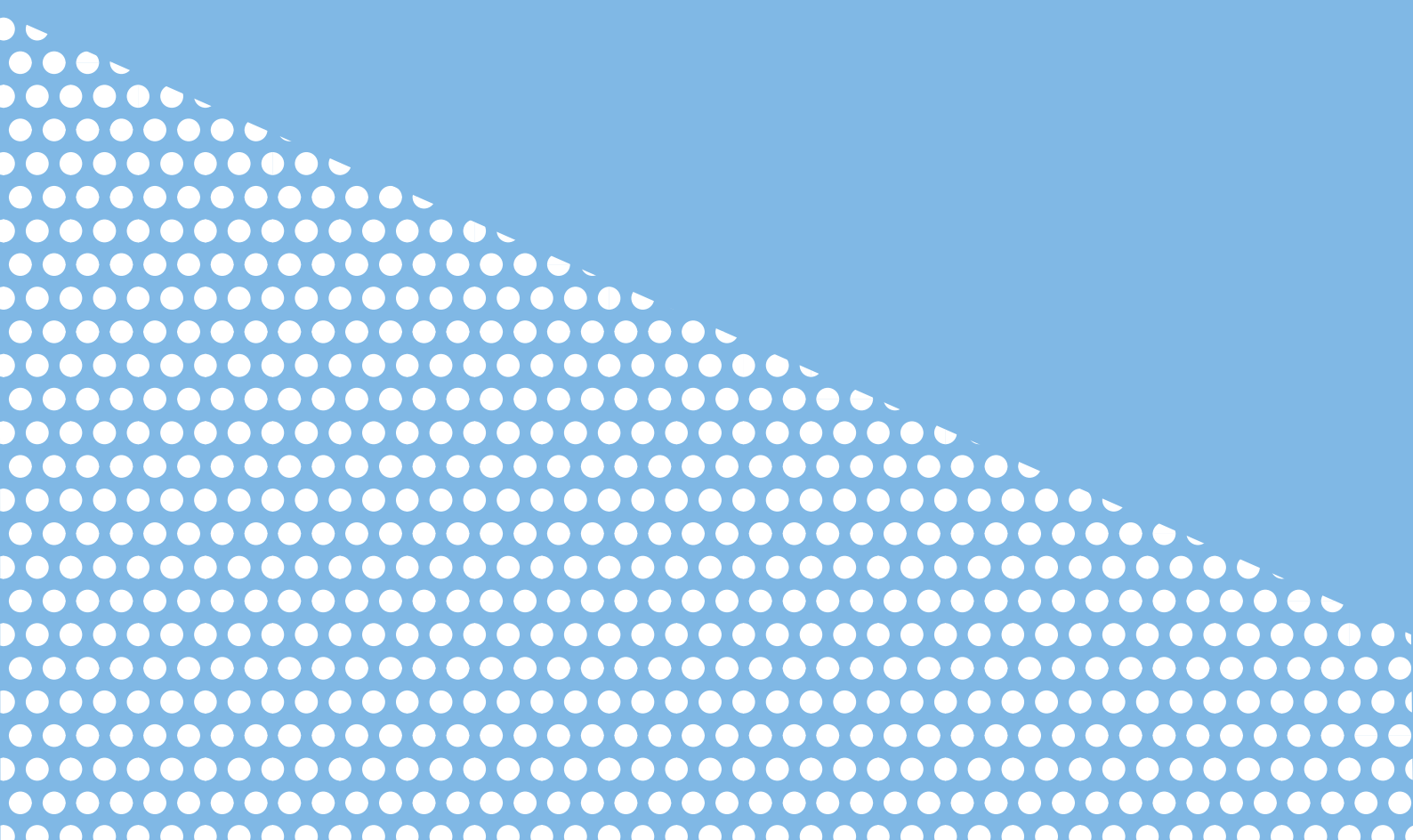


R E S E A R C H

G R A D U A T E S

Y E A R B O O K

2 0 1 7



C O N T E N T S

I n t r o d u c t i o n

Q U T B u s i n e s s S c h o o l

M a s t e r s b y R e s e a r c h

P h D

F a c u l t y o f E d u c a t i o n

M a s t e r s b y R e s e a r c h

P r o f e s s i o n a l D o c t o r a t e

P h D

C r e a t i v e I n d u s t r i e s F a c u l t y

M P h i l

M a s t e r s b y R e s e a r c h

P r o f e s s i o n a l D o c t o r a t e

P h D

F a c u l t y o f H e a l t h

M P h i l

M a s t e r s b y R e s e a r c h

P r o f e s s i o n a l D o c t o r a t e

P h D

F a c u l t y o f L a w

M a s t e r s b y R e s e a r c h

P r o f e s s i o n a l D o c t o r a t e

P h D

S c i e n c e a n d E n g i n e e r i n g F a c u l t y

M P h i l

M a s t e r s b y R e s e a r c h

P h D

Q M o m e n t u m

Human capital is the most important contribution that universities make to the knowledge economy and this is highlighted in this inaugural 2017 Research Graduates Yearbook.

QUT has built significant research capability in the last decade, performing well in the Australian context and as one of the leading young universities internationally. Research is by its very nature global and today's challenges require input from multi-disciplinary teams within Australia and beyond.

QUT research teams work across disciplinary boundaries and there have been some outstanding recent successes, as evidenced in this Research Graduates Yearbook.

We are proud to showcase the achievements of our research graduates and we commend them on their commitment to producing research that has real impact, both locally and globally.



*Professor Arun Sharma
Deputy Vice-Chancellor
Research and Commercialisation
Queensland University of Technology*

At QUT we foster a high performance and agile culture and aim to develop research graduates as entrepreneurial agents of change and drivers of economic activity.

Our Doctor of Philosophy, Masters by Research, Master of Philosophy and Professional Doctorate graduates are indeed agents of change, constantly seeking out new and innovative ways to progress their research ideas into reality. Their learning journey has allowed them to develop an individualised set of transferable skills such as critical thinking, creative problem-solving, project management, communication skills, entrepreneurship and transdisciplinarity that will support them during their transition into early career paths.

Real world research focus relies on working with end users – from industry, government and community – to identify problems and to collaborate on finding solutions. Problems facing society often require an approach that crosses a number of disciplines to create new conceptual and methodological innovations beyond discipline-specific approaches.

Through a more progressive, collaborative approach to research, each of our individual student's contribution to new knowledge helps to drive research teams that are delivering solutions to societal problems. Our highly skilled, enterprising graduates are well equipped for 21st century employment and careers, in ever-changing and complex working environments.

On behalf of all of us at QUT, we invite you to explore, enjoy and celebrate the cutting-edge research produced by our 2017 research graduates.



*Professor Helen Klæbe
Dean of Research and Research Training
Division of Research and Commercialisation
Queensland University of Technology*

M o h a m m a d M a h d i B e h r o u z i

Masters by Research

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

104397

Email

mahbe204@gmail.com

Thesis topic

Ambidextrous behaviour in new business development projects: Understanding the role of formal and informal control mechanisms

Description

This thesis investigates how managers can successfully manage new business development projects. This research examines how managers can explore new resources by encouraging creativity and innovation, while simultaneously exploiting existing resources by coordinating organisational strategies. The results of this investigation provide managers with guidance on how to achieve this strategy through the formal control of budget, centralisation of project and the appointment of autonomous and experienced project managers.

Supervisors

Henri Burgers, Kavos Mohannak

Christina Cranitch

Masters by Research

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

112813

Email

kirsty.cranitch@optusnet.com.au

Thesis topic

Professional identity: Shaping attraction, retention, and training intentions in early childhood education and care

Description

Across Australian long day care centres, thousands of early childhood (EC) educators face enduring challenges adversely impacting their pay, conditions, and workplace retention. Despite such challenges, significant numbers of EC educators continue to work in their roles over the long-term. Data was collected from 18 study participants and viewed through a professional identity framework comprising the dimensions of continuity, belonging and attachment, status and esteem, and mastery. The analysis shed light on the reasons underlying EC educator decisions to continue working in long day care centres within the broader context of historical and current policy approaches.

Supervisors

Paula McDonald, Deanna Grant-Smith

A l i

D e h g h a n M a n s h a d i

Masters by Research

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

110705

Email

aliuow@gmail.com

Thesis topic

The influence of culture on innovation in multinational organisations: Evidence from the oil and gas industry

Description

Culture is believed to play an important role in innovation processes and the innovativeness of organisations. In order to quantitatively measure this influence, the relationships between the dimensions of Hofstede's cultural model and the innovativeness of business units located around the world in the oil and gas industry are explored. Underpinning this study is a re-examination of data from a survey conducted by the Society of Petroleum Engineers in 2012 to measure the innovation-related behaviours of business units around the world. This study also examines the influence of cultural distance between the country of the responding organisation's headquarters and the country of the responding business unit, and assesses how this distance affects innovative output. The results show several ways in which geographic and cultural differences impact how innovation happens within and between different parts of the world.

Supervisors

Robert Perrons, Rachel Parker

Andrew Howell

Masters by Research
QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

104398

Email

andrew@targetround.com.au

Thesis topic

Fraud prevention: the alignment between fraud-related legislation and fraud government practices

Description

This thesis examined the alignment between regulations, government guidelines and fraud governance practices in the Australian public sector in efforts to minimise procurement fraud. Through analysis of three recent fraud cases studies, the interface between public sector anti-fraud governance frameworks and how they translate into workplace enforcement practices were considered for purposes of identifying enhanced ways for reducing this type of crime in the future.

Supervisors

Jeanette Van Akkeren, Julie-Anne Tarr

Jiyoung Kim

Masters by Research
QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

107545

Email

jiyoung.kim@hdr.qut.edu.au

Thesis topic

Entrepreneurship is no longer the young's game? a cross-sectional, cross-country study of senior entrepreneurship

Description

This thesis investigates the considerable variation in the rate of seniors' entrepreneurial activity across different countries. Building on institutional theory, this research investigates the impact of public expenditure related to seniors' health, pension, and education, on their entrepreneurial activity, taking into consideration the actual outcomes of public expenditures, measured with health status, poverty rate, and educational attainment of seniors. The findings suggest that institutional arrangements might trigger start-ups driven by particular motives (necessity vs. opportunity). Therefore, this thesis provides new insights into seniors' participation in entrepreneurial activities empowered by specific institutional factors.

Supervisors

Per Davidson, Jaehu Shim, Paul Steffens (The University of Adelaide)

Marko Volker

Krause

Masters by Research

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

107135

Email

marko.krause@hhl.de

Thesis topic

Asset pricing under tax rate uncertainty

Description

This thesis demonstrates the effects of tax rate uncertainty on asset pricing. Using real business cycle models with and without endogenous investments, this thesis conducts numerical experiments assuming different stochastic processes for the tax rate on dividends. Findings show that taxes on dividends can partly explain the equity premium. However, the magnitude of the effect of tax rate uncertainty on asset pricing depends very much on modelling assumptions such as endogeneity of investments. Furthermore, effects through tax capitalisation and tax redistribution have substantial effects on asset prices and expected returns.

Supervisors

John Chen, Benno Torgler

Hyejung Lee

Masters by Research
QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

102232

Email

hyejung.lee@hdr.qut.edu.au

Thesis topic

Auditors' gender differences and client portfolios

Description

This study examines whether, and to what extent, the reported gender differences in risk tolerance and information processing influence audit related judgments and decision making. The results indicate that, on average, female auditors have less risky clients in their client portfolios than male auditors and this difference is more pronounced in the high-risk engagement context. The findings of this study suggest that while individual differences could be moderated by a set of professional norms and standards, the very implicit gender stereotypes have a recognisable effect on auditor's client risk perception.

Supervisors

Yuyu Zhang, Marion Hutchinson

Z h o n g t i a n

L i

Masters by Research

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

102376

Email

li1127@live.cn

Thesis topic

Corporate social responsibility reporting on labour-practice-related issues in China: Evidence from five multinational firms operating in the electronics manufacturing services sector

Description

This thesis analyses employee-related disclosures made by five multinational firms that operate in the electronics manufacturing services industry. This research found that the employee-related disclosures respond to the need of legitimacy, yet are problematic in quality. In doing so, this thesis provides practical implications for employee-related disclosures pertaining to the electronics manufacturing services industry. Findings can be used to better address labour rights issues in this industry.

Supervisors

Shamima Haque, Ellie Chapple

M u h a m m a d F a r h a n

M a l i k

Masters by Research

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

110348

Email

farhan.malik06@yahoo.com

Thesis topic

Enterprise risk management and firm performance:
Role of the risk committee

Description

This thesis examines the impact of enterprise risk management (ERM) on firm performance. It also seeks to investigate whether this relationship is strengthened or weakened by the structure and composition of the risk committee. The sample comprises of 260 firm-year observations from FTSE-350 companies in the UK that have implemented ERM processes and established board-level risk committees during the study period from 2012 to 2015. The results show that ERM significantly and positively affects firm performance. Further, the number of financial experts and female members in the risk committee strongly strengthen this relationship. However, risk committee size, meetings, and independence weaken the impact of ERM on firm performance.

Supervisors

Mahbub Zaman, Sherrena Buckby

Anthony Newell

Masters by Research
QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

103529

Email

anthony.newell@outlook.com

Thesis topic

Countercyclical risk aversion in experimental asset markets

Description

This research is an experimental investigation into the changing nature of individual and collective risk aversion during financial decision making. In experimental asset markets, the market mechanism results in an overly optimistic view of the value of an asset if a business cycle expansion is perceived, while the reverse is true in the business cycle contraction. These empirical findings provide a behavioural basis for theoretical models of asset pricing, which contain a time varying risk aversion factor and contribute to the literature, which attempts to explain the asset premium puzzle.

Supervisors

Lionel Page, Anup Basu

T s h e w a n g

N o r b u

Masters by Research

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

102040

Email

norbu.tshewang@connect.qut.edu.au

Thesis topic

The role of formal and informal HRM policies and practices in managing work and family conflict: The perspective of Bhutanese small and medium enterprises

Description

In his thesis the impact of formal and informal Human Resource Management (HRM) policies and practices in managing work and family conflict in Bhutanese small and medium enterprises is examined through two studies. In study one, employers and employees were interviewed to explore the current formal and informal HRM policies and practices that help employees manage the balance between work and family demands. In study two, an online survey explored the link between employees' use of formal and informal HRM policies and practices, and the conflict between work and family matters. The findings from study one show informal flexible working hours are important. Study two findings indicate that using these informal HR practice significantly reduce conflict between work and family demands. The research extends our understanding of work and life balance and the HRM literature through unpacking the relationship between informal HRM practices in the context of an emerging economy.

Supervisors

Vicky Browning, Lisa Bradley

Melinda Robinson

Masters by Research
QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

112505

Email

melindarobinson@optusnet.com.au

Thesis topic

You only live once: Do life events shape authentic leaders?

Description

In this thesis research in Authentic Leadership and its relationship to life events and self-knowledge is continued. Through a quantitative analysis of data from over 150 leaders, a relationship was found between leaders with many life events and the strength of their authentic leadership. Additionally, there was evidence supporting the positive impact of recalling life events prior to reporting on authentic leadership. Consequently, a potential process for authentic leadership enhancement has been uncovered through this study.

Supervisors

Peter O'Connor, Mervyn Morris, Karen Becker

Rebecca Sharpe

Masters by Research
QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

111564

Email

becsharpe@hotmail.com

Thesis topic

To be or not to be, is loyalty the question? Self-regulatory strategies and their effect on goal striving and intent: A customer loyalty programme perspective

Description

Building upon extant research regarding goal intentions, implementation intentions and the self-regulation construct of action orientation, this thesis explored their collective application to a previously unresearched domain; that of customer loyalty programmes. This was done by introducing, and testing, how individuals are effected on their path to loyalty programme rewards achievement by factors, both in and out of their control. In doing so, the role of intentions, as a protagonist of loyalty programmes, was considered both academically and practically. Recommendations for future research and practice were made.

Supervisors

Brett Martin, Amanda Beatson

John Somerset

Masters by Research

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

109788

Email

john@somerseteducation.net

Thesis topic

Defining a financially sustainable independent school in Australia

Description

Independent schools in Australia have \$10 billion in annual turnover, educate 594,000 students, employ 53,000 teachers plus other staff, and invest approximately \$3 billion dollars into infrastructure and service debt. Financial stakeholders have little empirical evidence on the attributes of a financially sustainable independent school from which to make an informed decision on financial risk. This innovative qualitative study uncovers thick, rich descriptions from a broad range of expert stakeholders to define a financially sustainable independent school and document a comprehensive list of attributes.

Supervisors

Janet Mack, Myles McGregor-Lowndes

Z h i

S o n g

Masters by Research

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

110727

Email

zhi.song@hdr.qut.edu.au

Thesis topic

Exploration of the pre-export behaviour of the Chinese family owned medium sized enterprise (FMEs): The role of 'guanxi'

Description

This study explores the pre-export behaviour of Chinese family owned medium-sized enterprises (FMEs), based on a sample of twelve medical enterprises. It investigates the influence of Chinese 'guanxi' networks ('social relationships or personal network') on the pre-export behaviour of FMEs, and the specific resources and knowledge the 'guanxi' networks provide such firms to facilitate their internationalisation process.

Supervisors

Rumintha Wickramasekera, Stephen Cox

P u i Y a n

Y a u Y e u n g

Masters by Research

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

112366

Email

daisypy@gmail.com

Thesis topic

An exploration of risks in using cloud accounting information systems in Australia

Description

This thesis is an exploratory study on the risk management of using cloud accounting in Australia. Using the interview method, this research identifies the specific risks of the use of cloud accounting in organisations and proposes possible measures to mitigate those risks from the end-user perspective. This research provides an understanding of the special characteristics of cloud accounting information systems. The findings of this research will assist businesses with their decision-making in relation to the use of cloud accounting.

Supervisors

Ogan Yigitbasioglu, Peter Green

Husain Salilul Akareem

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

110340

Email

husainsalilul.akareem@hdr.qut.edu.
au

Thesis topic

The process of value co-creation: The roles of consumer engagement, consumer resources, and consumer roles in extended service context(s)

Description

This thesis is grounded in the Service Dominant Logic (SDL) perspective with a specific focus on value co-creation (VCC) arising from three major dimensions: consumer engagement, consumer resources, and consumer roles in extended services contexts. The program of research involves a theory building qualitative study, followed by a theory testing quantitative study to examine the influence of these three major dimensions on the process of VCC in education and health services. The findings make theoretical contributions to the SDL literature by demonstrating the complex nature of conceptualising and measuring the three dimensions underpinning the process of VCC in services. From a practitioner perspective, the research provides empirically derived models to understand how consumer engagement, resources and roles contributes to value co-creation, and suggests ways for firms to design and evaluate their service offerings.

Supervisors

Lynda Andrews, Edwina Luck

K a r a B u r n s

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

114076

Email

kara.burns@hdr.qut.edu.au

Thesis topic

Engagement, empowerment and patient generated health data

Description

This thesis examines patient generated health data in the context of healthcare services where information asymmetry traditionally enshrined the doctor as all-powerful and the patient as a passive recipient. Through vignette-led interviews and a clinical trial, the research highlights the role of this information in the co-created process of patient engagement, then demonstrates how it promotes healthcare self-determination and consumer empowerment. Patient generated health data aids diagnosis and management of health conditions, and provides significant emotional value for patients and their peer network. This information supports consumer-driven efficiencies, eliminating unnecessary treatments, and may reduce the overall cost of healthcare services. This thesis recommends that healthcare providers implement solicited and unsolicited patient generated health data to increase service confidence, satisfaction and reduce switching behaviour.

Supervisors

Judy Drennan, Gerard Fitzgerald, Shane Mathews

H o F a i C h a n

PhD

QUT Business School

Institute

na

Thesis type

By Publication

ePrint ID

104383

Email

hofai.chan@qut.edu.au

Thesis topic

Essays on top scholars: A scientometrics approach

Description

This thesis contributes to the scientometrics literature by providing empirical evidence on a number of aspects in academia, focusing on the most prominent scholars. This research comprises of eight individual studies within academia, examining topics on recognition, research performance, impact, biases and collaboration patterns.

Supervisors

Benno Torgler, Markus Schaffner

A m a r D o s h i

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

103532

Email

amar.doshi21@gmail.com

Thesis topic

Economic analyses of microalgae biofuels and policy implications in Australia

Description

This thesis presents an economic assessment of microalgae biofuels as a substitute in the Australian transport fuel market. This study systematically reviewed the current state of microalgae biofuels among its predecessors, analysed a novel production pathway integrated with existing industries, and estimated the economic value of its external benefits over agricultural-based biofuels. These findings informed a discussion on how a long-term, policy-led transition away from fossil fuels can be achieved through supporting the development of integrated microalgae industries and capturing the economic value of biofuels that will lead to a more diversified and socially-efficient transport fuel market.

Supervisors

Sean Pascoe, Louisa Coglan, Thomas Rainey

Natalie Elms

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

112190

Email

natalie.elms@qut.edu.au

Thesis topic

Exploring the effect of director tenure on director monitoring: A case-based approach

Description

This thesis addresses the unresolved question of how director tenure relates to director monitoring. Multiple sources of data, gathered over two interrelated qualitative studies, provide a unique and up close perspective of the phenomena. The results highlight the value of incorporating theories that explain director motivation into traditional corporate governance research. Overall, the relationship between tenure and director monitoring is shown to be more complex than generally assumed, and as such, policies using a single approach for director tenure may not be appropriate.

Supervisors

Gavin Nicholson, Stuart Tooley

J u d i t h H e r b s t

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

103631

Email

judith.herbst@qut.edu.au

Thesis topic

How Australian social enterprises use strategic marketing and social marketing to drive accountability and change for sustainable development

Description

This multiple case study investigation examines how strategic marketing, social marketing and accountability were applied across diverse Australian social enterprises to attain sustainable missions. Evidence revealed that organisations exploit horizontal and vertical marketing to forge partnerships that enhance their resources and capabilities. This research has implications for marketing management by highlighting the benefits of co-competition to enrich interorganisational relationships within the third sector. Working in this systematic way facilitates co-creation of social value to enhance livelihoods, increase social services and build resilience within communities. The thesis also demonstrated positive outcomes from integrated reporting in small- to medium-sized enterprises.

Supervisors

Wendy Scaife, Ogan Yigitbasioglu, Ellie Chapple

A i w e n

H e w

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

113984

Email

aiwen.hew@hdr.qut.edu.au

Thesis topic

Shaping strategic thinking among geographically dispersed stakeholders with the application of digital scenarios

Description

Scenarios have been used effectively over the years as a tool for helping to develop strategies in the face of uncertainty. This investigation involved delivering scenarios online with geographically-distributed groups of transportation experts within the Asia-Pacific region. Using a mixed-methods approach, this research examined their effectiveness as a way to challenge how participants think about the future. The results show that the perceived usefulness of the digitally-delivered scenarios contributed to individual learning that led to a change in mental models, thereby supporting the intended benefits of scenarios to challenge management thinking during the strategy development process. The findings also provide an improved understanding of using digital technologies to engage a wide range of stakeholders, who are geographically dispersed and relatively time-poor, in the scenario process.

Supervisors

Robert Perrons, Lionel Page, Simon Washington (The University of Queensland)

■

Annafatmawaty

Ismail

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

102894

Email

annafatmawaty@gmail.com

Thesis topic

We are different: A case study of entrepreneurship education in Malaysia

Description

This research examines the extent to which different pedagogies in entrepreneurship education influence individual skill development, and how this translates into the potential of entrepreneurial intention. A quasi-experimental design and analysis of interview data shows that, although a student-centred approach is widely accepted practice in western education, a teacher-centred approach is more effective in Malaysia due to the system of collective culturally based education.

Supervisors

Sukanlaya Sawang, Roxanne Zolin

J i n g

J i a

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

110538

Email

jjajinggogo@yahoo.com

Thesis topic

Does firms' risk management human capital reduce the likelihood of financial distress?

Description

Firm performance and financial distress likelihood are two key priorities for any business and, as such, knowledge of effective risk management is essential. This thesis investigates risk management practices in Australia to determine their impact on both performance and financial distress likelihood. It makes a significant contribution to the understanding of the management of risk through risk management committee existence and their level of human capital in forming an effective risk management practice. This research will provide invaluable insights for policy makers, firms and academia alike.

Supervisors

Marian Hutchinson, Kate Hogarth

Thamara Kularatne

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

104115

Email

thames_k@yahoo.com

Thesis topic

Economics of optimal management of tourism resources: A demand and supply analysis

Description

This thesis examines demand and supply in the tourism industry with the objective of revealing the optimal management of resources. The first section of this thesis investigates consumer preferences with respect to nature-based tourism together with a study of the manner in which tourists' experiences impact on non-market valuations. The second phase determines an efficiency evaluation of the hotel industry, which focuses on the impact of eco-friendly practices on hotel operations. The analytical techniques adopted in this research include discrete choice modelling, structural choice modelling and data envelopment analysis. The findings of this study contribute to the goal of creating a sustainable tourism industry in Sri Lanka and similar destinations.

Supervisors

Clevo Wilson, Boon Lee, Viet Ngu Hoang

Pei-Ta Lin

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

104122

Email

peita_lin@hotmail.com

Thesis topic

Strategic uncertainty in capital markets

Description

This thesis advances our understanding of financial markets from a game-theoretical perspective. Using tools from auction theory (mechanism design), this research identifies how financial market anomalies arise from the strategic interactions between market speculators in the initial public offering (IPO) and short selling markets. In doing so, this thesis shows how seemingly irrational market phenomena have rational microeconomic foundations and market designs can inadvertently promote speculative trading behaviours.

Supervisors

Janice How, Peter Verhoeven

Christopher Mahar

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

101801

Email

chris.mahar1@gmail.com

Thesis topic

Thematic vs taxonomic sponsorship articulations: Investigating differences by team identification and articulation in message processing and outcomes

Description

This thesis investigates brand attitudes in a sports sponsorship setting through messages linking brand and team. Messages of articulation were successful when they linked brand and team relationally, but not when attempting to match functional or image-based traits. Brand attitudes were mediated through brand/team fit for highly identified fans and through sincerity in low identification fans.

Supervisors

Larry Neale, Nicolas Pontes

Eucabeth Bosibori Opande Majiwa

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

105586

Email

eucajawa@gmail.com

Thesis topic

Productivity and efficiency of the agricultural sector: Africa with a special focus on rice farming and processing in Kenya

Description

Food security remains a serious concern in Africa due to famine, drought and low yields. To address this concern, this study quantifies sources of productivity and efficiency; and provides policy recommendations needed to raise African agricultural productivity. The results indicate that there is room for improvement in lifting African agricultural productivity through appropriate policy implementation. These include R&D spending, schooling, and lowering of HIV prevalence rates. This thesis also evaluates the efficiency of Kenyan rice farming and processing as a special focus, suggesting farmers can improve their efficiency with better knowledge of servicing and maintenance of rice processing machines.

Supervisors

Boon Lee, Clevo Wilson

Alistair Ping

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

114002

Email

acping@acping.net

Thesis topic

Why good people do bad things in business

Description

In this thesis's inter-disciplinary research from the fields of business ethics, moral philosophy, criminology, social psychology and neuro-cognitive science are synthesised to develop a causal factor model which explains why good people do bad things in business. The model was tested by interviewing senior executives involved in corporate crimes and the results have significant implications for ethics education and training.

Supervisors

Rowena Barrett, Luca Casali

Sylvia Roux

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

107549

Email

s.roux@qut.edu.au

Thesis topic

Customising work through social exchange:
An examination of how manager responses to requests for flexible work impact on work-home interaction and work engagement

Description

Customised work arrangements (CWAs) include all formal and informal forms of flexibility at work. This thesis used the social exchange process to understand employee requests and manager responses to CWAs. This research surveyed employees' requests, responses to requests and impacts on work-home interaction and work engagement, and the moderating effects of the cultural environment on those outcomes. This thesis examines the limits of responses to CWA requests, impacts on individual and business-related outcomes and social exchange theory. This thesis offers insights into how CWAs impact employee experiences, which has implications for organisations and government.

Supervisors

Paula McDonald, Abby Cathcart, Peter O'Connor

Rachel Akiko Sato

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

108149

Email

rachelas90@gmail.com

Thesis topic

Examining young Australian men's help-seeking towards mental well-being in a problematic online gaming context

Description

This social marketing thesis examines the help-seeking behaviour of young Australian men aged 18-25 years old towards overcoming problematic online gaming. This thesis utilised a three-part mixed methodology that builds upon the Model of Goal-directed Behaviour to develop a revised conceptual model that was tested through a web-based survey. Critical Incident Technique and in-depth interviews were also used to explore the key triggers of problem recognition and the competing coping behaviours of help-seeking, providing fresh insights into help-seeking and social marketing.

Supervisors

Judy Drennan, Ian Lings

Iwan Purwanto

Sudjali

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

112198

Email

iwansudjali@gmail.com

Thesis topic

The accounting for zakat: The accountability of Indonesian zakat agencies

Description

This study provides empirical insights into the accountability practices of Indonesian zakat agencies and investigates if key stakeholder (i.e. donor) expectations are being met. The findings emphasise the centrality of a sacred accountability for such faith-based organisations and its influence on the way in which secular accountability comes to be operationalised. The findings indicate that although agency administrators and donors share similar views on the accountability of zakat agencies, current practices in the discharge of accountability are deficient in meeting donor expectations. That is, there is an accountability information gap. The study provides research-based evidence to address the accountability information gap and promotes the need for Indonesian authorities to develop comprehensive best-practice guidance to improve the accountability reporting practices of zakat agencies.

Supervisors

Stuart Tooley, Craig Furneaux

M o h a m m a d W a n g s i t

S u p r i y a d i

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

114093

Email

wangsit.supriyadi@gmail.com

Thesis topic

Beyond deterrence: An empirical and experimental analysis of tax compliance behaviour in Indonesia

Description

This thesis takes a behavioural approach to tax compliance in three studies. It extends existing knowledge on factors influencing compliance behavior by employing various methodologies: survey analysis, quasi-experiment, and field experiment. The last two studies were conducted in Indonesia, which provided a non-developed countries context that is under-researched in the literature. One of this thesis's novel contributions to the literature is the application of repeated behavioural interventions in the field experiment. The thesis provides better empirical data for policy makers to design strategies to increase tax compliance.

Supervisors

Benno Torgler, Uwe Dulleck

Peter Walsh

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

104757

Email

p.walsh@griffith.edu.au

Thesis topic

Local governance and public policy: The dynamics of renewing disadvantaged neighbourhoods

Description

Responding to local areas with entrenched social and economic disadvantage has been a significant public policy issue in many parts of the world. A key challenge has been to establish appropriate governance arrangements to support an effective response. The purpose of this thesis is to contribute to the development of place-based governance theory in the context of responding to local disadvantaged areas. The thesis draws together a number of research findings to develop a set of place-based governance principles as a contribution to theory development as well as to future policy and program efforts to address spatial disadvantage.

Supervisors

Myles McGregor-Lowndes, Robyn Keast

Z h i x i n

X i e

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

112179

Email

nate.zhixin.xie@gmail.com

Thesis topic

Essays on the neurobiology of economic and financial risk taking

Description

This thesis investigated the influence of neurobiological mechanisms in economic and financial risk taking, and their possible roles in understanding market stability. The evidences about risk preferences, trading behaviours and physiological responses, which were found in our laboratory and field experiments, supported a feedback theory. Our physiological responses under certain circumstances may exaggerate the emotions of exuberance and pessimism during market boom and bust times, reducing our abilities to engage in rational decisions.

Supervisors

Lionel Page, Daniel Smith

Feng Xiong

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

105509

Email

xiongfeng@xmu.edu.cn

Thesis topic

The economic consequences of financial reporting on Twitter

Description

This thesis examines stock market reaction following financial reporting information on Twitter. The results indicate that larger companies and companies closer to technology are more likely to adopt Twitter for financial reporting. Smaller companies receive greater benefits (reduction of information asymmetry) from this practice, as well as disclosing multiple financial reporting tweets. This study encourages frequent use of Twitter and other new Information Technology, to increase the visibility of small companies. This study provides new evidences to inform regulatory policy and promote 'best practice' guidelines for financial reporting on social media.

Supervisors

Ellie Chapple, Kerrie Sadiq

K u n l i n

X u

PhD

QUT Business School

Institute

na

Thesis type

Traditional

ePrint ID

110823

Email

k7.xu@qut.edu.au

Thesis topic

The importance of cross-cultural capabilities for Chinese immigrant entrepreneurs in Australia

Description

This thesis takes a novel approach to investigating cross-cultural capabilities of Chinese immigrant entrepreneurs in Australia. Results show that cross-cultural capabilities include two main dimensions: capability of psychological adaptation (including emotion management and positive attitude), and capability of sociocultural adaptation (including cultural learning, language skills and bicultural flexibility). Further, Chinese immigrant entrepreneurs are heterogeneous with five diverse immigrant entrepreneur groups in terms of their cross-cultural capabilities, namely pragmatists, challengers, optimists, integrators and assimilators. This thesis also provides evidence of the impact of cross-cultural capabilities on immigrant entrepreneurs' business outcomes that are associated to venture growth.

Supervisors

Judy Drennan, Shane Mathews

Faculty of Education

Jennifer Clarke

Masters by Research
Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

114123

Email

jennifer.clarke@tafe.qld.edu.au

Thesis topic

Sustainable pedagogical leadership in Early Childhood Education and Care: Implementing the 2012 Australian National Quality Standard

Description

This historical case study combined two quality areas in early childhood education and care (ECEC): sustainability and pedagogical leadership, introducing the new term Sustainable Pedagogical Leadership in ECEC (SPLE). SPLE includes principles embedded in sustainability and Education for Sustainability (EfS) combined with contemporary approaches to pedagogical leadership unique to ECEC settings. This represents an innovation in the way that pedagogical leadership can be framed in ECEC. Key characteristics of SPLE identified were providing clear vision, mentoring, professional learning, critical reflection and distributed leadership opportunities. SPLE led to an exceptional organisational culture. Enculturated practices were observed in EfS as a result.

Supervisors

Lyndal O’Gorman, Julie Davis

Heidi Clauscen

Masters by Research

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

102439

Email

hclau1@eq.edu.au

Thesis topic

Exploring fraction knowledge with telling time:
A case study of students who have learning
difficulties

Description

This research employed an intrinsic case study method to explore the mathematics knowledge, procedures, and strategies used by nine year four children who have learning difficulties (LD) to tell twelve-hour time on analogue and digital clocks. A specific focus was to examine the fraction knowledge as a factor contributing to the mastery of telling twelve-hour time on analogue and digital clocks. The research highlighted the children's predominant use of mathematics knowledge linked to number and arithmetic only and argued that fraction knowledge is vital to telling twelve-hour time.

Supervisors

Suzanne Carrington, Andy Yeh

Amelia Coleman

Masters by Research
Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

109754

Email

ameliacoleman93@gmail.com

Thesis topic

Different, threatening and problematic:
Representations of non-mainstream religious
schools

Description

The political contexts of marketisation, multiculturalism and pluralism have influenced the emergence of niche, religious providers of education in Australia with increasing government support. The most substantive increases in enrolments within the non-mainstream religious school sector have been in Islamic schools and schools catering to “fundamentalist” Christian denominations. Concomitantly, non-mainstream religious schools have received considerable media attention in Australia. This study involves a comparison of the media reportage focusing on Muslim schools and “fundamentalist” Christian schools during a 12 month period in which Muslim schools across the country received significant media attention after they were threatened with funding cuts. It is suggested that exploring how different categories of non-mainstream religious schools are represented in the media could become a proxy for understanding how the Australian public are invited to perceive these schools.

Supervisors

Shaun Nykvist, Rebecca English

Frances Constantine

Masters by Research

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

108052

Email

fcons3@eq.edu.au

Thesis topic

Adjusting personal expectations: An analysis of early-career teacher narratives

Description

This narrative inquiry of four early-career teachers examines their changing expectations of themselves as teachers as they shape their professional identities. Drawing upon Clarke and Hollingsworth's Interconnected Model of Teacher Professional Growth (2002), this analysis highlights the essential role that feedback and supportive collegial relationships play in the shift from idealism to a more practical approach to teaching. Recommendations are made for teacher education and induction programs to prepare teachers to critically examine the validity of their explicit and implicit assumptions, beliefs and expectations about themselves as teachers in the early-career years.

Supervisors

Rebecca Spooner-Lane, Denise Beutel

T r o y

D u n n

Masters by Research

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

104125

Email

tdunn@goodstart.org.au

Thesis topic

Inclusion of children with diverse needs in early childhood education and care services: Exploring inclusive practice through self-authorship

Description

The inclusion of children with diverse needs in Early Childhood Education and Care (ECEC) services is now recognised internationally and within Australia as best practice and crucial in providing high quality education and care (Kalyanpur, 2011; Mohay & Reid, 2006). As such, competent early childhood educators are essential to support the inclusion of children with diverse needs, while also facilitating high quality inclusive pedagogical practice. Through the theoretical framework of self-authorship this multiple case study design explored how three early childhood educators working at a long day ECEC setting made meaning of their experiences with the inclusion of children with diverse needs.

Supervisors

Susan Walker, Joanne Lunn

G a b r i e l l e K e m p t o n

Masters by Research

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

110591

Email

g.kempton@skymesh.com.au

Thesis topic

Creativity in education: Exploring teacher experiences of creativity through an immersion studies learning framework

Description

This study emerged from the implementation of new curriculum within the Primary Years of an Australian school and the trialling of a school-based immersion studies learning framework. This study draws on policy incentives to promote creative thinking within the Australian Curriculum and the interpretation of creativity within educational settings. This research investigates teachers' perceptions and experiences of working within the immersion studies learning framework, and explores the ways teachers' knowledge building translated into planning, teaching and learning approaches to foster creativity. The research findings inform understandings of how teachers can develop knowledge and appreciation of creativity, aligned to interdisciplinary ways of teaching and learning.

Supervisors

Carly Lassig, Anita Jetnikoff

Brian Marsden

Masters by Research

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

108055

Email

bsmarsden@gmail.com

Thesis topic

Higher degree research as professional learning for teachers: A cohort perspective

Description

This thesis explores how a cohort of six full-time teachers negotiated and explained their teaching practice as a result of their higher degree learning in a Master of Education. Reflections across multiple time phases of a research degree were analysed to understand how teachers negotiated the interdependent connections of knowledge production and reconstruction that occurred across their various ecologies of practices. The teachers reported an increasing confidence in critically evaluating and reflecting on their teaching practice, although the collisions between the circular time patterns of research learning and linear patterns of teaching practice were experienced as significant challenges.

Supervisors

Jill Willis, Mary Ryan

K i m

P r e s t o n

Masters by Research

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

109007

Email

kimpres@hotmail.com

Thesis topic

Perceptions of a mindfulness intervention to manage stress and support the emotional work of teachers in alternative schools

Description

This thesis is based on a case study which explored the impact of a six-week mindfulness program designed with a two-fold purpose: to support the emotional work of alternative school teachers, and to assist in their management of stress. Overall, the study revealed a range of beneficial outcomes emerging in association with the mindfulness intervention, including a reduction in teachers' perceived stress levels. Participating teachers were highly supportive of the use of mindfulness as a professional development tool within the alternative school context. The study also suggests implications for the future use of mindfulness within this context.

Supervisors

Rebecca Spooner-Lane, Amanda Mergler

S a m u e l

S i m p s o n R e e v e s

Masters by Research

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

108953

Email

samreeves@gmail.com

Thesis topic

High-stakes behaviours: A case study of teacher perceptions of standardised testing in secondary schools

Description

Standardised High-Stakes Testing is a staple of modern education systems worldwide. This study investigates teacher attitudes towards testing and whether there is a relationship between their school context and the formation of attitudes, using NAPLAN as a case-study. This study uses Ajzen's Theory of Planned Behaviour and Bernstein's Code Theory, in a mixed-method survey approach, drawing on a population of English teachers from Queensland. This research found that there were varied attitudes towards NAPLAN testing, and that there were some commonalities between the formation of these attitudes and the school context.

Supervisors

Beryl Exley, Judy Smeed, Julie Dillon-Wallace

Margaret Wilkinson

Masters by Research

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

109618

Email

marg2.wilkinson@gmail.com

Thesis topic

An investigation of place value understanding in Year two children

Description

Mastering the place value system in the early years of school can be very challenging for children. This mixed methods study explores the place value understanding of Year 2 children (n=9), through detailed observations of their strategy use in place value tasks. Multiple strategy use was observed, with a better understanding of place value accompanied by more frequent use of separate and grouping strategies. Strategy use varied with different place value task configurations, with separate and grouping strategies used more frequently in the 3-digit shopping task. This thesis applies contemporary perspectives of Siegler's overlapping waves theory and rational constructivism to analyse these findings.

Supervisors

Sonia White, Susan Walker

Benjamin Bruce Wilson

Masters by Research

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

102215

Email

benwilsonconsultancy@gmail.com

Thesis topic

Caring, creativity, and collaboration: How teachers perceive, understand, and enact high expectations

Description

This research explores the concept of high expectations and how these play out in teacher practice in low ICSEA schools in Queensland. This work suggests that while there are a multitude of differing perceptions and definitions of high expectations, there is not always agreement about how these can or should play themselves out in practice. This research aims to support classroom teachers to better meet the diverse and complex needs of their students through encouraging teachers to critically analyse their own professional practice, especially as related to demonstrating high expectations of students in low SES schools.

Supervisors

Joanne Lampert, Grace Sarra

Madonna Ahern

Professional Doctorate

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

112197

Email

madonnaahern@bigpond.com

Thesis topic

Exploring the impact of a positive education program on the wellbeing of adolescent girls

Description

This study explores the impact of a positive education program on the wellbeing of adolescent girls in their transition year to secondary school and the following year. Researchers in the area of positive psychology are calling for more empirical studies to be done, particularly in the area of adolescent wellbeing, to address the limited amount of research in the area to date. This study contributes to this underresearched area by providing empirical evidence on a longitudinal study of a positive education program using five evidence-based constructs.

Supervisors

Peter Bowman, Amanda Mergler

S e l e n a

F i s k

Professional Doctorate

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

112506

Email

selenafisk@gmail.com

Thesis topic

A qualitative inquiry of students' and teachers' perceptions on feedback in three Queensland secondary schools

Description

This study qualitatively analyses students' and teachers' perceptions on the effectiveness of formative and summative feedback, using a Critical Systems Theory theoretical framework. By considering feedback content, comparison and mode, this research uncovers perceptions of the strengths, weaknesses and effectiveness of different feedback types. Teacher feedback to students is one of a number of important school-based influences on student achievement. Pre-existing research highlights the benefits and impact of feedback, and the characteristics of effective feedback. However, few studies have investigated students' and teachers' perceptions. This study outlines potential opportunities and strategies to support effective formative and summative feedback practices for secondary school students.

Supervisors

Beryl Exley, Judy Smeed

Mark Laraghy

Professional Doctorate

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

102090

Email

mark.laraghy@livingstone.qld.edu.au

Thesis topic

A case study of implementing international programs in one state school

Description

Using a qualitative case study approach, this study examines how one government school in Queensland implemented international programs for fee-paying students from Asia at three specific time frames. Through an analysis of the policy processes that have driven international programs and approaches to Asia-literate school education in Australia, this study demonstrates that school based implementation processes were problematic and that efforts to enrich international programs in the school through Asia literacy were limited. Findings indicate the complexity of what happens in a school when top-down approaches for policy implementation occur without effective communication and the provision of staff professional development.

Supervisors

Deborah Henderson, Radha Iyer

Vanessa Miller

Professional Doctorate
Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

114061

Email

vanessamiller8@gmail.com

Thesis topic

Teachers creating the “third teacher”: An action research approach to learning environment design

Description

While learning environment is thought to play a significant role as “third teacher”, little research exists to guide schools in the design of space for contemporary learners. Through participatory action research (PAR) and Clark’s Mosaic designing approach this qualitative study explored three teachers’ experience of transformative learning space design. The findings reveal the complexity of teachers’ experience; that disruption of participation fosters transformative thinking and practice; the need for a design framework and professional learning to increase teachers’ designing capacity; and that PAR and Mosaic effectively supports collaborative designing. Study findings provide an evidence base for developing a learning environment design framework for primary schools that integrates a shared vision of learning and the principles of Reggio Emilia. The framework will enable school leaders and teachers to create innovative learning environments conducive to contemporary approaches.

Supervisors

Hilary Hughes, Derek Bland, Jill Willis

Emily

Ross

Professional Doctorate

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

107049

Email

ross.emilyj@gmail.com

Thesis topic

An investigation of teachers' curriculum interpretation and implementation in a Queensland school

Description

This study analysed the process of curriculum interpretation undertaken by five primary school mathematics teachers as they implemented the Australian Curriculum in a Queensland school. It examined the process from intended to planned to enacted curriculum used by the teachers, as well as the influences impacting upon these processes. The teachers in the study employed similar strategies when interpreting the intended and planned curriculum. However, each teacher followed a unique process to enact the curriculum. The study found that while similar factors influenced this process, there were variations in terms of how it impacted on each teacher.

Supervisors

Vinesh Chandra, David Nutchey, Nanette Bahr

Christopher Blundell

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

112463

Email

blundellcn@gmail.com

Thesis topic

A case study of teachers transforming pedagogical practices through collaborative inquiry-based professional learning in a ubiquitous technologies environment

Description

This is a case study of a team of teachers using collaborative inquiry to design new approaches for teaching and learning with digital technologies. The findings are significant because they, firstly, highlight the value of teachers using theoretical lenses to understand the complex influences on their practice, and secondly, identify the contributing factors to changes in practice. Implementing new approaches involved personal transformative learning for each teacher. This was shaped by prior practice, attitude to innovation, and willingness to explore new classroom roles, relationships and actions. Collaborative inquiry resulted in increased trust, openness and confidence.

Supervisors

Kar-Tin Lee, Shaun Nykvist

Kylie Bradfield

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

112507

Email

kylie.bradfield@outlook.com

Thesis topic

The teaching of children's literature: A case study of primary teachers' pedagogical content knowledge

Description

Resulting in the development of a framework labelled Literary Pedagogical Content Knowledge (LPCK), this thesis aimed to describe the complex interplay of three components in primary school classrooms: content, pedagogy, and children's literature. A case study research design elicited descriptive evidence of nine teachers' understandings of the teaching of children's literature, recognising that teacher knowledge bases involve complex, situated knowledge. The thesis, underpinned by constructivism and through the use of semi-structured interviews, built on Shulman's formulation of Pedagogical Content Knowledge (PCK) by considering teachers' alignment with Literary Theory.

Supervisors

Beryl Exley, Karen Dooley

Helen Breathnach

PhD

Faculty of Education

Institute

na

Thesis type

By Publication

ePrint ID

110539

Email

h.breathnach@qut.edu.au

Thesis topic

Children's perspectives of play in an early childhood classroom

Description

While play is valued conceptually and pedagogically, its place in early years settings is under increasing pressure. Framed by the sociology of childhood, this ethnographic study in a Queensland Preparatory Year classroom investigated children's perspectives of play, and the ways in which they engaged in activities in an environment where play-based learning was supported. Video-recorded observations and conversations with children showed their complex understandings of classroom activities, raising questions about what counts as 'play' and 'work' for children. Findings have implications for enhancing children's agency in classroom practices, and identify methodological considerations for respecting children's agency as research participants.

Supervisors

Lyndal O'Gorman, Susan Danby

L o a n

D a o

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

103197

Email

ltkdao@ymail.com

Thesis topic

Leading the implementation of the national curriculum: A case study in one Queensland school

Description

This research investigated how members of the school curriculum leadership team in a P-12 independent school led the implementation of the Australian Curriculum, and the challenges and enablers they encountered in this implementation. The findings suggest members positioned higher in the school hierarchy tend to refer more to direct use of powers, while those positioned lower in the school structure tend to refer more to indirect use of powers. Moreover, school leaders should consider the interactive nature of the change process in their planning and implementation of large-scale education reform, as it can facilitate or hinder such implementation.

Supervisors

Lisa Ehrich, Deborah Henderson, Neil Cranston (University of Tasmania)

Sandra Grant

PhD

Faculty of Education

Institute

na

Thesis type

By Publication

ePrint ID

107908

Email

skgrant100@gmail.com

Thesis topic

Kindergarten teachers' work and a new quality agenda

Description

This institutional ethnography examines kindergarten teachers' work during rapid policy change that addressed new quality improvement agendas. Policy restructures heralded the transition to a national Early Years Learning Framework and a National Quality Framework for Australian early childhood education and care services. Teachers' accounts highlighted their reorientation of work practices to manage the pressures of accountability and production of evidence connected to the discourse of quality improvement articulated in Australian early childhood education and care policy. The transition to increased governance contributed to disjunctures between policy implementation and the experiences of enacting policy.

Supervisors

Susan Danby, Barbara Comber, Maryanne Theobald, Karen Thorpe

Sandra Houen

PhD

Faculty of Education

Institute

na

Thesis type

By Publication

ePrint ID

108029

Email

slhouen@gmail.com

Thesis topic

Teacher Talk: “I wonder...” request designs

Description

Preschool teacher interactions with children and how they design requests for information were investigated. The teachers frequently used questions as a pedagogical strategy to elicit knowledge. Teacher questions, however, were found to be problematic in encouraging children to answer a question. When teachers changed their strategy from a question design to an ‘I wonder...’ request design, children were found to be more likely to respond, to display their knowledge and agency. These findings support teachers to build a repertoire of pedagogic strategies to encourage children’s contributions, and highlights the significance of teacher-child talk within the quality agenda in early childhood education.

Supervisors

Susan Danby, Ann Farrell, Karen Thorpe

K u a n h a t h a i

K u a d n o k

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

106915

Email

ankus_h@hotmail.com

Thesis topic

Pedagogies and power relations in Thai English foreign language writing classrooms: A critical ethnography

Description

Using critical applied linguistics, and drawing on the concept of power, as theorised by Foucault, this study examines issues of power and pedagogical practices that influence the teaching of writing to Thai English Foreign Language (EFL) primary students. This research adopted Carspecken's critical ethnographic approach to gather data. The research yielded findings about the power relations that operate in the enactment of EFL pedagogies for teaching writing in Thai schools. The research has theoretical significance for understanding EFL writing education in Thailand in the context of the international spread of English in the twenty-first century.

Supervisors

Radha Iyer, Kathy Mills

L a n P h u o n g

L e

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

103848

Email

phuong213@gmail.com

Thesis topic

Aligning specialist English language curriculum in higher education with development imperatives and workplace communication needs in Vietnam: A case study of the Vietnamese petroleum industry

Description

This research investigates the alignment between English language communication in multinational joint ventures within the Vietnamese petroleum industry and a university-based English for Specific Purposes (ESP) course designed for petroleum engineering students. The study identified necessary knowledge for professional workplace communication and the extent to which these knowledge types are currently taught in the university course, and found that levels of misalignment exist between the two. Contextually-appropriate communication requires knowledge of participants, the organisation and social norms of interaction, which was lacking in the ESP course. The findings of this research will improve recognition of workplace communication and contribute to innovations in ESP course design and teaching.

Supervisors

Margaret Kettle, Hitendra Pillay

Andrew Leichsenring

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

109489

Email

andrew.leichsenring@hdr.qut.edu.au

Thesis topic

The development of preservice teachers' professional practice and identity through immersion in a school community

Description

This research is a case study exploring the professional teacher identity development of six fourth-year preservice teachers who participated in a year-long immersion pathway in schools. This thesis adopts an interpretivist epistemology in order to understand the meanings of the preservice teachers' actions, and their experiences and histories. Data was collected throughout the year via interviews, an online discussion board, and the collection of professional artefacts. Data revealed that participation in a year-long immersion pathway provided unexpected, challenging but rewarding experiences in relation to building a professional teacher identity beyond the usual preservice program.

Supervisors

Donna Tangen, Elizabeth Curtis

Thi Chau Ngan Nguyen

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

110536

Email

ntchaungan5979@yahoo.com

Thesis topic

Aligning English for Specific Purposes (ESP) curriculum with industry needs: Language practices for Vietnam's globalised workplaces

Description

The case study reported in this thesis investigated the types of English used in workplaces at the forefront of globalisation in Vietnam, namely Customs in an international airport and an import/export company. The level of alignment was then sought between these naturally-occurring genres and the English for Specific Purposes (ESP) curricula designed for graduates. Through an understanding of the sociolinguistics of mobility, the study found that the workplaces demanded functional English with a focus on communication whereas the courses largely taught lexicogrammatical knowledge. The findings contribute to greater understanding of the need for alignment and how it can be achieved.

Supervisors

Margaret Kettle, Catherine Doherty

Jennifer Oakley

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

102493

Email

principal@amriverschool.org

Thesis topic

Understanding emotional climate: Interaction rituals and cogenerative dialogue in a beginning science teacher's classroom

Description

This doctoral study contributes to the growing body of research about classroom emotional climate. This study demonstrates that unsuccessful classroom interactions involving disruptive students perpetuates a cycle of non-membership in the classroom and further unsuccessful interactions. This cycle led to negative emotional energy and negative perceptions of classroom emotional climate for these students. However, introducing ongoing cogenerative dialogue where students experience successful interactions with the classroom teacher, provided impetus for these students to transfer their membership of cogenerative dialogue into the classroom setting. This created a cycle of positive interactions, reaffirming their membership of the classroom group.

Supervisors

Donna King, Stephen Ritchie, Kar-Tin Lee

Alan Ogilvie

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

104231

Email

dogilvie@bbc.qld.edu.au

Thesis topic

Personal reflexivity and the construction of adolescent vocational identity

Description

This thesis reports on the extent to which, and in what ways, adolescents in their final year of senior schooling adopt a process of reflexive internal conversations to help formulate vocational identity. Ten students in an Independent School in Australia developed their vocational identity as a self-story that emerged over 12 months from an aggregation of smaller relevant event stories. The identity story and the progress made towards its development revealed that narrative identity formulation involves different reflexive input, but also revealed its development as a social enterprise. The results suggest that reflexive identity interventions can significantly benefit student transition from senior schooling.

Supervisors

Mary Ryan, Derek Bland

Rajibussalim

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

108771

Email

rajibussalim@outlook.com

Thesis topic

The impact of industry-based learning programs on science, technology, engineering and mathematics students: A case study of Indonesian higher education

Description

This thesis examines the impact of Industry-Based Learning programs on Science, Technology, Engineering and Mathematics (STEM) undergraduate students at Higher Education institutions in Indonesia. The industry-based learning programs are commonly implemented under a bigger umbrella of University-Industry Collaboration. This research utilises a qualitative approach and adopts the case study method to capture the perceptions and real-life experiences of the respondents.

Supervisors

Tony Sahama, Hitendra Pillay

Caroline Rueckert

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

107901

Email

caroline.rueckert@qut.edu.au

Thesis topic

Conceptions of care in international higher education in Australia

Description

This thesis analyses conceptions of care within the public discourse of international higher education in Australia from 2002-2013. It examines a series of public texts that specifically address questions about the 'care' and 'duty of care' that government and institutions afforded during this time period to international students studying in Australia. I trace through the conceptions of care that are articulated within these documents, analyse how they both constitute and are constitutive of wider social practices within the period, and posit a new critical model of care to provide a way forward for how we might practice care more effectively within international higher education, both in Australia and elsewhere.

Supervisors

Joanne Lampert, Margaret Kettle

Tracey Sempowicz

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

104288

Email

tracey.sempowicz@qut.edu.au

Thesis topic

Examining the primary school experiences of intercountry adoptees: Perspectives of adoptive parents and children

Description

Intercountry adoptees represent a minority group in Australian schools. This research reveals that the majority of children in this group appear to adjust well and have positive school experiences. However, results also show that the impact of attachment disruption and complex trauma on these children's development and subsequent school experience may not be understood by school personnel. This qualitative multicase study uses attachment, trauma, child development and social constructionist theories to examine the primary school experiences of intercountry adoptees, from the perspectives of adoptive parents and their children. This study recommends a 'Consultative Partners' Model for managing the intercountry adoptee's school experience, which makes better use of available social resources and places the child at the centre of policy and practice considerations in schools.

Supervisors

Suzanne Carrington, Derek Bland, Judith Howard

M a r n e e

S h a y

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

107925

Email

ms.shay@qut.edu.au

Thesis topic

Counter stories: Developing Indigenist research methodologies to capture the voices of Aboriginal and Torres Strait Islander staff in flexi school contexts

Description

The focus of this study was to centre the voices and experiences of Aboriginal and Torres Strait Islander peoples in flexi school context. The voices prominent in this study are Aboriginal and Torres Strait Islander educative staff in flexi schools and my voice, as an Aboriginal researcher. Flexi schools are engaging with high numbers of Indigenous people, yet this context of schooling is relatively absent from the broader Indigenous education discourse. This qualitative study explores the experiences of Indigenous staff in flexi schools in Queensland, Victoria and Western Australia. Using autoethnography, I documented my experiences as an Aboriginal education researcher using yarning methodology in institutionalised education settings to consider new uses of Indigenist methodology and identify practical implications for Indigenous researchers using Indigenous ways of being, knowing and doing in settings that have historically perpetuated exclusion, imperialism and racism.

Supervisors

Joanne Lampert, Grace Sarra, Denise Proud (University of the Sunshine Coast)

N e r i d a S p i n a

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

104977

Email

n.spina@qut.edu.au

Thesis topic

The quantification of education and the reorganisation of teachers' work: An institutional ethnography

Description

This thesis explores how significant aspects of teachers' work are being re-organised by the rise of large scale assessment regimes. The research shows how teachers' work is connected to chains of texts that link education data to funding and performance management. While public and institutional discourses suggest teachers make individual decisions to 'teach to the test' in response to high stakes testing, this research demonstrates that significant aspects of teachers' work both in and out of the classroom is orchestrated by series of policy texts that flow from governments to bureaucrats and ultimately into schools.

Supervisors

Suzanne Carrington, Barbara Comber, Valentina Klenowski, Jessica Harris (The University of Newcastle)

Takahiro Yokoyama

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

101737

Email

yokoyamt@hotmail.com

Thesis topic

The impact of TESOL teacher education on job satisfaction for native English speakers teaching English to speakers of other languages in Japan

Description

This study examines potential effects of teacher training or education in Teaching English to Speakers of Other Languages upon job satisfaction of native English speaker teachers in Japan. While multiple regression analyses discovered only certain types of training showed a positive influence, the interview participants revealed how their existing skills were often not fully utilised in the Japanese context. This thesis discusses the pedagogical implications and recommendations for teacher education, along with administrative implications and suggestions for the future recruitment of native English speaking teachers in Japan.

Supervisors

Karen Woodman, Paul Shield, John Lidstone

Lynette Zollo

PhD

Faculty of Education

Institute

na

Thesis type

Traditional

ePrint ID

112362

Email

l.zollo@qut.edu.au

Thesis topic

Initial teacher education for early childhood teachers: A rhizomatous inquiry

Description

This project is a study of how initial teacher education works for early childhood preservice teachers and what it does. It brings to light some of the multidimensional dynamics that operate in initial teacher education. Using a rhizomethodological approach, the inquiry found that the politics of belonging, border crossing, and respecting the alterity of an Other offer new ways for thinking about how initial teacher education works. Initial teacher education program, policy and pedagogy implications are generated by this inquiry and future research pathways are proposed.

Supervisors

Kerryann Walsh, Felicity McArdle

Creative Industries Faculty

Antonietta Rea

MPhil

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

114097

Email

area136@hotmail.com

Thesis topic

The enchanted drive: Landscape in motion

Description

The practice-led research project investigated and creatively responded to the perceptual experience of driving through a hinterland woodland escarpment. The research dealt with the painting medium and explored theories and practices to portray shifts in perception, interpenetrating states, flow, strobe sunlight and life force in a driver-car mediated landscape plenum. The painting series on aluminum panels present the memory of what was just glimpsed together with the anticipation of the splendors up ahead, with the present to create a multiplicity of sublime perceptual cognition.

Supervisors

Leah King-Smith, Mark Pennings

I n d i a

B r e e n

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

106744

Email

indiarbreen@gmail.com

Thesis topic

Miniature thunder: Inscribing the self in ekphrastic poetry

Description

This practice-led research project considers how the figure of poetic self is inscribed in the ekphrastic poem and looks at how ekphrasis can intersect with confessional poetics to form a hybrid mode. This mode of hybridity guides my own creative practice and creates an expansion of the term ekphrasis, as ekphrasis illuminates that it is never a static interaction, but a mode that entails a verbal representation of the artwork as well as aspects of the confessional self.

Supervisors

Sarah Holland-Batt, Lesley Hawkes

Elisa Carmichael

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

108051

Email

leecee_carmichael@hotmail.com

Thesis topic

How is weaving past, present, futures?

Description

This researcher is a descendant of the Quandamooka people from Minjerribah and Moorgumpin, North Stradbroke and Moreton Island. This practice-led research project explores the application of traditional weaving techniques in creating contemporary forms of fashion acknowledging the strength and structure of weaving practices across Australia. The resulting collection of the researcher's woven garments is thus both a cultural expression and political statement. As a practicing Indigenous visual artist, this paper is a brief introduction to the researcher's contribution to Indigenous Australian Fashion.

Supervisors

Kathleen Horton, Jennifer Craik

Hele Ellis

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

107658

Email

heleellis@gmail.comn

Thesis topic

Decentering the subjective: The transcendent experience of formlessness in an abstract expressionist painting practice

Description

This practice-led research project is based on the experimental strategy of Formlessness within painting, a negation of representation within the compositions, which potentially act as a pathway to sensory immersion and without a subject-matter to an awareness of Self. The colour palette chosen for the colour fields introduces chromatic couplings that are specifically hung for maximum charge. The colours present as taking on their own lives, explaining the compelling force behind these works that lead to a pure sensation. Key tenets of Anthroposophy - with particular concern towards Steiner's writing on colour - are central to the theoretical position the project takes.

Supervisors

Leah King-Smith, Victoria Garnons-Williams

A n d e r s

G r o e n n i n g s a e t e r

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

108954

Email

agronningsaeter@gmail.com

Thesis topic

Musical bedroom: Models of creative collaboration in the bedroom recording studio

Description

This project explores the ways that bedroom recording studios influence creativity and collaboration during the music production process. Bedroom studios offer a number of creative and financial advantages over traditional recording studios, although their use as a place of creative collaboration also offers significant challenges. Drawing on creative practice research frameworks and interview data collected from collaborators and other practitioners, I identify how the bedroom studio occupies a precarious space between 'professional space' and 'hobbyist space', how this space is defined by discourses of legitimacy, and how my creative practice as a music producer is shaped by these issues.

Supervisors

Gavin Carfoot, Yanto Browning

A v r i l

H u d d y

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102338

Email

avrilandmick@gmail.com

Thesis topic

A contemporary model for dance artists in residence in secondary schools

Description

This practice-based research inquiry investigates Artist in Residence projects being delivered in Australian Secondary Schools. Through an analysis of Artist in Residence programs and models of practice, dance creativity and creative processes, and two case studies from my own professional practice, I have created a contemporary model of practice for dance artists in residence in Secondary Schools and communities. The findings from this research will provide insights into how best to promote rich creative experiences and sustainable arts practice within schools and their broader local communities, long after the conclusion of an arts project.

Supervisors

Shaaron Boughen, Judith McLean

G r a c e

K i r k

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

102954

Email

gracekirk92@gmail.com

Thesis topic

Postcolonial privilege in the Pacific: Interrogating tropes in literature set in Vanuatu

Description

This creative writing project explores the nature of postcolonial life in the South Pacific island Republic of Vanuatu, through a reflective memoir of grief and place. The narrative explores the privileges of the expatriate lifestyle in Port Vila, focusing on the role and relationships shared with domestic staff. The accompanying exegesis surveys significant creative works set in Vanuatu in order to examine how ni-Vanuatu people have been represented historically, in order to identify existing tropes and encourage sensitive representation in the developed narrative.

Supervisors

Sarah Holland-Batt, Rohan Wilson

J a c o b

L a u b e

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

107899

Email

jlaube1989@gmail.com

Thesis topic

Understanding artist development: How do producers support the development of artists through the production process?

Description

This thesis examines the concept of 'artist development' in music, identifying how musicians develop through the production process, and the role that the producer can play in such development. The study outlines the history of artist development in the music industry and the role of the record producer as an auteur figure, connecting this broad context with creative practice through the production of two EP recordings. Reflecting on artist development from the perspective of producer, the author identifies key elements of the production process that can contribute to the development of artists in a studio setting.

Supervisors

Gavin Carfoot, Yanto Browning

J a c i n a

L e o n g

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103761

Email

jacina.leong@qut.edu.au

Thesis topic

'When you can't envision, you can't give permission': learning and teaching through a STEAM network

Description

This thesis proposes a framework for learning and teaching through an interdisciplinary STEAM (Science, Technology, Engineering, Arts, Mathematics) network. The framework was developed from teaching experience, interviews with STEAM institutions and practitioners, and practice-led research in the field. This thesis recommends adopting practices seen in STEAM initiatives in North America to rapidly developing Australian experiences, approaches, attitudes and motivations for STEAM education, and advocates the implementation of open studio art educational models to help shape new pedagogical experiences in the STEAM field.

Supervisors

Mark Pennings, Jaz Choi

Paul Metcalf

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102704

Email

nickmetcalfe1@yahoo.co.uk

Thesis topic

Learning and teaching the art of sound design: An analysis into determining best practices

Description

The aim of this study was to investigate the learning and teaching of sound design in higher education contexts. Two main aspects were examined: firstly, an investigation into published resources, addressing sound design as creative practice, and, secondly, an examination of the relationship between technical process and creative skills development within curriculum design. The perceived educational benefits of collaborative project and other practical exercises were also investigated, contrasting them with technical, skills-based learning. Finally, the study suggests avenues for future development that may provide better access to reference materials that support sound design students' development as creative, industry-ready practitioners.

Supervisors

John Willstead, Gavin Carfoot

M a r i e

M u n k a r a

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

107649

Email

marie.munkara@hotmail.com

Thesis topic

A living landscape

Description

This thesis investigates Land, People, and Language of the Tiwi Islands in the Northern Territory, prior to and post colonisation by the missionaries in 1911. The use of existing scientific knowledge in contrast to Tiwi knowledge demonstrates that the ancient Tiwi knowledge system is fundamental to the reconstruction and maintenance of Tiwi language and history. This creative work demonstrates how Tiwi knowledge, land, relationships, language and history can inform contemporary creative writing practice.

Supervisors

Sandra Phillips, Sharyn Pearce

N a t a s h a

N a r a i n

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

111574

Email

n.narain@hdr.qut.edu.au

Thesis topic

Mapping a liminal: Nurturing of kantha into contemporary art

Description

This project is a creative practice-led exploration of the Bengali textile embroidery tradition of kantha and its potential influence on contemporary art practice. It discusses the gendered history of kantha and its relevance to the contemporary lives of women. The project's key findings are twofold: firstly, that kantha practice is inadequately understood from the perspective of the maker, and secondly, that an artist does not have to replicate the literal craft processes of kantha in order to evoke its emotional significance, but that by applying its conceptual narrative strategies and its approach to mark making, these techniques are applicable in cross-media and interdisciplinary contemporary art forms.

Supervisors

Courtney Pedersen, Leah King-Smith

J u d i t h

N e w t o n

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103633

Email

judithnewton@y7mail.com

Thesis topic

Social media implementation models in the Australian emergency management sector

Description

This thesis explored the Australian emergency management sector's integration, management and use of social media. The research generated new models that describe how social media has been implemented in these organisations. This research has strengthened the knowledge base about organisational social media use and its findings can assist organisations to evaluate the way the social media function is positioned in their structures, in order to determine if the placement, staffing and management of the function is aligned to their business and communication goals.

Supervisors

Jean Burgess, Axel Bruns

Carly O'Neill

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

108026

Email

cm.oneill@qut.edu.au

Thesis topic

Exit stage left: Mid-career transitions of female stage managers in Australia

Description

Stage managers are critical participants in the Australian live performance industry, which in 2015 generated almost \$1.5 billion in revenue. Australian census data indicates that this industry is being serviced by a disproportionately young, female workforce (ABS 2011). This study is an investigation into the career transition experiences of professional female stage managers in Australia. The study outlines the career development challenges experienced during mid-career and prompt premature exits from the profession. This research presents the experiences of professional female stage managers who have worked within Australia's peak performing arts companies (AMPAG 2016), and makes recommendations regarding workforce retention strategies, educational models, psychological and social support mechanisms and organisational and sectoral strategies that will lead to increased sustainability within the profession.

Supervisors

Ruth Bridgstock, Sean Mee

Elizabeth Vilmanis

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

108028

Email

lizzie@lizzievilmanis.com

Thesis topic

Seeing the chameleon: Barriers to making dance work for independent dance creators in Brisbane

Description

This study advances knowledge about the Australian independent dance sector and identifies existing barriers that impacts the ability of Brisbane independent dance creators to make dance work. This thesis presents a three-tier framework to systematically address and prevent the recurrence of these existing barriers. This research utilises a mixed methodology that generates related data, including analysis of practice, a literature and contextual review of claims about practice, and a survey of Brisbane independent dance artists.

Supervisors

Clare Dyson, Bree Hadley, Susan Street

Elena Volkova

Masters by Research

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

104570

Email

storymuseum@gmail.com

Thesis topic

Operation 'Homecoming': Exploring the capacity of transmedia storytelling to support integration of the female defence force personnel back in to civilian life

Description

This project, 'Operation Homecoming', articulates the role creativity can play in the lives and wellbeing of the female military veterans. Research shows that military service can lead to profound changes in identity, affecting veterans' perception of themselves and their relationship to the world. Recognising the lack of knowledge about the needs of women transitioning from the military service back into civilian life, this project explores the capacity of transmedia storytelling to help these veterans recognise, embrace and articulate their new identity, foster self-representation and confidence. This thesis presents the approaches and the outcomes of this innovative interdisciplinary research.

Supervisors

Helen Klaebe, Julie-Anne Carroll

G r a n t

M c L a y

Professional Doctorate

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

109619

Email

gamclay@hotmail.com

Thesis topic

Movement capture: A choreographic re-interpretation of the physical dynamics and sequential movements of a rugby union match

Description

This thesis explored ways of coding and reinterpreting physical movement data from sport to create movement responses within a choreographic practice context in the field of contemporary dance. The study consisted of the notation and analysis of the physical dynamics and sequential body patterns of the high impact sport of rugby union to inform and influence the creation of movement scores that resulted in the creation of a new contemporary dance work and contributed to furthering the knowledge, understanding and practice of choreographic approaches to dance.

Supervisors

Gene Moyle, Laurent Frossard, Lee McGowan, Carol Brown (The University of Auckland)

A n a s t a s i a

B o o t h

PhD

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

114001

Email

boothanastasia@gmail.com

Thesis topic

Playing with me: Feminine perspectives in fetishism and contemporary art

Description

While many female contemporary art practitioners employ erotic fetishism in their work, the discourse surrounding fetishism is still perceived as primarily masculine. Critical feminist theorists are revisiting the fetish in order to explore previously marginalised and undervalued considerations of female sexual agency. While these theorists hint at fetish's strategic creative application and its ability to question hegemonic depictions of passive femininity, analyses do not articulate how sexual fetishism could be understood as a distinct creative stratagem. In response, this creative practice-led research project renegotiates fetishism as a critical feminist strategy and a distinct creative method in artistic practice.

Supervisors

Courtney Pedersen, Andrew McNamara

L y n n e

B r a d l e y

PhD

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

104124

Email

lynn@zenzenzo.com

Thesis topic

Found in translation: Transcultural performance practice in the 21st century

Description

This practice-led PhD proposes Cultural Translation as a methodology for engaging with transcultural performance as innovative and ethical practice. The investigation draws upon the decade-long collaboration between Australian contemporary performance company Zen Zen Zo Physical Theatre and Japanese Butoh company Dairakudakan. The study addresses questions regarding the transposition of cultural product; the ethics of cultural exchange; and artistic innovation in transcultural performance praxis. The study's findings include a cultural translation of Maro Akaji's Butoh training and devising. These methods profoundly influenced the creation of "In the Company of Shadows", the original performance work which constituted the core of this study.

Supervisors

Paul Makeham, Sean Mee

C a m e r o n

C l i f f

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103325

Email

cliffhangerprod@gmail.com

Thesis topic

Transmedia storytelling strategy: How and why producers use transmedia storytelling for competitive advantage

Description

This thesis is a cross-disciplinary study of storytelling strategy. It uses business, marketing, advertising, media and cultural studies approaches and compares big-budget storytellers, like Hollywood, with small, innovative, and independent producers. It analyses how producers in these different contexts and competitive environments use a particular strategy, transmedia storytelling, to construct innovative multiplatform projects. It develops an audience engagement framework specific to transmedia texts and criteria for assessing the competitive advantage of different transmedia strategies. In doing so it conducts three case studies of leading, successful transmedia projects; Doctor Who, Sofia's Diary and The Lizzie Bennet Diaries.

Supervisors

Jon Silver, Stuart Cunningham

Shital Desai

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112766

Email

shital.goran.desai@gmail.com

Thesis topic

Embodied Intuitive Interaction in Children

Description

Children are increasingly using complex products, so it is increasingly important that these products should be intuitive to use. This research studied the role of Embodiment in intuitive interaction in children. Children were observed playing with Jenga (both the physical version and the app), Monkey Blocks—a gravity-defying stacking toy and Osmo—a mixed reality toy. The research resulted in an interaction model that will help designers to design Embodied intuitive products for children. The outcomes build on the ongoing research in intuitive interaction and provide insight into how designers could design embodied intuitive products for children.

Supervisors

Alethea Blackler, Vesna Popovic

Stefanie Duguay

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

111892

Email

stefanie.duguay@gmail.com

Thesis topic

Identity modulation in networked publics: Queer women's participation and representation on Tinder, Instagram, and Vine

Description

This thesis examines queer women's negotiation of multiple audiences on Tinder, Instagram and Vine. It combines analysis of platform interfaces, user content, and interviews to identify queer women's modes of participation and self-representation with attention to platforms' influence on this activity. Findings demonstrate participants' engagement in a set of practices that I term "identity modulation"—a process whereby individuals draw on platform features and functions to adjust the prominence of sexual identity in relation to other personally identifying information. These findings illuminate features, policies, and user cultures that impede identity modulation, warranting changes that facilitate diverse users' digital participation.

Supervisors

Jean Burgess, Elija Cassidy

L a w r e n c e

E n g l i s h

PhD

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

110620

Email

lawrence@room40.org

Thesis topic

The listener's listening

Description

The listener's listening explores the role of audition and creative practices in the sonic arts. It looks at the relationship between listener and recording device and argues that listening is always agentive, embodied and affective, because the listening is always about the time and place in which the listener listens. It explores how the cultural and social experiences of the artist researcher affect listening through an exploration of the practice of field recording. The thesis argues for a new theoretical framework called relational listening that accounts for this relationship between listener and recording device.

Supervisors

Keith Armstrong, Prof Philip Graham

D a n i e l

F i l o n i k

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

110597

Email

filonik@web.de

Thesis topic

Participatory data analytics: Designing visualisation and composition interfaces for collaborative sensemaking on large interactive screens

Description

This thesis proposes the development of interfaces to support collaborative, community-led inquiry into data, which is referred to as Participatory Data Analytics. Over the course of multiple iterations spanning three use cases, this research developed a novel visualisation interface named DataChopin. Its distinctive characteristics are the use of large-scale, vertical displays as a shared desktop, along with natural, touch-based interactions for incremental construction of visualisations. The evaluation of this prototype has yielded recommendations for participatory research practitioners and designers of data exploration interfaces. In doing so, this research takes steps towards greater accessibility and democratisation of data analytics capabilities.

Supervisors

Markus Rittenbruch, Marcus Foth

S t e v e

F o x

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

114128

Email

steve.fox@connect.qut.edu.au

Thesis topic

The people behind the press: Building social capital in networked news models

Description

This thesis lays a foundation for understanding people's perceptions and engagement in news production, during a time of limited transparency about why, how, and where information spreads online. Through creating, operating, and examining a news organisation purpose-built for this project, it was possible to describe critical gains and losses for the practice and business of doing news online. In interpretation, the dissertation documents a process of social capital being built among participants in the news operation, and posits that this will translate into a social infrastructure that can sustain such operations.

Supervisors

Lee Duffield, Susan Carson, John Cokley (The University of Queensland)

Elizabeth Heck

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102465

Email

elizabhk@gmail.com

Thesis topic

Social learning and the facilitation of co-creative media practice in community media, arts and cultural organisations

Description

This thesis examines the significance of social learning in community media and arts contexts. This research analyses organisational storytelling in community cultural development and community media sectors, as a way of enacting social change from within a community. These organisations exist as hybrid learning environments, and they must maintain standards of quality in their processes and outcomes, in order to be of ongoing value in their communities and to funders. Such community organisations create networked social learning systems, and the co-creative media practice explored in this thesis is learnt 'in situ' in communities of practice.

Supervisors

Christina Spurgeon, Michael Dezuanni

Penelope Holliday

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103101

Email

pa.holliday@qut.edu.au

Thesis topic

The shifting city: A study of contemporary fictional representations Of Melbourne's inner and outer suburban spaces

Description

This project explores the complexity of Melbourne's inner and outer suburban spaces as portrayed within contemporary Melbourne fiction. The study is a textual analysis of the works of several Melbourne writers whose writings feature their city's suburbs as significant sites in the exploration of the relationship between identity and place. I argue that Melbourne, as a city of suburbs, is a paradigm worthy of writerly and critical attention. The fictional texts explored in this thesis are Christos Tsiolkas's *The Slap* (2008), Sonya Hartnett's *Butterfly* (2009), Steven Carroll's novel *The Time We Have Taken* (2007) and Wayne Macauley's novel *Blueprints for a Barbed-Wire Canoe* (2004).

Supervisors

Lesley Hawkes, Vivienne Muller

Erica

Jeffrey

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112504

Email

ericarose@peacemoves.org

Thesis topic

Dance in peacebuilding: Space, relationships, and embodied interactions

Description

This study contributes to the scope of arts-based peacebuilding research through practice-based field research focusing on dance in peacebuilding in the Asia-Pacific region. It argues that through embodied ways of knowing, dance activates multiple ways to understand space, dialogue, and relationality and contributes diverse approaches and knowledge, expanding the range and diversity of peacebuilding practice and research. This thesis investigates the experiences of local facilitators, participants, and the researcher as both a reflective practitioner and practitioner-researcher in Fiji and the Philippines. The qualitative research methods employed include strategies of the reflective practitioner, participant semi-structured interviews, and sensory ethnography.

Supervisors

Gene Moyle, Rachel Pedro, Roland Bleiker (The University of Queensland), Lesley Pruitt (The University of Melbourne)

Michael Lee

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

108823

Email

m103.lee@hdr.qut.edu.au

Thesis topic

NBA memes: The role of fan image macros within the online NBA fan community

Description

This project explores internet memes, pinpointing the utilisation of image macros by online-based basketball fans, as a cultural tool for communication, conversation, critique and debate. More specifically, this study focuses on how basketball fans, through image macros, are engaging with different facets of culture, beyond professional sports. The nature of internet memes allow users to create texts that express the tone of their feelings, and this research contends that the idiosyncratic nature of basketball memes are motivated by non-serious sports-related banter, and yet, can potentially offer legitimate cultural insight by often drawing on popular cultural myths and trends.

Supervisors

Stephen Harrington, Jean Burgess

J i a j i e

L u

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112817

Email

jjajie.lu@hotmail.com

Thesis topic

Understanding the Chinese diaspora: The identity construction of diasporic Chinese in the age of digital media

Description

This thesis investigates the formation of diasporic Chinese identity in the current media landscape. Through reviewing the history of Chinese emigration and the evolution of Chinese identity, this thesis proposes mediated social interaction as a new approach to the formation of Chinese identity. Following this proposal, this thesis explores how the social interactions and patterns of the Chinese diaspora in Australia have changed under the influences of media development. This research finds that transnational communications with family and friends in China via social media have become a significant part of Chinese diasporic social life, allowing people to remain more socially and culturally connected with China than before. Simultaneously, diaspora Chinese use different social media platforms to maintain different social networks. They deliberately present different aspects of their national and parochial identity to adapt to different social settings.

Supervisors

Terry Flew, Peta Mitchell

Briony Luttrell

PhD

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

108032

Email

briony.m.L@gmail.com

Thesis topic

A cultural semantics of string arrangement for recorded popular music: A model for analysis and practice

Description

This thesis contributes new knowledge about writing and analysing string arrangements for recorded Popular music. I show how string arrangements can be categorized under one of seven distinct styles that are made coherent and meaningful through their identification with specific social and cultural institutions. The string styles are derived from and situated in a cultural and historical corpus of 500 albums released between 1952 and 2011. The thesis offers a new way for arrangers to analyse examples of practice, inform new creative work, and communicate with other musical professionals about string arranging.

Supervisors

Philip Graham, Kiley Gaffney

Daniel Lynch

PhD

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

107048

Email

glowinthedork@gmail.com

Thesis topic

Holding transmedia: Narrative at the intersection of print and digital creative writing

Description

This practice-led research project explores the phenomena of narrative cohesion in developing an original transmedia novel. In doing so, transmedia storytelling is positioned as a philosophical lens that mediates the intersection of print and digital creative writing. A combination of textual analysis and media specific analysis is used to establish and articulate patterns of cohesion in an array of various transmedia and literary works. Based on this analysis, the research proposes a theoretical framework for transmedia narrative cohesion that establishes links between literary and narrative theory, media studies, and social semiotics. The framework draws from, and is applied to, the creative work *Martyrs: The life and afterlife of Collin Ampersand*, arguing 'the book', as a physical artefact, still plays a vital role on the continuum of narrative innovation and experimentation.

Supervisors

Donna Hancox, Lee McGowan

M i t c h e l l

M c E w a n

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107983

Email

mitch.mcewan@gmail.com

Thesis topic

The influence of naturally mapped control interfaces for video games on the player experience and intuitive interaction

Description

This thesis empirically explores the influence of different types of naturally mapped control interfaces (NMCIs) for video games on the player experience and intuitive interaction. Across two repeated-measures experiments on racing and tennis games, more naturally mapped controls were shown to have largely positive effects, with some differences associated with player characteristics. The compensatory effects of natural mapping for casual players are revealed, along with some aversion to NMCIs amongst hardcore players. Overall implications are discussed, and a new NMCI Dimensions Framework presented, to aid future academic and design work leveraging NMCIs to improve video game accessibility and experiences.

Supervisors

Daniel Johnson, Peta Wyeth, Alethea Blackler

G a l y n a M c L e l l a n

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107047

Email

galyna.mclellan@qut.edu.au

Thesis topic

Contemporary environmental colour design praxis in the urban context

Description

Although the term 'design praxis' has been frequently used by design practitioners in relation to everyday practice, there is a lack of empirical works that provide a theoretical framework for understanding the multidimensional notion of this process. Using constructivist grounded theory, this study developed a conceptual model of the Environmental Colour Design Praxis (ECDP) that synthesised perceptual, pragmatic, creative and social domains related to design praxis. The robust conceptualisation of the ECDP with a focus on design thinking and analysis of design experiences within contemporary social environments substantiates its theoretical contribution to understanding of the design praxis phenomena; and reveals opportunities for improvement in environmental colour design.

Supervisors

Mirko Guaralda, Jill Franz

Prudence Miles

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107547

Email

pruemiles@optusnet.com.au

Thesis topic

Teachers' use of multiplatform educational screen content: The case of Australia's SBS

Description

This study explores the development and use of educational resources to accompany Special Broadcasting Service (SBS) television programs and multiplatform program content. Through action research and participant observation methods, this study discusses the growing importance of multiplatform screen content in education, and how and why teachers use educational materials prepared by broadcasters. In doing so, it incorporates social theories of learning, particularly communities of practice theory. It concludes that, to best engage teachers and their students, education and broadcaster communities should collaborate in order to better understand authentic and informal learning.

Supervisors

Stuart Cunningham, Michael Dezuanni

D a n i e l

P a d u a

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

110533

Email

dan.padua@gmail.com

Thesis topic

The Family 'Playlist': Popular music, age and identity

Description

Popular music is central to the understanding of youth culture and has come to represent the so-called 'generation gap'. This thesis, however, argues that popular music is no longer just a signifier of generational tension. It is now an increasingly significant cultural resource that allows parents and their children to establish and maintain family relations. Using interviews from families who are fans of Queen or Taylor Swift, this research investigates how shared practices around popular music consumption contribute to a cohesive family identity.

Supervisors

Jason Sternberg, Gavin Carfoot

Leonardo

Parra Agudelo

PhD

Creative Industries Faculty

Institute

na

Thesis type

By Publication

ePrint ID

106912

Email

leonardo.parra.agudelo@gmail.com

Thesis topic

Street interventions for change: Designing with grassroots organisations

Description

This thesis explores how to achieve social change through street design interventions from the bottom-up in Bogota, Colombia. This study seeks to better understand challenges and opportunities of urban activism by examining two grassroots community organisations that tackle social issues, including inequality, poverty, and segregation. Design is increasingly being directed towards social change. This research outlines an innovative approach for urban grassroots organisations to address social issues through design. This thesis provides a critical discussion informed by empirical studies about the role of design in a post-conflict Colombia as an inclusive process for fostering social inclusion, and civic innovation.

Supervisors

Marcus Foth, Gavin Sade, Jaz Choi

Emma Potter-Hay

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103324

Email

emma.potter@connect.qut.edu.au

Thesis topic

Broadcast, promote, respond, engage: Competing understandings of the purpose and value of social media in an emergency management organisation

Description

This project examined the use of social media in emergency management organisations. It involved an organisational ethnography conducted at the Queensland Fire and Emergency Services, observing and participating in their use of social media for a period of two years. This thesis found that the organisational restructure that occurred during the study had a direct and disruptive effect on their use of social media, and describes how the organisation largely normalised (rather than adapted to) social media. In doing so, the organisation's efforts to engage in a two-way conversation with their audience were secondary to their one-way communication responsibilities.

Supervisors

Jean Burgess, Axel Bruns, John Banks

Imogen Smith

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107725

Email

imogenjsmith@gmail.com

Thesis topic

Materiality and media: Australian literary journals in the post-digital publishing ecology

Description

This research examines the role materiality plays in the literary journal field within the 'messy', 'post-digital' publishing ecology, and asks how literary journal editors exploit the languages of different media to achieve their goals. The research employs a methodology that combines interviews with Australian literary journal editors and textual analysis, complemented by a contextual review and underpinned by a theoretical framework based on the sociology of literature. Its findings contribute new knowledge on the ways that digital technologies have affected literary publishing, and can inform future policy and funding decisions in the arts in Australia.

Supervisors

Donna Hancox, Susan Carson

■

E m m a

S o m o g y i

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

110535

Email

emmasomogyi@hotmail.com

Thesis topic

The moral undead: Representations of the soul in contemporary vampire film and television

Description

This research examines representations of the soul in popular Western, post-millennial vampire film and television released between 2008 and 2017. A genre analysis, the study examines key vampire texts through the lens of sacred and secular philosophies of the soul, and argues that the contemporary vampire can be read as an ensouled creature with personhood. The research contributes to the film and television scholarship of the vampire horror sub-genre by offering a new way to conceptualize the vampire, and identifying what the study terms 'the sensitive cycle' of vampire horror.

Supervisors

Mark Ryan, Lesley Hawkes

Jordin Steele

PhD

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

102043

Email

jordin.steele@hdr.qut.edu.au

Thesis topic

The role of collaboration in contemporary opera creation: A practice-led approach

Description

This practice-led research explores the potential of multidisciplinary collaboration as a strategy to break down tacit knowledge and increase individual and group creativity. The auto-ethnographical exegesis documents the development of a major creative work, titled, *The Void and the Light*, and proposes a new collaborative model for the creation of contemporary opera. The knowledge generated from this research offers a practical insight into systematic methods for collaboration and strategies for aesthetic decision making in interdisciplinary ensembles.

Supervisors

Kiley Gaffney, Michael Whelan, Andy Arthurs

A t a

T a r a

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103998

Email

ata_tara@yahoo.com

Thesis topic

Measuring visual attributes for assessing visual conflicts in urban environments

Description

The visual relationships between a proposed development, such as a new high rise building or telecommunication tower, and its existing urban setting have become increasingly controversial for local residents, urban planners and landscape architects. Visual amenity and character are one of the most contentious issues in conflicts that go to court. This research provides a review of Planning and Environment court cases from 2000 to 2012 in Brisbane to identify different types of conflicts within the city. Taking four case studies from this database, visual amenity conflicts are analysed and three quantifiable methods for comparative analysis are proposed to assess conflict cases with greater reliability in the courtroom.

Supervisors

Gillian Lawson, Veronica Garcia Hansen, Wageeh Boles, Stephen Perry (Stephen Perry Landscape Design)

B i a n c a

T o t h

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

106023

Email

biancatoth@gmail.com

Thesis topic

Energy simulation for decision support in early architectural design

Description

This thesis proposes a framework for performance-oriented design, which supports integrated decision-making by enabling architects and engineers to work together to evaluate the energy performance of design alternatives in early stages of project development. As embedded-practice research, this investigation draws on firsthand multidisciplinary experience to identify the limitations of current tools and processes in supporting performance-oriented investigations. In response, this thesis establishes common goals and principles for an integrated energy-oriented design strategy. As a critical response to the observed shortcomings, this research developed a collaborative tool for energy design and analysis, which provides decision support by permitting practitioners to quickly, flexibly and reliably assess the performance of multiple design options early on.

Supervisors

Robin Drogemuller, Veronica Garcia Hansen, Michael Docherty

Terence Willsted

PhD

Creative Industries Faculty

Institute

na

Thesis type

By Creative Works

ePrint ID

103847

Email

j.willsted@qut.edu.au

Thesis topic

It's not the heat, it's the humidity: Developing a practice-based method for cultural history curation and dissemination

Description

This research contributes new knowledge about the curation and presentation of cultural history. Relationships between curation and performance were tested through the development of an interdisciplinary approach to capturing, storing and sharing the histories of subcultures or scenes, and the creation of a public performance centred around the Brisbane punk and post-punk music scene. This project contributes new understanding of how public stories about popular culture can be presented while simultaneously generating new knowledge about the culture itself.

Supervisors

Christy Collis, Philip Graham, Ross Gibson
(University of Canberra)

D e d y

W i r e d j a

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112171

Email

dwiredja@yahoo.com

Thesis topic

Assessment of airport service performance: A passenger-centred model

Description

Inspired by the need to assess airport performance based on the complete passenger experience, this thesis outcome, the Airport Indicators of Passenger Experience (AIPEX) Model provides a novel approach to assessing airport services. To investigate the passenger-centred role at airports, a previous conceptual model of airport service performance was thoroughly examined using quantitative and qualitative mixed-methods. The refined model, the AIPEX Model, provides a more integrated and robust approach to assessing service performance than previously available. This passenger-driven model will support design of passenger-centred airports, and the translation of passenger needs and perceptions into improved services.

Supervisors

Vesna Popovic, Thea Blackler

N o r A r b i n a

Z a i n a l A b i d i n

PhD

Creative Industries Faculty

Institute

na

Thesis type

Traditional

ePrint ID

110347

Email

rodziarbina@yahoo.com

Thesis topic

Assessing the landscape character of Malaysia's heritage urban river corridors

Description

This research advances a methodology to examine landscape character in urban river corridors, by embracing the values and meanings held by working insider communities in Malaysia's developed heritage river cities, Melaka City and Kuala Terengganu. This methodology is based on the Experiential Landscape Survey - a phenomenological approach in contemporary landscape assessment practice, which employs multiple methods to contribute to the assessment of urban river corridors. This research revealed that the working communities' important urban river corridor territories include the natural and built water-related landscape settings perceived as valuable to support and enable their working routines and personal needs.

Supervisors

Debra Cushing, Gillian Lawson

Faculty of Health

Colette Wembenyui

MPhil

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

114078

Email

wcfunyui@yahoo.co.uk

Thesis topic

Examining knowledge and self-management of chronic kidney disease in a primary health care setting: Validation of two instruments

Description

Chronic kidney disease is a major health problem in Australia. Research shows that effective self-management behaviours can slow its progression and improve health outcomes. Knowledge of this disease is an important factor in self-management. This study, conducted at Inala Primary Care, evaluated the validity and reliability of instruments designed to measure kidney knowledge and self-management. This study found that while people with chronic kidney disease engage in some self-management, their knowledge was unexpectedly low. These instruments will be useful for clinicians to use in the real world so that educational support can be targeted to patient needs.

Supervisors

Ann Bonner, Clint Douglas

S h a n n o n

B a k o n

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

107137

Email

shannon.bakon@qut.edu.au

Thesis topic

A quantitative investigation into the relationship between nursing students' learning style and success in bioscience education

Description

Bioscience is a cornerstone of nursing practice and integral to the provision of safe, patient-oriented health care. However, undergraduate nursing students experience significant andragogic barriers that influence their ability to integrate and apply bioscience knowledge. This research explored the relationships between student characteristics, learning styles and achievement within the bioscience units of the undergraduate nursing degree. The findings from this study may guide the development of innovative, student-focused teaching approaches that may improve bioscience knowledge application and integration within the clinical environment.

Supervisors

Martin Christensen, Judy Craft, Lisa Chopin

Tania Cusack

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

107734

Email

tania@handsfullofhope.com

Thesis topic

Under the skin of narcissistic kin: A thematic enquiry into the use of online blogs by adult children of perceived narcissists

Description

This thesis is an exploratory study of blog writing by adults who perceive their parents to be, or to have been, narcissistic (ACONs). The qualitative study focuses on the purpose and potential intentions or outcomes of blog use by this group, and in so doing it identifies four key themes: revealing adversity, venting about difficult relationships, rethinking identity and pursuing healing. These themes are proposed to largely follow a developmental sequence, allowing ACONs to engage in processes of identity construction and psychological healing that may be less accessible in their offline lives. The findings of the research have potential implications for mental and allied health practitioners working with adult children of narcissistic parents.

Supervisors

Areana Eivers, Mariann Martsin

Angela de Weger

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

104123

Email

angela_deweger@hotmail.com

Thesis topic

The relationship between the quality of the outdoor learning environment and physical activity in preschoolers in centre-based early childhood education and care settings

Description

A significant number of preschoolers do not meet recommended levels of daily physical activity. The early childhood education and care setting provides significant opportunities to influence and support physical activity behaviours of preschoolers. This project explored the relationship between the quality of the outdoor learning environment and physical activity in preschoolers in centre-based early childhood educations and care settings.

Supervisors

Stewart Trost, Susan Irvine

Julia Finnane

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103985

Email

j.finnane@uq.edu.au

Thesis topic

Exploring partnerships between early childhood educators and parents to promote healthy eating to children

Description

The purpose of this study was to deepen understanding of collaborative partnerships between early childhood educators and parents, with a focus on promoting healthy eating to children. The study took a predominantly qualitative approach, with in depth case studies of two long day care services. Interviews, observations and policy analysis were conducted to explore policies, procedures and practices of ECEC services in relation to healthy eating, educators' and parents' perceptions of their roles, and barriers and enablers to communication. The findings of this study have implications for both the early childhood and nutrition sectors.

Supervisors

Danielle Gallegos, Susan Irvine

P a t r i c e

H a r a l d

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

112183

Email

patriceharald@yahoo.com.au

Thesis topic

Is it too late by eight? Recognising the protective factors of culture, education and family in raising resilient Aboriginal and Torres Strait Islander children

Description

This study explores the development of cultural resilience and the strength of Aboriginal and Torres Strait Islander children in the early years (0 to eight). Cultural resilience is based on success and Indigenous worldviews. Participants indicated that culture, family and community play a significant role in growing up children. It enabled children to cope with transitioning between home, community and the school environment. Factors such as a knowing one's culture, protocols, having respect for self and others builds strength, identity, and ability to display empathy to others. Family and culture provide children from a young age with knowing where they belong, where they come from, and with strong connections to country and kin. Community enables them to navigate the many challenges they may face in a positive and respectful way.

Supervisors

Mary-Lou Fleming, Marguerite Sendall, Bronwyn Fredericks, Jenni Judd (James Cook University)

Alexander Hutchinson

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103982

Email

alexanderbhutchinson@gmail.com

Thesis topic

Identification of response pathways of prostate cancer cell lines in Hans Clevers Media

Description

Prostate cancer has been extremely difficult to grow in vitro, however recent development of a novel media has improved success rates of propagating tumour cells in the laboratory. This research defines pathways regulated by this media in different prostate cancer cells in order to identify critical factors needed for prostate cancer survival. Both common and cell line-specific responses to the media were identified, demonstrating that not all prostate cancer cells respond the same way or have the same requirements. These unique responses must be considered when cells grown in this media are used to explore potential new treatment targets.

Supervisors

Ian Vela, Anja Rockstroh, Melanie Lehman,
Colleen Nelson

S i h a m

J a m i l e

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

108151

Email

sihamjamile@hotmail.com

Thesis topic

Polymorphisms in nuclear hormone receptor
pathways in breast cancer

Description

This project investigates the relationship between potentially functional biomarkers in Nuclear Hormone Receptor Pathways and sporadic breast cancer susceptibility. This research investigates nuclear hormone receptor co-activator 1 and 3 genes using different molecular genetics methods, resulting in the ability to test their potential effect on the nuclear hormone receptor pathway in sporadic breast cancer.

Supervisors

Lyn Griffiths, Robert Smith

Mathilde Klein

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

107921

Email

mathilde.klein@hdr.qut.edu.au

Thesis topic

Characterisation of duplicated haemoglobin genes
in bivalves

Description

Haemoglobins (Hbs) are among the most well investigated proteins due to their oxygen carrying capacity. These proteins are found in many different animals where they exhibit extraordinary diversity of form, yet little is known about their distribution, function, and evolution in invertebrate lineages. This study demonstrates that multiple Hb genes are expressed in bivalve molluscs and some of these duplicated genes show tissue specific expression, because they may have undergone neofunctionalisation through gene duplication. This study also describes the generation of a comprehensive resource for the bivalve molluscs and the presence of Hb-like encoding genes in these organisms.

Supervisors

Ana Pavasovic, Peter Prentis, Louise Hafner

Stephanie Koo

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103629

Email

stephanie.c.koo@gmail.com

Thesis topic

3D reconstruction of synaptic and nuclear corticosteroid receptors distribution density in the amygdala: A feasibility study

Description

This project tested a new way of looking at different types of stress receptors (corticosteroid receptors) in the brain. The method used fluorescent markers to label the stress receptors in brain tissue, and using computer software reconstructed microscope images in 3D. This thesis provides a new research method, demonstrating how it can be used to compare different types of stress receptors at different locations in the amygdala.

Supervisors

Luke Johnson, Andrew Battle, Arnauld Belmer,
Selena Bartlett

F a n

L i u

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

107980

Email

854423047@qq.com

Thesis topic

Academic stress and mental health among
adolescents in Shenzhen, China

Description

This thesis investigates the relationships between demographic variables, academic stress, depression and anxiety symptoms among adolescents in Shenzhen, China. Academic stress was consistently the strongest risk factor for depression and anxiety. Grade level, academic performance and gender were found to be the strongest variables predicting academic stress, depression and anxiety symptoms respectively. The moderating effects of gender, residency type and grade level were also indicated in this thesis. This study has future implications in helping Chinese teachers/school staff to identify adolescents who are at risk for academic stress, depression and anxiety.

Supervisors

Esben Strodl, Hansen Sun, Janet Hou

G o v i n d a

O j h a

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

107922

Email

ojhagovinda@gmail.com

Thesis topic

An evaluation of melanopsin function and light exposure in depressive disorders

Description

Melanopsin cells in the eye signal environmental light to multiple brain areas including those for circadian rhythms, which control the pupil light reflex and mood. Melanopsin function and daylight exposure in humans with non-seasonal depression was determined to investigate the role of light on depression. Normal melanopsin and light exposure was found in patients with non-seasonal depression and there was no relationship between hours in daylight and melanopsin. This novel finding advances our current understanding on the relationship between environmental light and melanopsin in depressive disorders.

Supervisors

Beatrix Feigl, Andrew Zele, Leanne Hides

Leanne Ragonesi

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

113719

Email

ragonesi_leanne@hotmail.com

Thesis topic

Structural characterisation of the term placenta:
Maternal obesity and gestational diabetes mellitus

Description

This thesis investigated placental histopathologies and perinatal outcomes from women with normal glycaemia, women with maternal obesity and women with gestational diabetes mellitus. The incidence of placental maturational defects were higher in the placentae from women with maternal obesity and women with gestational diabetes mellitus, suggesting that obesity and gestational diabetes mellitus may be associated with structural changes to the placenta that may affect function. In addition, this study optimised a method for extracting and amplifying microbial DNA from formalin-fixed tissue, in order to perform microbial examination in parallel with histopathology analysis using the same tissue specimen.

Supervisors

Elise Pelzer, Kenneth Beagley, Flavia Huygens,
Paul Dennis (The University of Queensland)

S a m r a t

S a r k a r

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103277

Email

samratsar@gmail.com

Thesis topic

Blur adaptation with source and observer methods

Description

Blur adaptation is the improvement of visual and perceptual performance of an individual after they spend time viewing a blurred target. It is possible to generate blurred images through the use of both the source and observer methods. This study compared blur adaptation using both methods, while using the combination of defocus and higher-order aberrations. This process saw participants adapt to a blurred natural scene for one minute, then perform a visual acuity task. Tumbling Es. Negligible blur adaptation was noticed for both source and observer methods. A longer adapting period might be necessary to achieve significant improvement in visual acuity following blur adaptation.

Supervisors

David Atchison, Marwan Suheimat

Patricia Sinasc

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

104436

Email

patnrick@optusnet.com.au

Thesis topic

Residential aged care health workers' knowledge, attitudes and confidence in providing care to a person with a stoma: a needs analysis for education

Description

This study of residential aged care health workers' knowledge, attitudes and confidence in providing care to an older person with a stoma was conducted to identify characteristics of learners, and educational needs, to effectively provide stoma care. The findings inform development of an educational program aimed at building aged care health workers' capacity to give appropriate and confident stoma care to residents.

Supervisors

Helen Edwards, Kathleen Finlayson

Stephanie Sweeper

Masters by Research

Faculty of Health

Institute

na

Thesis type

Traditional

ePrint ID

114075

Email

stepsweeper@gmail.com

Thesis topic

Non-formal coach education in a secondary school high performance volleyball academy

Description

Using a participatory action research methodology, a coaching education intervention embracing the organising principles of a Continuing Professional Development program and the skill acquisition principles of non-linear pedagogy was designed and implemented to determine if the behaviours and coaching practices of sports coaches could be enhanced. This research aims to inform the fields of sports coaching education, sports pedagogy and ultimately coaching practices. It also provides a practical example of Ecological Dynamics Theory, and more specifically, a tangible example of non-linear pedagogy: a Constraints-Led Approach, being used in the sport of volleyball to enhance coaching practices and player learning.

Supervisors

Lee Wharton, Anthony Rossi

Carla Tolson

Masters by Research

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103981

Email

tolsoncarla@outlook.com

Thesis topic

Molecular analysis of *Mycobacterium kansasii* from human and potable water specimens

Description

This research investigates whether the environmental mycobacteria, *Mycobacterium kansasii*, is linked to outbreaks of pulmonary disease in Queensland. The prevalence of pulmonary disease, due to environmental mycobacteria is increasing, however, it's not clear if waterborne *M. kansasii* are the same as those that cause disease in humans. This thesis develops and compares three DNA-based methods to determine the likely source of *M. kansasii*. The findings of this research, which have been presented nationally and internationally, show that Brisbane's municipal water is unlikely to be the infection source. However, waterborne *M. kansasii* cannot be excluded from areas associated with the mining industry.

Supervisors

Flavia Huygens, Irani Rathnayake

Keith Butler

Professional Doctorate

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

109906

Email

k8.butler@hdr.qut.edu.au

Thesis topic

Zero harm: Myth or reality

Description

This thesis is a comparative study of the Zero Harm concept within workplace health and safety. This research includes 13 countries within the Asia Pacific region of a large oil and gas contracting organisation. An examination of Zero Harm and its perceived effectiveness, manifestation and impact on workplace health and safety performance and behaviours is undertaken with a cross section of the workforce including senior leaders, line managers, supervision and employees. The findings from this research programme have practical implications and applications in understanding the Zero Harm concept and its contribution to workplace health and safety.

Supervisors

James Freeman, Jeremy Davey

Fiona Davis

Professional Doctorate

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103527

Email

gradydavis@netspace.net.au

Thesis topic

Transitions for youth with physical impairment and the impact on them and their families

Description

This project used a mixed methods approach to explore the quality of life of youth with physical impairment and their caregivers during a life transition, namely the move from primary to secondary school. The lived experience of both the caregivers and the youth provided perspective on the impact of the environment for the youth as well as the impact of caregiving for the families. Identifying and accessing relevant and appropriate information for caregivers to assist in decision making, and provision of therapeutic interventions for the youth during this developmental period were seen to be crucial in fostering a positive transition.

Supervisors

Michele Clark, Rosemary Aird, Scott Devenish, Leanne Johnston (Cerebral Palsy League of Queensland)

William Loveday

Professional Doctorate

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

108061

Email

bloved64@gmail.com

Thesis topic

Prescription opioid analgesic drug misuse: What can we learn from doctor-shopping behaviour

Description

This thesis examines the phenomenon of 'doctor shopping' for prescription opioid drugs in Queensland to identify whether aspects of this behaviour could be used to better identify drug misuse and to assist doctors in better treatment of patients. Findings suggest that doctor shopping is a complex and uncommon behaviour in patients receiving prescription opioid drugs and not necessarily associated with aberrant drug use. It appears that long-term high dose use of prescription opioids is a greater indicator of concern and potential risk of harm. These outcomes have relevance to the implementation of real-time reporting of prescription opioid drugs in Australia.

Supervisors

Kirsten Vallmuur, Gerard Fitzgerald, Belinda Lloyd
(Monash University)

Kamal Singh

Professional Doctorate

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

110807

Email

singhkamal58@yahoo.co.nz

Thesis topic

Understanding the socio-cultural context of obesity in rural iTaukei Fiji: 'A participatory research approach'

Description

This research study examines the socio-cultural context of obesity using a community-based participatory research (CBPR) methodology in a rural iTaukei community in Fiji. This research was conducted in three sequential phases, where each was aimed at a different perspective of the situation. The findings of this research provide guidance and understanding about the socio-cultural factors that influence community's perceptions' about obesity and underpin knowledge for the future development of culturally safe health promotion programs to support better health outcomes and eliminate health disparities in the rural parts of Fiji.

Supervisors

Marguerite Sendall, Phil Crane, Wendy Snowdon
(Fiji National University)

A r e e j A l i

A b u n a r

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

114127

Email

areej.abunar@hotmail.com

Thesis topic

The construction of sickle cell disorder in Saudi Arabia: The invisible disease

Description

This exploration of sickle cell disorder (SCD) in Saudi Arabia was informed by social constructionism and constructivist grounded theory methods. Shaping a Reality, the key analytical category generated in the research, reflects the interrelationships between three constituent categories; The Invisible Disease, Positioning of Social Actors and Shifting Perspectives. The experience of SCD was contextual and multilayered. The interrelationship of interactions and the socio/cultural environment gave focus to the invisibility of SCD and how this positioned patients and carers. Thus, the research generated insight into social and political complexities around SCD that extend beyond medical science and health promotion education.

Supervisors

Carol Windsor, Joanne Ramsbotham, Fatin Al-Sayes (King Abdulaziz University)

Prakash Adhikari

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

102656

Email

p.adhikari@qut.edu.au

Thesis topic

Novel pupillometry protocols for the early detection of melanopsin dysfunction in glaucoma

Description

This thesis developed new methods for the pupil light response measurement to objectively assess melanopsin function in humans with healthy or diseased eyes. It was determined that melanopsin function is independent of age and refractive error (nearsightedness or farsightedness). The new quadrant field pupil testing protocols developed in this thesis detected melanopsin dysfunction in the very early stages of glaucoma (glaucoma suspects) when it is difficult to detect visual dysfunction with conventional ophthalmic tests. The outcomes advance understanding of melanopsin function in humans and introduce optimal pupillometry protocols for translation to clinical settings to guide treatment.

Supervisors

Andrew Zele, Beatrix Feigl, Phillip Morris

Afrina Afrose

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

107550

Email

afrina_pharm@yahoo.com

Thesis topic

Crystallization engineering techniques for developing a novel dry powder inhaler formulation for ibuprofen

Description

Techniques for producing inhalable particles (<5µm) for dry powder inhaler (DPI) formulations mostly involve crystallization followed by high energy input size reduction systems (e.g., milling and homogenization), which produce particles with very high surface energy and poor flow properties, restricting the efficient dispersion of drugs from the formulations. This investigation has used an anti-solvent precipitation crystallization (APC) method of producing inhalable ibuprofen (IBP) crystals for pulmonary delivery from a DPI formulation.

Supervisors

Nazrul Islam, Graeme George, Tony Howes (The University of Queensland), Abdur Rashid (Leo Pharma), Edward White (The University of Queensland)

Islam Ahmed Said Al Bulushi

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

104749

Email

islamoman@gmail.com

Thesis topic

Heavy vehicle safety in Oman: A situational
analysis

Description

Through a mixed methods approach this thesis investigates the road safety and operational culture of heavy vehicle drivers in Oman. The research found evidence of low road safety compliance across much of the heavy vehicle industry in Oman. The research identified many unsafe driving behaviours and attitudes that were well established within the industry and its operations. Many of these behaviours and attitudes were facilitated and encouraged by lack of safety regulations and enforcement at different systems levels. The outcomes of this research have a broad range of applications in the area of road safety in Oman and similar countries.

Supervisors

Jeremy Davey, Kerry Armstrong, Jason Edwards,
Abdullah Ali Nasser Al Maniri (The Research
Council)

Hayfa Hamed Al Mutary

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

103986

Email

hayfa.almutary@connect.qut.edu.
au

Thesis topic

Exploring symptom clusters in people with chronic kidney disease

Description

Chronic kidney disease is associated with a high symptom burden that is strongly linked to poor individual outcomes and quality of life. The complex relationships among these symptoms remain poorly understood. This study was the first to identify symptom clusters from multidimensional perspectives in advanced chronic kidney disease. Adopting a symptom cluster approach has the potential to significantly advance symptom assessment and management. The symptom cluster model developed in this study has important clinical and investigative implications, which can serve as a framework to encourage and guide new lines of intervention research to reduce symptom burden in this population.

Supervisors

Ann Bonner, Clint Douglas

M d Mujibul Anam

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

112191

Email

labib303@gmail.com

Thesis topic

Majmawalas and sexual health promotion in Bangladesh: An ethnography of street healers in Dhaka City

Description

Sexual health promotion is a challenging enterprise in Bangladesh and all the more challenging if systems are not willing to recognise existing community resources. Majmawalas are local street healers who treat men's sexual health problems. Yet rather than being seen as a potential resource for responding to sexual health, Bangladeshi authorities focus their efforts largely via a biomedical lens in which the social dimensions of sexuality are given little consideration. Among the outcomes of this biomedical dominance is a lack of interest in the potential role of traditional healing systems that are a prime source of health care for many Bangladeshis. The central contention of this thesis is the importance of working with traditional community resources rather than against them. The results of this study contribute critical knowledge about the potential to harness the Majmawalas in sexual health promotion programmes in Bangladesh.

Supervisors

Mark Brough, Ignacia Correa-Velez, Zahir Ahmed (Jahangirnagar University, Bangladesh)

Peter Barraclough

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

104818

Email

peterbarraclough68@gmail.com

Thesis topic

Common method variance and other sources of bias in road traffic research

Description

This research examined the extent to which method bias, in particular, Common Method Variance, potentially affects road safety studies. A meta-analysis (systematic review) examining self-reported and archival records of traffic offences and crashes, found differences in the size of the effects produced by the two data types. The investigation also suggests that effect sizes are inflated both when dichotomous scales are used in preference to Likert scales, and when the predictor and predicted variables are gathered and analysed in the same manner from the same source.

Supervisors

James Freeman, Angela Watson, Barry Watson, Anders Wahlberg (Uppsala University)

Leanne Brown

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

107136

Email

leanne.brown2@health.qld.gov.au

Thesis topic

A randomised controlled trial of a decision support intervention to support decision making for older individuals with advanced kidney disease

Description

This research evaluated the effectiveness of a decision support intervention to guide older people who have advanced stages of kidney disease who are faced with treatment choices about dialysis or conservative action. A pragmatic randomised controlled trial was conducted to determine if the intervention lowered decision conflict and decision regret. The research found that the decision support intervention increased participant knowledge of risk, benefits and symptoms of dialysis. There were no observable differences between groups for decision conflict or decision regret. The research raises issues about fully informed patient choice in end of life care and lays the foundation for ongoing research.

Supervisors

Glenn Gardner, Ann Bonner

Dagmar Bruenig

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

112180

Email

daggi@bruenix.com

Thesis topic

Genetic, biomarker and psychological factors for risk and resilience of PTSD

Description

This thesis systematically investigated molecular risk and protective markers of Posttraumatic Stress Disorder (PTSD). PTSD poses a significant health and societal burden in Australia, especially in at-risk groups such as military personnel. The molecular aetiology of the disorder is poorly understood and it is unclear why many people recover quickly after trauma exposure while others continue to suffer. The thesis significantly contributes to the field of stress and resilience research by identifying novel markers for replication and adding to the knowledge-base of molecular markers for resilience, a burgeoning research field. This area of research is important to develop prevention and early intervention strategies.

Supervisors

Joanne Voisey, Ross Young

Kerry Buttenshaw

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

112416

Email

kerrybuttenshaw@gmail.com

Thesis topic

Identifying and measuring confidence in dietitians working with clients with psychological issues

Description

This thesis investigates and measures Australian dietitians' confidence about working with clients impacted by mental health issues. An exploration of dietitians' experiences in everyday dietetic practice, and literature review preceded the development of the Dietetic Confidence Scale (DCS), an evidenced-based tool for measuring dietitians' confidence in working with clients experiencing psychological issues. The DCS is an evaluation tool useful for dietetic practitioners, educators and researchers. Study results have informed recent revisions of Australian dietetic competency standards, and in turn influenced dietetic training and continuing professional development, improving the quality of nutrition care for clients impacted by psychological issues.

Supervisors

Jane Shakespeare-Finch, Susan Ash

Alice Cairns

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

107534

Email

alice.cairns@jcu.edu.au

Thesis topic

Exploring help-seeking, vocational role function and goal setting of young people accessing mental health services

Description

This thesis used mixed methods research to explore the experiences of young people seeking mental health help by identifying their presenting issues and correlates of work and study participation, including neurocognitive capacity. In conjunction with symptoms of psychological distress, concerns with work, study and social roles were consistently reported and the acceptability of the Goal Attainment Scaling was trialled. Service evaluation tools that incorporate specific client-identified outcomes may support more targeted treatment, strengthen current evaluation processes and improve engagement of young people with appropriate services.

Supervisors

Steven McPhail, David Kavanagh, Frances Dark
(Metro South Mental Health Services)

João Canoquena

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

107924

Email

costa.canoquena@hdr.qut.edu.au

Thesis topic

Developing a theoretical framework for improved practical application of a coordinated response in road safety

Description

This thesis develops ten conceptual tools for investigating, designing, implementing and evaluating coordinated road safety countermeasures at a local level in Australia by examining coordinated responses at the practical, conceptual and systemic layers. Practical level tools include a descriptive model of coordinated responses, two continua of public approval and a typology. At the conceptual level they include a strategy development model, a coordination model, predictors of optimal coordination and a typology. At the systemic level, the thesis identifies the need to manage road safety in a more decentralised manner, by adopting principles from Dynamic Systems Theory and the descriptive model.

Supervisors

Mark King, Barry Watson

Elizabeth Corfield

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

110722

Email

elizabeth.corfield@connect.qut.edu.au

Thesis topic

Characterising the relationship between fatigue and depression

Description

This dissertation focused on increasing our knowledge and understanding of the comorbidity and genetics of fatigue and depression. Statistical computations, including twin modelling and analysis of genome-wide association data, were conducted to characterise the phenotypic and genetic relationship between fatigue and depression. The high levels of comorbidity observed between fatigue and depression is independent of the traits' overlapping symptoms and is likely attributable to the non-causal genetic relationship which exists between the traits. A significant proportion of the association between fatigue and depression is explained by shared genetic factors.

Supervisors

Dale Nyholt, Lyn Griffiths, Sonya Marshall-Gradisnik (Griffith University), Dr Yadav Sapkota (QIMR Berghofer Medical Research Institute)

Katherine Cullerton

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

109095

Email

kcullerton@yahoo.com.au

Thesis topic

An exploration of the factors influencing public health nutrition policymaking in Australia

Description

This thesis explored the factors that influence nutrition policymaking in Australia, and resulted in strategies that could be used by poorly-resourced health organisations to gain traction in public health nutrition policymaking. Insight into these strategies was gained through a social network analysis exploring the power of interest groups and their influence on nutrition policy in Australia and in-depth interviews with these key influencers.

Supervisors

Danielle Gallegos, Timothy Donnet, Amanda Lee

James

Damserre Derry

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

112415

Email

jdamserederry@yahoo.com

Thesis topic

The prevalence of alcohol use among road users and its impact on traffic crash severity in Ghana

Description

This thesis is a compendium of research from roadside, drinking bars, hospitals and police accident records in Ghana. The thesis investigated the natural prevalence of alcohol use among road users at these settings and the potential crash risk associated with this behavior. The research established that the prevalence of driving or operating a vehicle with elevated BAC above the legal limit was high. This was however underreported by the police. This research underscores the need for enhanced enforcement of the drink-driving law, and education of road users on responsible alcohol consumption among road users to improve upon road safety in Ghana.

Supervisors

Gavan Palk, Mark King

Tiet Hanh Dao Tran

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

105851

Email

daohanh2001@gmail.com

Thesis topic

Stressful life events, modifiable lifestyle factors, depressive symptoms, health-related quality of life, and chronic disease among older women in Vietnam and Australia: A cross-cultural comparison

Description

This research compared life stressor, lifestyles, depressive symptoms, health-related quality of life, chronic diseases and impact of life stressors on health among older women living in Vietnam and Australia. The research revealed that Vietnamese women had a similar number but different types of life stressors from Australian women. Vietnamese women reported higher levels of daily physical activity, less exercise, more sleep problems and depressive symptoms, lower levels of physical health, and higher prevalence of hypertension, and heart disease. Australian women reported healthier diet, higher BMIs, a common use of tobacco and alcohol, and higher prevalence of breast cancer. The patterns by which life stressors influence health for Vietnamese and Australian women are different

Supervisors

Helen Edwards, Charrlotte Seib, Debra Anderson
(Griffith University)

Steven Duhig

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

110637

Email

steven.duhig@hdr.qut.edu.au

Thesis topic

Hamstring strain injury: Effects of high speed running, kicking and concentric versus eccentric strength training on injury risk and running recovery

Description

The hamstring strain injury is a common and problematic injury within sports that involve high-speed running and kicking. This program of research has provided novel insights regarding the relationship between high speed running volumes and hamstring injuries, the effects of kicking on risk factors for hamstring strain and the muscular adaptations induced by concentric and eccentric hamstring exercises.

Supervisors

Anthony Shield, Geoffrey Minett, Morgan Williams
(University of South Wales)

Gilles Forget

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

105935

Email

gillesforget@hotmail.com

Thesis topic

Being a father in my new society: A phenomenological study of the migration journey of fathers of refugee backgrounds living in south-east Queensland, Australia

Description

This thesis investigates the lived experience of 19 fathers from refugee backgrounds of 11 different countries who have settled in South-East Queensland. Through in-depth interviews and an interpretative phenomenological analysis, this study describes the migration journey of the men and the challenges and changes they faced while being a father in a new society. The analysis outlines the barriers to their social inclusion and the acculturation challenges faced as they revisit the meaning of fatherhood, experience the transition from manhood to fatherhood, and embrace their father involvement. Policy, practice and research avenues are proposed to better support their settlement in Australia.

Supervisors

Ignacio Correa-Velez, Michael Dee

Fernando Garcia, Jr

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

106948

Email

fernandojr.garcia@hdr.qut.edu.au

Thesis topic

An Economic evaluation of multi-parasite control strategies in the Philippines

Description

This thesis examines the cost-effectiveness of multi-parasite control strategies of the Soil Transmitted Helminthiasis program in the Philippines. The research aims to identify strategies that offer the best value for money by establishing the optimal parasite control strategy in terms of frequency and mode of delivery, taking into consideration whether this varies subnationally. Using a decision-modeling approach, the findings are expected to guide the country's health policy and decision-makers to efficiently allocate scarce health resources and establish a parasite control policy in the Philippines.

Supervisors

Kate Balcon, Nicholas Graves, Lydia Leonardo
(University of the Philippines)

Cassandra Gauld

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

107659

Email

c1.gauld@qut.edu.au

Thesis topic

A theory-based approach to the development and evaluation of public education messages aimed at social interactive technology use on smartphones among young drivers

Description

Most young drivers aged 17 to 25 years own a smartphone and many use it while driving. As the social interactive capabilities of smartphones (e.g., emailing, Facebook) increase, the risk of severe injury sustained by young drivers may also increase. This research utilised a theory-based approach to develop and evaluate the effectiveness of public education messages aimed at initiating, monitoring/reading, and responding to social interactive technology among young drivers. Overall, the messages that targeted monitoring/reading behaviour were considered the most effective with some gender differences identified. This research may help inform future design of messages addressing driver distraction and smartphone use.

Supervisors

Ioni Lewis, Barry Watson, Katherine White, Judy Fleiter (Global Road Safety Partnership)

Zachary Gerring

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

112796

Email

zachary.gerring@qimrberghofer.edu.au

Thesis topic

Integrating genome-wide association and blood genomic profiling data to characterise migraine risk loci

Description

This thesis involved a multi-staged integrated study of gene expression, DNA methylation, and DNA sequence variation data in a large sample of migraine cases and non-migraine controls. The analysis and integration of these data identified molecular perturbations associated with migraine, and prioritised migraine susceptibility genes for further functional characterisation. The use of multiple molecular data to study existing migraine loci has the potential to provide a substantial contribution to understanding the underlying genetic architecture and biological mechanisms of migraine, and may help in the development of diagnostic tests and new targets for drug therapy.

Supervisors

Dale Nyholt, Lyn Griffiths, Grant Montgomery (The University of Queensland)

Alaa Hussain Hafiz

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

112417

Email

alaa.hafiz@hdr.qut.edu.au

Thesis topic

Enhancing the competence of undergraduate nursing students to care for dying children in Saudi Arabia

Description

Most undergraduate nursing students receive limited formal education regarding paediatric palliative care. The study employed a sequential explanatory mixed methods design to generate knowledge about how to enhance nursing students' competence in caring for dying children in Saudi Arabia. The study provides evidence of the benefits of well-designed educational programs in enhancing the learning of palliative care and improving students' knowledge, attitudes, and perceived self-competence in this field. Programs which include a mix of both didactic and active learning approaches are recommended. The study also identified a range of sociocultural influences on what competence means in the context of paediatric palliative care in Saudi Arabia and the importance of considering these when designing educational interventions.

Supervisors

Patsy Yates, Joanne Ramsbotham, Elizabeth Forster (University of Southern Queensland)

Kerry Hall

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

110528

Email

kkmjhall@bigpond.com

Thesis topic

Acute respiratory illness in urban Aboriginal and
Torres Strait Islander children

Description

This thesis is the first to comprehensively evaluate
Acute Respiratory Illness with Cough (ARIwC)
in urban, predominantly Aboriginal and Torres
Strait Islander, children. This research identified
a community that is experiencing significant
disadvantage and a concerning burden of ARIwC.
Positive findings include the frequent presentation
to primary health care, continuity of primary health
care provider, and knowledge of when cough is
abnormal; factors that are all critical to the success
of interventions and further research to reduce the
burden of this disease.

Supervisors

Kerry-Ann O'Grady, Anne Change, Michael Otim
(The University of Sydney)

J u n

H e

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103096

Email

jazouhe@hotmail.com

Thesis topic

The factors that influence private health insurance holders' choice between public and private emergency departments at the time of emergency

Description

This is the first study to examine the issues relating to choice between public and private emergency departments in an Australian setting. This study has identified that the key factors influencing the choice are affordability and perceptions of the quality of service provided. This research provides valuable insight for future planning by identifying the factors that, if addressed, may help improve patient's access to emergency care.

Supervisors

Gerard FitzGerald, Janet Hou, Sam Toloo

Nina Pauline Holzapfel

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

107571

Email

np.holzapfel@googlemail.com

Thesis topic

Investigation of the potential anticancer effects of lycopene in tissue engineered in vitro and in vivo models

Description

This project is a step forward in understanding the mode of action of phytochemicals in the prevention and treatment of cancer by using tissue engineered in vitro and in vivo models. In this thesis, the natural compound lycopene, primarily found in tomatoes and tomato-based products, was tested as a treatment option, particularly for ovarian cancer patients. The study revealed the distinct potential of lycopene to prevent the onset of ovarian cancer and its ability to reduce tumor and metastatic load in an already established disease status, as tested in an intraperitoneal humanised animal model.

Supervisors

Dietmar Hutmacher, Judith Clements, Daniela Loessner

S e i j i H u m p h r i e s

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

113714

Email

sh.humphries@connect.qut.edu.au

Thesis topic

Early psychosis in central Viet Nam: Short-term
outcomes and their determinants

Description

Set in central Vietnam, this project aimed to address the relative lack of research on people in developing countries who have recently experienced schizophrenia or a related illness for the first time. It examined the community functioning and quality of life of participants over a six-month period, as well as factors linked with a good or poor recovery. Overall, the group's outcomes were relatively positive, despite the region's limited mental health services. However, participants from low-income households appeared to have a high risk of poor outcomes, indicating the need for interventions targeting such individuals.

Supervisors

Robert King, Michael Dunne, Cat Huu Nguyen
(Hue University of Medicine and Pharmacy)

Malik Asif Hussain

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

110339

Email

asif_dr2007@yahoo.com

Thesis topic

An investigation of the impact of bacterial diversity, pathogenic determinants and biofilms on chronic wounds

Description

This research investigates the abundance and diversity of bacteria in chronic wounds. Chronic wounds are a significant public health burden associated with complex polymicrobial communities. Bacterial colonisation has been hypothesised to be one of the main underlying causes of chronic wounds, which leads to detrimental effects on wound healing. This research utilises next-generation sequencing technologies to identify possible bacterial biomarkers to predict wound healing trajectory. Overall, bacterial bioburden and their molecular characteristics were found to be associated with and predictive of poor wound healing outcomes. This research has been presented at conferences and in publications.

Supervisors

Flavia Huygens, Irani Rathnayake

Hyo - Jung Kim

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

112363

Email

h203.kim@hdr.qut.edu.au

Thesis topic

Married south Korean migrants with children in
Australia: Investigation of their acculturation

Description

This thesis is an empirical study of the post-migration adjustment of married South Korean migrants with children in Australia. It examines the adjustment challenges and the adjustment process of this sub-population. The outcome suggests that pre-migration expectations and marital relationships can play an important role in the adaptation process. Further, marital communication can be a key protective factor. The findings have important implications for the psychological literature and clinical practice.

Supervisors

Nigar Khawaja, Areana Eivers

Le Thi Hai Ha

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

106949

Email

lhh@huph.edu.vn

Thesis topic

Bullying roles and associations with mental health of adolescents in Vietnam: A short-term longitudinal study

Description

This research investigates the patterns of traditional bullying and cyberbullying in schools in Vietnam. This longitudinal study was one of few internationally to measure both traditional bullying and cyberbullying together and investigate temporal patterns of bullying and its social determinants over an academic year. Surveys were completed by more than 1,400 adolescents. Bullying experiences were common among these young people, but were inherently unstable over time. There were strong links between bullying and mental health problems (depressive symptoms, distress, and suicidal ideation). The findings have implications for preventive interventions in Vietnamese schools and internationally.

Supervisors

Michael Dunne, Michelle Gatton, Marilyn Campbell, Huong Thanh Nguyen (Hanoi School of Public Health)

S z e Y e e

L e e

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

105510

Email

samantha.sy.lee29@gmail.com

Thesis topic

Eye movements and driving-related performance
of older adults with visual impairment

Description

Little is known about the impact of visual impairment on the road scanning behaviour of older drivers. This study examines the eye movement patterns of older drivers while performing driving-related tasks to better understand the elevated crash rates of visually impaired older drivers with simulated blur, as well as true glaucomatous visual impairment. Visual impairment from either simulated blur or glaucoma resulted in reduced laboratory-based hazard detection and closed-road driving performance, with associated alterations in eye movements. Among those with glaucoma, some of the alterations were potentially compensatory, which may facilitate improved driving-related performance.

Supervisors

Joanne Wood, Alexander Black

E l a i n e

L u m

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

107540

Email

epmlum@gmail.com

Thesis topic

Making decisions about antibiotic use in the
Australian primary healthcare sector

Description

Antibiotic use drives antibiotic resistance, a global issue with significant human health and economic burden. Australia's antibiotic consumption is above the OECD average. However, it is unclear which factors are most important for driving antibiotic use in Australian primary healthcare. This research established the most important factors influencing general practitioners to prescribe antibiotics and consumers to use antibiotics. In addition, a model was developed 'the Enabling Antibiotic Eupraxis (EABE) model' to explain the drivers of antibiotic use from three perspectives: general practitioners, community pharmacists and consumers. This evidence informs the implementation of Australia's national antimicrobial resistance strategy.

Supervisors

Katie Page, Nicholas Graves, Lisa Nissen, Zee Upton, Jenny Doust (Bond University)

Lynette Mackey

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103082

Email

lmackey2014@gmail.com

Thesis topic

A temperament based perspective on eating behaviour and appetite in the overweight and obese

Description

This thesis investigates the relationship between a developmental model of temperament and eating behaviour. This research explores whether an individual's innate level of emotional reactivity and their ability to manage this placed them at risk of uncontrolled eating behaviours linked to weight management failure, overweightness and obesity. The results of this thesis suggest that emotionally reactive individuals may turn to highly liked, high-fat foods to soothe their emotions. Such individuals may be at greater risk of uncontrolled eating behaviour because they are unable to regulate their level of reactivity and subsequently lack effective strategies to regulate their emotions.

Supervisors

Neil King, Melanie White, Zephanie Tyack
(Queensland Health)

M a d h a v a n

M a n i

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

102651

Email

madhavan.mani@gmail.com

Thesis topic

E-mindful health: Evaluation of mobile apps for
mindfulness

Description

This thesis tests the efficacy of mindfulness mobile apps to improve wellbeing of young people. It reviews and evaluates existing mindfulness mobile apps to identify high-quality ones and demonstrates their potential to improve wellbeing of young people. Mindfulness has gained empirical support as an effective treatment for a variety of mental health conditions including stress, anxiety and depression. Not only can mindfulness be adapted to suit young people, mobile apps can potentially deliver it, which may help address the challenge of effectively delivering mindfulness training to this highly vulnerable population.

Supervisors

David Kavanagh, Leanne Hides

Michelle Lorraine Maynard

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

106748

Email

m1.maynard@qut.edu.au

Thesis topic

Image and non-image forming melanopsin function
in age-related macular degeneration

Description

This thesis developed clinical protocols for early detection of retinal deficits in age-related macular degeneration (AMD) and provides new insight of AMD on melanopsin function, extending to both image-forming and non-image forming pathways. The administration of vision tests under dim illuminations detected deficits in AMD before conventional ophthalmic tests. A sub-class of retinal ganglion cells expressing the melanopsin photopigment was dysfunctional in early AMD and was associated with sleep inefficiency in advanced AMD. This thesis provides the foundation to advance retinal function measurement in AMD and expands our knowledge on the relationship between AMD progression and non-vision related functions.

Supervisors

Beatrix Feigl, Andrew Zele, Phillip Morris

Craig McNulty

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

108025

Email

c.mcnulty@qut.edu.au

Thesis topic

The complex reality of VO₂ kinetics to steady state: Reassessment of the models used to quantify and interpret VO₂ kinetics, steady state, and time to steady state

Description

This thesis developed new methods of modelling oxygen uptake in exercising humans during cycling exercise sessions to steady-state. The results will contribute to the redefinition of conventional methods of data acquisition, processing, and modelling across exercise physiology, sports science, and respiratory disease research and application. The thesis identified misconceptions within current methods of data handling, and proposed innovative methods for improved data modelling.

Supervisors

Rob Robergs, Ian Stewart

Gregory Merlo

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103657

Email

gb.merlo@qut.edu.au

Thesis topic

“Going over the parapet”: The development of a framework for understanding the translation of evidence from economic evaluations

Description

This thesis contextualises the translation of evidence from economic evaluations into a broader implementation framework. Multiple research methods were used to develop this unique innovation, including a review-based adaptation of the Consolidated Framework for Implementation Research, a discrete choice experiment measuring the preferences of healthcare decision makers for aspects of economic evidence, and interviews with health economists about the evidence translation process. This thesis proposes a new framework, the CFIR-EE (Consolidated Framework for Implementation Research for Economic Evidence).

Supervisors

Katie Page, Nicholas Graves, Kate Balcon

J u d y M u n d a y

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

103084

Email

judy.munday@qut.edu.au

Thesis topic

Perioperative temperature management for
women undergoing Caesarean section

Description

Perioperative hypothermia is a significant problem for women undergoing caesarean section, however this population has been previously neglected in internationally accepted evidence-based recommendations for thermal care in surgical patients. This three-phased, in depth exploration of the phenomenon has advanced understanding of the effectiveness of methods to prevent perioperative maternal hypothermia, particularly for women receiving intrathecal morphine. Research findings confirm that temperature decline is significant across this vulnerable population and supports recommendations for the development of health service policies and thermal management guidelines that incorporate consistent use of combined, multi-modal, effective warming strategies employed both preoperatively and intraoperatively in the place of single interventions.

Supervisors

Sonya Osborne, Patsy Yates

Ugenthiri Naiker

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

108004

Email

ugenthiri@gmail.com

Thesis topic

Waiting times: The outpatient referral process, variation, performance and structural influences

Description

This thesis was an exploratory study of the outpatient referral process and waiting times experienced by patients in the public health system. The performance of health services was measured by applying the criteria of efficiency, effectiveness and equity of access to the outpatient process and service delivery. This research has identified that the performance of outpatient services is influenced by the interrelationship between organisational culture, internal and external stakeholders, resources, demand for services, politics, policy and design of the health system. This conceptual framework provides health service managers with a systematic guide to system wide performance improvement.

Supervisors

Gerard Fitzgerald, Michael Rosemann, Joel Dulhunty (Queensland Health)

L o t t a E m i l i a

O i k a r i

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103844

Email

Lotta.Oikari@qimrberghofer.edu.au

Thesis topic

Regulation of human neural stem cell fate
determination by proteoglycans

Description

This thesis investigated how human neural stem cells are regulated, focusing specifically on heparan sulfate proteoglycans, the key proteins of the extracellular space. The findings of this study identified central roles for proteoglycans in mediating neural stem cell events, including self-renewal and differentiation. This research has improved our understanding of human stem cell and human neurogenesis biology and provided novel approaches for the development of improved neural stem cell applications, including using these cells for brain damage therapy.

Supervisors

Larisa Haupt, Lyn Griffiths

Uchechukwu Levi Osugwu

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

109469

Email

o_leviuche@hotmail.com

Thesis topic

Limitations in peripheral optics measurement of the eye

Description

The thesis investigated some of the limitations in measuring peripheral optics of the eye. It found that peripheral refraction can be measured accurately with the Shin Nippon autorefractor along only the horizontal and vertical meridians. While peripheral higher-order aberrations are mirror symmetric between fellow eyes of isometropes (people with similar refractions in both eyes), they were unaffected by anisometropia (dissimilar refraction in both eyes) and refractive error group, except for spherical aberration, which showed small effects. The findings do not support a role of peripheral higher-order aberrations in refractive error development.

Supervisors

David Atchison, Marwan Suheimat

Tuti Pahria

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

110738

Email

t.pahria@gmail.com

Thesis topic

Indonesian women diagnosed with breast cancer:
A hermeneutic process

Description

The purpose of this research was to construct a hermeneutic understanding of the experience of Indonesian women diagnosed with breast cancer. This research was grounded in Gadamerian philosophy, which informed data generation and analysis. The breast cancer experience appeared as an indiscriminate group of actions and events that had no clear beginning, middle and end. The temporal frames through which the women interpreted their worlds and acted, if not arbitrary, were ever shifting and did not exist as a coherent whole. The findings emphasise the importance of bringing a lens that juxtaposes the social, cultural, and historical realms to the temporal experience.

Supervisors

Carol Windsor, Karen Theobald

Sophie Parham

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

106919

Email

sophie.parham@hdr.qut.edu.au

Thesis topic

Application of elaborated intrusion theory to the measurement and enhancement of motivation in type 2 diabetes

Description

This thesis examined the relationship between mental imagery and motivation for self-care in chronic disease management. A scale measuring frequency of health cognitions found greater motivation in those frequently imagining change. However, an intervention designed to increase frequency and intensity of these health cognitions found no change in behaviour. This research demonstrated that imagery-based training may not be effective in sustaining motivation in chronic health, but leaves open the possibility that it could assist in initial stages of disease management.

Supervisors

David Kavanagh, Christian Gericke, Neil King

O m k a r L a x m a n

P a t k a r

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

103955

Email

omkarpatkar05@gmail.com

Thesis topic

Serotonin and noradrenaline signalling in binge-like long-term alcohol intake and associated maladaptive effects in adult mice

Description

Alcohol dependence is a debilitating disorder with current therapies displaying limited efficacy and/or compliance. This thesis investigated the contribution of two key neurotransmitters; noradrenaline and serotonin in alcohol dependence using a mouse model of binge-like alcohol consumption. Using this model, the study demonstrated that long-term alcohol intake causes neuroadaptive changes in the signalling of these molecules, leading to alterations in normal emotional states and alcohol dependence. Finally, the thesis highlighted the efficacy of the FDA approved drug for hypertension pindolol and the anxiolytic drug tandospirone to reduce alcohol consumption, thereby offering a novel approach to improve treatments for alcohol addiction.

Supervisors

Selena Bartlett, Pamela Pollock

Cassandra Pattinson

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

108054

Email

cl.pattinson@hdr.qut.edu.au

Thesis topic

Weight status of young children: Exploring the relationship with sleep and light exposure

Description

The problem of paediatric obesity remains significant. This study investigated the potential influence of two environmental mechanisms proposed to affect children's weight status: sleep and light exposure. Collectively this body of research has made significant contributions to current understanding of child weight status in three ways: 1. documentation of current methodologies used to classify body mass in young children; 2. adding to understanding of the potential role of sleep parameters for child weight; and 3. the first documentation of the significant influence of environmental light exposure on the weight of preschool aged children. This study elucidates new directions for intervention.

Supervisors

Karen Thorpe, Simon Smith, Stewart Trost

Mary - Anne Ramis

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

109614

Email

m.ramis@qut.edu.au

Thesis topic

Factors that influence and predict undergraduate nursing and paramedic students' intention and use of evidence-based practice

Description

Despite professional requirements, educational research across disciplines provides limited evidence to indicate that undergraduate health students are confident with or intend to use evidence in their clinical practice after graduation. Using Bandura's self-efficacy theory, this research investigates factors influencing undergraduate nursing and paramedicine students' intention to use, and their current use of, evidence-based practice (EBP). Through development and validation of two multivariate prediction models, the study identified EBP self-efficacy as one important factor necessary for supporting students' intentions to translate EBP into clinical contexts. The research results provide theoretically-based components for curriculum developers when designing strategies to support students' advancement in EBP.

Supervisors

Anne Chang, Lisa Nissen

Tina Roche

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

103094

Email

tina.roche@hdr.qut.edu.au

Thesis topic

Evaluating the effectiveness of emergency nurse practitioner service for rural patients presenting with chest pain

Description

The nurse practitioner role has been implemented in rural hospitals throughout Australia as a health service reform strategy in emergency departments. This research is the first to examine the safety and quality of this service for patients presenting with a complex health condition. Using a Donabedian framework, the outcome of emergency nurse practitioner service was demonstrated to be comparable to standard care. The research provides an evidential basis to support the quality of nurse practitioner service, a benchmark for further research and identifies the problems that need to be addressed to ensure the future of rural health research.

Supervisors

Glenn Gardner, Leanne Jack

Jose Rodrigues

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

104817

Email

hillario@gmail.com

Thesis topic

The acquisition of pedagogical expertise in dance:
A constraints-led approach

Description

This thesis explores the acquisition of pedagogical expertise by dance teachers in a tertiary setting. Adopting the constraints-led theoretical framework with a qualitative approach, this investigation retrospectively examines the potential factors, or constraints, influencing the acquisition of pedagogical expertise in dance. The results identified five themes, which were mapped into the constraints-led theoretical framework as environmental constraints (i.e., mentors, role models and students); task constraints (i.e., rules); and, individual constraints (i.e., needs). The results from this study highlight the potential of understanding constraints within their specific context in order to improve dance teachers' pedagogical development.

Supervisors

Eric Brymer, Gene Moyle, Keith Davids, Duarte Araujo (Technical University of Lisbon IST)

Joan Rohl

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

102374

Email

joan.rohl@qut.edu.au

Thesis topic

Intracellular trafficking and secretion of matrix metalloproteinases during macrophage migration

Description

This thesis advances the knowledge of intracellular trafficking pathways for the cell surface delivery of Matrix metalloproteinases 9 and 14 in macrophages. As elevated and persistent levels of these proteolytic enzymes contribute to excessive inflammation and poor wound healing outcomes, the findings from this thesis could lead to the development of improved therapeutics for the treatment of chronic wounds. Trafficking machinery proteins responsible for cell surface delivery of Matrix metalloproteinase 14, matrix degradation and macrophage invasion was identified in this study, and could be used as novel therapeutic targets.

Supervisors

Rachael Murray, Danica Hickey, Melissa Fernandez (Agency for Science, Technology and Research)

Leonie

Ruddick - Collins

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

114003

Email

leonie.ruddickcollins@abdn.ac.uk

Thesis topic

Establishing the benefits of protein intake during energy balance and energy restriction to improve weight loss

Description

This thesis examined the effects of dietary protein manipulation during energy balance and energy restriction on physiological and behavioural mechanisms influencing body weight. Changes in protein intake were imposed to assess the role of dietary protein in maintaining whole body protein turnover, resting and postprandial energy expenditure, appetite and food preferences. Methodological issues such as reliability and the definition of weight stability were also addressed. The results from this thesis support higher dietary protein intakes as a means for maintaining protein turnover and resting energy expenditure during energy restriction.

Supervisors

Nuala Byrne, Neil King

R u s d i B i n

R u s l i

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

113718

Email

diri65@yahoo.com

Thesis topic

Traffic safety along rural mountainous highways in
Malaysia

Description

This research has generated an in-depth understanding of road traffic crashes along rural mountainous highways in Sabah, Malaysia that will enable development of targeted countermeasures. To achieve this, an extensive set of road traffic data was collected through field surveys and secondary sources, and a set of cutting-edge statistical and economic models were developed to investigate (i) single-vehicle crashes, (ii) multi-vehicle crashes, and (iii) injury severity of traffic crashes along rural mountainous highways. Findings from this research will contribute to the design of a safer environment along rural mountainous highways, which are common in many developing countries.

Supervisors

Md. Mazharul (Shimul) Haque, Mark King, Wong Voon (Malaysian Institute of Road Safety Research)

Beata Sander

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

114124

Email

b1.sander@qut.edu.au

Thesis topic

The influence of the autonomic nervous system on the human choroid

Description

Short-sightedness occurs due to excessive growth of the eye. This research provided new insights into the role of the autonomic nervous system in the control of eye growth by blocking neural signals involved in the eye's response to blur. Pharmacological interventions were examined including adrenergic agonists and muscarinic blockers, while additional mixed interventions included optical blur combined with drugs. The eye's short-term response was assessed through measurements of eye length and the thickness of the choroid. Muscarinic blockers reduced the eyes response to hyperopic blur but did not enhance the short-term response to myopic blur.

Supervisors

Michael Collins, Scott Read

Socheata Sann

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

105511

Email

socheata.sann@gmail.com

Thesis topic

Developing effective policies to reduce disability
from road crashes in Cambodia

Description

This thesis aims to influence Cambodian policy to lessen the impacts of road crashes in the country. This research identified and explored the social and cultural constructions and impacts of disability as a result of road crash, on individuals and their families. In addition to the quantitative analysis on the road crash datasets, this investigation sought to further an understanding of how to best develop evidence based policies that will shift towards a safer system for all road users, including persons with disabilities, which will ultimately improve the quality of their life.

Supervisors

Narelle Haworth, Julie King, Mark King

Phoebe Lorraine Sarkar

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

110524

Email

sarkar.phoebe@gmail.com

Thesis topic

Characterising the role of insulin signalling in advanced prostate cancer

Description

The majority of prostate cancer patients receiving hormone therapy become insulin resistant, and studies show this metabolic dysfunction is associated with more rapid treatment failure, yet the effect of insulin on prostate cancer is not fully known. This thesis discovered the mechanisms by which insulin increases the propensity of prostate cancer cells to migrate, which is required for cancer cells to disseminate and metastasise, giving a possible explanation for the more aggressive disease in prostate cancer patients with insulin resistance. The results provide a strong rationale for specifically monitoring and treating insulin resistance in prostate cancer patients, which is not current clinical practice. The results suggest that anti-diabetes drugs may be useful as adjuvant therapy in prostate cancer.

Supervisors

Colleen Nelson, Jennifer Gunter, Brett Hollier

Anthony Schoenwald

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103760

Email

anthony.victor@bigpond.com

Thesis topic

Nurse practitioner led pain management the day after Caesarean section: A randomised controlled trial

Description

Caesarean pain is a major problem for women in the days after childbirth and is often not well controlled with the routine practice of twice daily controlled-release oxycodone. This randomised controlled trial demonstrated that a nurse practitioner intervention designed to support maternal participation using immediate-release oxycodone and supportive educational strategies was a safe and effective approach for pain management after caesarean section. At three months follow-up, a small subset of women had persistent pain which was strongly correlated with postnatal depression. Nurse practitioners have the potential to transform acute pain management by meeting individual patient needs over their healthcare journey.

Supervisors

Clint Douglas, Carol Windsor, Mark Gibbs
(Queensland Health)

Masroor Shariff

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

107900

Email

ibn.shariff@gmail.com

Thesis topic

The effects of binge-like sucrose consumption on the mesolimbic reward pathway in the brain

Description

Obesity is a growing epidemic worldwide. It is estimated that the annual costs arising from obesity-related illnesses exceed \$56.6 billion dollars in Australia alone, with 80 per cent of the Australian population predicted to be overweight or obese by 2025. Whilst sugar directly contributes to a significant amount of weight gain that leads to obesity, it is also as addictive as alcohol and nicotine. This thesis establishes that the nicotinic acetylcholine receptors (nAChRs) are involved in regulating sucrose consumption. Furthermore, coupled to the changes in nAChRs, this thesis also sheds new light on the global morphological changes that occur in the dendrites of the neurons in the nucleus accumbens (NAc) and amygdala (AMG) reminiscent of similar changes to drugs of abuse, suggestive of a global imbalance at the level of the Nac and AMG. Together, this suggests the brain reward center should be considered in the treatment approach for obesity.

Supervisors

Selena Bartlett, Pamela Pollock

Teodora Stefanova

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

94161

Email

teodora.stefanova@connect.qut.edu.au

Thesis topic

Factors shaping pedestrians' unsafe behaviour at actively protected level crossings

Description

The main objective of this research was to contribute to a better understanding of pedestrian behaviour at active level crossings, where collisions with trains are a major issue worldwide and in Australia. Articulating both systems-based and traditional individual-centred methods in psychology, this research contributed to a greater theoretical and practical understanding of the origins of unsafe behaviour at crossings. A new tool called Pedestrian Unsafe Level Crossing (PULC), was developed and has provided direction for the proactive analysis of unsafe pedestrian behaviour at level crossings and for the development of effective countermeasures against it.

Supervisors

Andry Rakotonirainy, James Freeman, Christian Wullems, Jean-Marie Burkhardt (Georgetown University), Patricia Delhomme (Georgetown University)

D i m i t y S t e p h e n

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

107853

Email

dimity.stephen3@gmail.com

Thesis topic

Putting a price on climate change: The cost of climate change and foodborne diseases in Queensland in quality-adjusted life years and dollars

Description

Previously, there were no estimates of what effect climate change may have on foodborne diseases in Queensland in future. This thesis provides the first estimates of the incidence and health and economic costs of three important foodborne diseases under climate change to 2036 at a regional level in Queensland. Further, this thesis took the novel approach of using microsimulation models to calculate these costs. From these results, all levels of government and other interested organisations could develop strategies to reduce the future costs of foodborne disease.

Supervisors

Adrian Barnett, Nicholas Graves

Thi Trang Uyen Than

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

108959

Email

uyentpp@yahoo.com

Thesis topic

Extracellular membrane vesicles from
keratinocytes

Description

This project was the first to simultaneously study the three different types of extracellular membrane vesicles (EVs) released by skin cells, in order to reveal the differences in their bioactive molecular cargo. The results of this project have significantly contributed to the body of knowledge surrounding EV biology, especially with regard to keratinocyte-derived EVs and EV mediated keratinocyte fibroblast interaction. This information will have utility for future research directions in wound and skin biology.

Supervisors

Tony Parker, David Leavesley, James Broadbent

Naomi Tutticci

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

102966

Email

ntutticc@bigpond.net.au

Thesis topic

Measuring reflective thinking and self-efficacy after high fidelity simulation to optimise the reflective capacity of final year nursing students

Description

Reflection is a cornerstone of effective registered nursing practice. This study developed a reliable and valid tool to measure critical reflection and self-efficacy that was used in combination with a reflective thinking instrument to determine nursing students' reflective capacity. The balanced reflective practitioner model described by this study provides insight to both nursing students and educators about student's growth as reflective practitioners. The incorporation of nursing students in the debrief facilitator role had a significant effect on the ability of these students to reflectively think. This challenges the standard practice of academics as simulation debrief facilitators.

Supervisors

Fiona Coyer, Mary Ryan, Peter Lewis (Australian Catholic University)

Nathan Wallace

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

112769

Email

Zharag.6@gmail.com

Thesis topic

FKBP52 and its role in DNA damage repair

Description

This thesis aimed to determine if FKBP52 had a role in the DNA damage repair pathways and what that role may be. FKBP52 was found to co-localise with known DNA damage protein hSSB1. FKBP52 expression responded to IR induced DNA damage. FKBP52 levels were also found to increase in the nucleus in response to IR and were found to be bound to the nucleus. This suggests it was involved in the DNA damage response. FKBP52 depletion also led to altered DNA damage signalling, in particular with the phosphorylation of key regulatory proteins of the DNA damage pathway. It was also found that reduced levels via siRNA led to reduced survival after IR via clonogenic assays, and reduced the efficiency of HR via the HR assay. FKBP52 levels in the nucleus were shown to be regulated by ATM and ATR. Consistent with this, FKBP52 was found to be phosphorylated following IR on a putative ATM/ATR phosphorylation site. It was found that phosphorylation at this site lead to altered expression of the FKBP52 protein.

Supervisors

Derek Richard, Emma Bolderson, Laura Croft,
Sally-Anne Stephenson

H u i W a n g

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

108006

Email

whui1219@gmail.com

Thesis topic

Development of nicotine loaded chitosan
nanoparticles for lung delivery

Description

This research offers a specific strategy for the management of a global health problem associated with smoking addiction. Novel controlled release nicotine-loaded chitosan nanoparticles have been developed as a potential therapy. In vitro and in vivo evaluation of these nanoparticles indicate that they are suitable as dry powder inhaler formulations for pulmonary delivery. Results from a mouse model should translate to humans to provide a safe and effective approach to treat smoking dependence.

Supervisors

Nazrul Islam, Selena Bartlett, Graeme George,
Changyou Gao (Zhejiang University)

Karen Whalley

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

107458

Email

karenmwhalley@gmail.com

Thesis topic

The Role of prosodic skills in reading
comprehension

Description

This thesis investigates prosody, often described as the rhythm and melody of spoken language. Prosody is largely absent in text, and established its importance with children and adults reading comprehension. A series of studies shows that prosodic skills play a unique, yet largely unrecognised role in reading comprehension in grade 3 and 4 children, which goes beyond prosody's indirect role in supporting word identification and listening comprehension. Using electroencephalography (EEG), the real-time processing of spoken complex sentences with and without prosody were investigated in adults. Prosodic speech was processed differently (right hemisphere-based), suggesting an interaction with syntactic processes to support superior comprehension.

Supervisors

Julie Hansen, Renata Meuter

Tania Withington

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

107159

Email

withingtont5@gmail.com

Thesis topic

Factors that influence the placement trajectories of children in out-of-home care: Perspectives of carers and children

Description

With increasing numbers of children being placed in out-of-home care it is vital that we have a better understanding of the factors that influence the placement journey, specifically placement stability and placement movement. This convergent mixed method research investigates factors influencing placement trajectory from the perspective of children and carers in the out-of-home care system. Child-carer engagement at the levels of individual child or carer, family-care context and child protection system were found to be critical. A key outcome of this research is the recommendation to structure out-of-home care policy and practice around the placement trajectory concept, placing relationship at the centre, and using child-focused outcomes to evaluate out of home care.

Supervisors

Judith Burton, Areana Eivers, Robert Lonne

Chih Huang Yang

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

113952

Email

chih.yang@connect.qut.edu.au

Thesis topic

Vitamin D in dry eye and myopia

Description

Vitamin D is important to human health, with a variety of systemic diseases linked to vitamin D deficiency. The effect of a two-month treatment of a vitamin D oral supplement on the ocular surface in older people with dry eye, and on binocular vision in younger adults with short-sightedness was assessed. Vitamin D had a beneficial effect on symptoms of dry eye in older people and improved the accommodation function in younger adults. This work suggests that the development of vitamin D eye drops might be useful for these conditions.

Supervisors

Katrina Schmid, Damien Harkin, Michael Kimlin

Yuanhao Yang

PhD

Faculty of Health

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

101792

Email

yuanhao.yang@hdr.qut.edu.au

Thesis topic

Characterising the relationship between migraine and depression

Description

This thesis investigated the association between two common complex diseases, migraine and depression, by analysing both phenotype and genotype data. Multiple studies, including twin modelling and cutting-edge statistical analysis of genome-wide association data, were performed to explore the research aims. This thesis developed current knowledge about the relationship between migraine and depression, indicating that the observed comorbidity between migraine and depression can be explained almost entirely by shared underlying genetically determined disease mechanisms; and suggest that patients with comorbid migraine and depression are genetically more similar to patients with only depression than patients with only migraine.

Supervisors

Dale Nyholt, Lyn Griffiths

Faculty of Law

Eduarda Rosalen

Masters by Research

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

102895

Email

eduarda.rosalen@hdr.qut.edu.au

Thesis topic

A legal framework for ensuring hydropower security in Brazil in the context of climate change

Description

This thesis analyses the elements and problems underpinning Brazil's hydroelectric system and climate change legislation, at both national and international levels. As hydropower dams' operation is threatened by climate change, threatening Brazil's energy security, it is crucial to adopt an adaptive legal framework. This investigation focuses on human rights issues, undertaking a comparative analysis with American legislation. The research findings will provide a global model for other countries that rely on hydropower dams and face similar climate change issues.

Supervisors

Bridget Lewis, Felicity Deane, Richard Johnstone

Darren Catton

Professional Doctorate

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

1070894

Email

darren.catton@cattonroderick.com.au

Thesis topic

Should retail lease legislation in Australia be simplified?

Description

The purpose of this thesis is to determine whether retail shop lease legislation in Australia should be simplified in relation to five major topics of concern. Such a determination will be achieved primarily by analysing and comparing the different legislation in each Australian jurisdiction. In addition, other simplified Australian legislation and the Voluntary Leasing Codes for England and Wales will be analysed. Such analysis will allow the preparation of recommendations for simplified retail leasing legislation.

Supervisors

Sharon Christensen, Bill Duncan

Margaret Voight

Professional Doctorate

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

2365065

Email

margaretvoight@gmail.com

Thesis topic

Is a view different from a wish? Considering the child's view in parenting disputes in Australian family law matters.

Description

This thesis explored the significance of and the intended purpose of the child custody law 2006 child 'voice' provision amendments to the Family Law Act of ascertaining a child's view instead of a child's wish. This thesis conducted both doctrinal and qualitative analysis to examine whether parliament intended that the amendment would translate to a change in statutory meaning which should in turn change the way Independent Children's Lawyers and Judges practiced. This thesis recommended legislative amendments to the Family Law Act to facilitate a clearer legislative pathway for a child's voice to be heard in parenting disputes.

Supervisors

Benjamin Mathews, Donna Cooper, Judith Burton

K h a l e d

A l n k h a i l a n

PhD

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

109616

Email

k.alnkhalan@gmail.com

Thesis topic

The theory of successful criminal entrepreneurs

Description

Criminal entrepreneurs are behind organised crime, yet little is known of how they developed their vision, gained the skills and connections to succeed in their criminal careers. This study provides a novel understanding of the contributing factors in the formation of these successful empires, in an effort to anticipate and prevent the rise of new criminal entrepreneurs in Australia. This study traces the evolving nature of their vision, identity, skills, operational approach and social network. The findings of this study shall enable law enforcement agencies to break down the formation process of criminal entrepreneurs and their organisations in Australia.

Supervisors

Mark Lauchs, Cassandra Cross

Scott Berry

PhD

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

103669

Email

scott@sbchealthnet.com

Thesis topic

Community of blood: Impacts and management of intersecting stigmas among Thai same-sex attracted men and transgender people with HIV

Description

This study presents findings of research undertaken with 22 same-sex-attracted men and transgender people living with HIV (PLHIV) in community or self-help groups in Thailand. It examines experiences of stigma associated with same-sex attraction, non-binary gender identity and HIV. It investigates the ways that intersecting stigma associated with sex, gender and HIV affected the lives of the participants and influenced their decisions to join and remain in community groups. The project adopted grounded theory, a qualitative research method, to undertake fieldwork between 2012 and 2014. The research contributes to scholarship on HIV stigma and its management. The individuals from this study felt powerless to change HIV stigma and its multiple impacts on their lives. However, together they felt more empowered and had the capacity to change the Thai stigma associated with HIV.

Supervisors

John Scott, Matthew Ball

A m a n d a

B r o w n

PhD

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

112815

Email

abrownm012@bigpond.com

Thesis topic

Protection from child emotional abuse in family law parenting matters over two regimes of the Family Law Act 1975 (Cth): Policy, legislation and judicial reasoning

Description

This thesis explored whether Australian family law adequately protects emotionally abused children in parenting matters. It explored the nature of child emotional abuse, and analysed two regimes of the Family Law Act 1975 and their political underpinnings. It analysed case law to understand judicial interpretation and application of the law. Applying social science understandings of child emotional abuse, this thesis found Australian family law—as embodied in legislation, case law, and policy—has not adequately dealt with this form of child maltreatment. Findings indicate the need to develop more robust approaches to child emotional abuse in family law matters.

Supervisors

Ben Mathews, Donna Cooper

Jacinta Buchbach

PhD

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

112184

Email

jacinta-glynn@bigpond.com

Thesis topic

Social media policies and work: Reconciling personal autonomy interests and employer risk

Description

The thesis provides an analysis of the boundary shifting which social media creates between the public/private dimensions of employees and the regulation of social media and work. The thesis analyses the legal complexities of corporate control over personal social media use and the challenges in both managing corporate risk and preserving personal autonomy interests of identity, participation and speech in online spaces. The research outlines what is wrong with social media policies and highlights uncertainties in the law from an individual autonomy perspective. It proposes an innovative model for constructing social media policies through the lens of communicative tenets of Corporate Social Responsibility.

Supervisors

Nicolas Suzor, Matthew Rimmer

Andrew Cable

PhD

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

109615

Email

andrewcable@outlook.com

Thesis topic

Transparency, privacy and equality: A human rights analysis of the open justice principle in Australian mental health legislation

Description

This research analysed Australia's statutory recognition of the common law principle of open justice at mental health civil commitment review hearings and whether its operation complies with the current United Nations human rights framework. This thesis argues that Australia's statutory approaches are inconsistent and that accordingly, each Australian state and territory should implement a supported decision-making framework to enable mental health involuntary patients, should they wish, to make autonomous decisions to waive rights to privacy and confidentiality, and to open a review hearing either in part, or in full. In addition, reviewing tribunals are obliged to publish reasons statements according to a test of 'significance'.

Supervisors

Ben White, Lindy Willmott

Tien Hoang Le

PhD

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

110537

Email

hoangtienle77@gmail.com

Thesis topic

Human trafficking in Vietnam: Preventing crime and protecting victims through inter-agency cooperation

Description

The aims include: examining inter-agency cooperation in preventing human trafficking and protecting victims; identifying root causes of the problem; and suggesting appropriate solutions to better trafficking prevention and victim protection. To achieve these aims, 25 semi-structured interviews with five different cohorts (police officers, border guards, women's union staff, social welfare staff, and staff from the Ministry of Information and Communication) were conducted. In addition, seventy government reports and five conference proceedings specific to the situation in Vietnam were collected, critically analysed, and used to triangulate the findings from the semi-structured interviews.

Supervisors

Molly Dragiewicz, Kerry Carrington

L i n a A c c a

M a t h e w

PhD

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

107784

Email

linamathew@gmail.com

Thesis topic

Legislative models of prosecuting child sexual abuse in India: A review and critical analysis

Description

This thesis conducted the first comprehensive analysis of Indian criminal laws about child sexual abuse offences. It explored social science studies on the nature, prevalence and effects of child sexual abuse, including a focus on India. It synthesised Indian legislation and case law, and provisions of the UN Convention on the Rights of the Child. It identified and analysed six problematic aspects of Indian law. Finally, it conducted a theoretical analysis of four of these key issues, informed by the social science evidence and the UNCRC. The thesis identified key areas of recent progress, and areas requiring further reform.

Supervisors

Ben Mathews, Andrew Garwood-Gowers, Sibnath Deb (Pondicherry University)

Shannon Merrington

PhD

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

103632

Email

s.merrington@hdr.qut.edu.au

Thesis topic

Dark networks: Criminal collaboration in Australian police forces

Description

This study investigates why police officers engage in corruption, the role of trust in facilitating and bonding officers together, and the network structures that develop from these relationships. Findings revealed that officers collaborated and operated under a network structure reinforced by a subculture of unwritten rules, codes and acceptance by senior officers. This network was found to be dynamic, shifting in structure, membership and activity, but remained highly clustered and cohesive around a few core actors. Additionally, the corruption network operated on collaborations of trust. Officers used trustworthy attributes, personal experience and third party information to assess whether a fellow officer was trustworthy enough to be a member of the corruption network, which resulted in a 'pipeline' of trust.

Supervisors

Mark Lauchs, Cassandra Cross, Robyn Keast

Huong Van Nguyen

PhD

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

112358

Email

huongnv_mpi@yahoo.com

Thesis topic

Making public-private partnerships in infrastructure successful in Vietnam: A need for a better procurement legal mechanism

Description

This thesis examines how Vietnamese laws could be improved to facilitate successful public-private partnership (PPP) projects. It focuses on key PPP rules on project selection, land acquisition, major entities in procurement, capital and risk allocation of projects, procurement procedures and dispute resolution. The research utilises the regulatory regimes of Australia and the Philippines by way of comparison with that of Vietnam. This thesis concludes that although PPP laws are in force in Vietnam, there are many processes that could be improved. The research takes learning from Australia and the Philippines to provide recommendations to improve the relevant legislation in Vietnam.

Supervisors

Sharon Christensen, Bill Duncan

Belinda Parker

PhD

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

107855

Email

belinda_parker@live.com

Thesis topic

Seven deadly sins: Developing a situational understanding of homicide event motive

Description

This project explores homicide motives through a situational lens to determine whether they differ in terms of their victim, offender, and offence characteristics. The aim was not to identify why people engage in homicidal behaviours, but instead to examine whether there are particular distinctive qualitative characteristics that distinguish and differentiate the motives from one another. In doing so, this research highlights the importance of looking beyond the general homicide statistics, disaggregating them by motive, and challenging the notion of what is often understood as the typical homicide victim, offender, and situation.

Supervisors

John Scott, Claire Ferguson

Christopher Turnbull

PhD

Faculty of Law

Institute

na

Thesis type

Traditional

ePrint ID

113831

Email

christurnbullphone@gmail.com

Thesis topic

Family law property settlements: Principled law reform for separated families

Description

This thesis investigates the philosophical basis, values, and practical application of family law, specifically property settlements for separated spouses, where those spouses have children of their relationship. It is a step forward in understanding of how judges decide cases, as it reports on the results and process of decision-making using 200 decisions from family law courts. It develops criteria for defining justice in this context, including a clear purpose to the law, consistency of decision-making, non-discrimination between spouses, giving weight to financial disadvantage, and priority to the economic interests of children.

Supervisors

Donna Cooper, Alex Deagon, Richard Johnstone

Science and Engineering
Faculty

Alexander Browning

MPhil

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

110808

Email

a13xbrowning@me.com

Thesis topic

Stochastic mathematical models of cell
proliferation assays

Description

Cell proliferation assays are routinely used to study collective cell behaviour, and can be interpreted with mathematical models. In this thesis, we apply a computational Bayesian technique to calibrate stochastic discrete mathematical models of cell migration and cell proliferation in the context of a cell proliferation assay. Initially, we use a lattice-based model to explore the optimal duration of a cell proliferation assay. Next, we estimate the parameters in a lattice-free model using three independent experimental data sets. Our model is able to both describe and predict the evolution of the population and spatial structure in a cell proliferation assay.

Supervisors

Matthew Simpson, Scott McCue

M o h a m m a d L u t f u r R a h m a n

MPhil

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

113830

Email

lrahman@juniv.edu

Thesis topic

Modelling flyover induced travel demand in Dhaka, Bangladesh

Description

This research evaluates induced travel demand with the construction of transport infrastructure in Dhaka, Bangladesh using flyovers as a case study. It examines whether transport infrastructure induces travel behaviour changes, and explains that flyover users did not generate any induced travel kilometres. However, flyover users switched their travel mode, route, and residential location for travel time savings. The findings contribute to guide policies that include the effects of induced travel demand when constructing new roadway facilities, such as flyovers in Dhaka and other similar cities in developing countries.

Supervisors

MD Kamruzzaman, Douglas Baker

Vikal Acharya

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

108956

Email

vikal.acharya@gmail.com

Thesis topic

Tool-supported vulnerability assessment for SCADA networks

Description

This thesis contributes to the information security of Supervisory Control and Data Acquisition Networks (SCADA). This research provides support for security audits by showing them how to identify component-level vulnerabilities in SCADA networks. We have developed a novel process to assess the vulnerability of SCADA devices remotely. The process firstly identifies the device in the network and its configuration, searches for its specifications using an online database, looks up vulnerabilities online, and finally pinpoints any existing software patches. This process was validated during three case studies that use industry-standard equipment to provide proof of concept demonstrations.

Supervisors

Colin Fidge, Ernest Foo

R e z a

A l i m o h a m m a d i

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102162

Email

rz.alimohamadi@gmail.com

Thesis topic

Portfolio strategic control and portfolio management performance

Description

This thesis presents the development of a new control mechanism for managing a portfolio of projects in today's rapidly changing environment and fierce global competition. Portfolio Strategic Control combines elements of portfolio management and functions of strategic management to control portfolios in a strategic manner and improve performance. This feedforward approach can be applied in parallel with traditional feedback control system to prepare portfolios for future environments by aligning its objectives with organisational strategy, managing resources, risks, and opportunities in an integrated fashion, and adding elements of flexibility and learning to portfolios.

Supervisors

Stephen Kajewski, Vaughan Coffey, Eric Too (University of Southern Queensland)

B i l a l A l s a l a m

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

104318

Email

bilahazimyounus.alsalam@hdr.qut.edu.au

Thesis topic

A small autonomous UAV for detection and action in precision agriculture

Description

This research developed a framework for detection and action in agriculture and other Remote Sensing tasks through the use of Unmanned Aerial Vehicles (UAVs) with an on-board computer. This system has potential applications in the field of precision agriculture, for example performing the task of detecting and eradicating weeds. The method is based on vision-based-detection and navigation, which autonomously detects a target (e.g. a weed) and takes action (e.g. spraying herbicide). The system was tested in simulation and outdoor experiments at a farm in South-East Queensland, Australia. The results of this system have shown that the on-board system is capable of detecting targets of interest and taking autonomous actions accurately and efficiently, making it a useful application to precision agriculture.

Supervisors

Felipe Gonzalez, Duncan Campbell

O w e n

A r t h u r

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

104747

Email

o.arthur@live.com

Thesis topic

Investigation of high temperature nanofluids for concentrating solar collector applications

Description

This thesis investigated the potential use of molten salt nanofluids as a directly absorbing heat transfer fluid in concentrating solar receiver applications. This research was conducted through the development of a two dimensional fluid dynamics model in COMSOL, which uses radiative heat transfer and mixture model physics. Two molten salts were studied, NaNO₃-KNO₃ and Li₂CO₃-K₂CO₃ doped with graphene nanoparticles. This thesis evaluates the effects of receiver length and height, inlet velocity, nanoparticle volume fraction and solar concentration on receiver performance.

Supervisors

Azharul Karim, YuanTong Gu

S u k u n t a

A v a p a k

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102375

Email

sukunta@hotmail.com

Thesis topic

Failure mode analysis on concentrated solar power (CSP) plants: A case study on solar tower power plant

Description

This thesis is an investigation of critical failure modes of solar tower power systems in concentrated solar power (CSP) technology. This research evaluates the causes and impacts of failure on the major components of CSP technology and applies the failure Mode and Effect Analysis (FMEA) to CSP solar tower systems. This research proposes an alternative method to overcome the limitations of Risk Priority Number (RPN) from traditional FMEA. This thesis includes a case study, which applies the proposed approach to CSP solar tower systems for better prioritisation of failure mode, which will reduce the risk of failures.

Supervisors

Lin Ma, Michael Cholette

David Benfer

Masters by Research
Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

104558

Email

benfer.dave@gmail.com

Thesis topic

Passive acoustic monitoring of calling activity provides an optimised field survey methodology for the threatened pouched frog, *Assa darlingtoni*

Description

This project examined various methods used to detect pouched frogs (*Assa darlingtoni*), a threatened species in south-east Queensland. Through the use of automatic sound recording devices, this research has provided valuable information on the calling behaviour of the species, which will greatly aid in developing effective monitoring programs for this species and contribute to its conservation in the future.

Supervisors

Susan Fuller, Stuart Parsons

Tara - Louise Bopf

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

104384

Email

tara.bopf@optusnet.com.au

Thesis topic

Mathematical modelling of worker interactions and the impact on workplace safety

Description

This research applies mathematical modelling techniques to data on work and safety practices in order to investigate workplace safety programs and improvement strategies. Currently there is a lack of mathematical modelling on the interactions between workers and workplace safety intervention programs, resulting in limited understanding on the success of the programs. This thesis examined the potential impact of safety intervention programs prior to implementation within the workplace, resulting in the development of mathematical models that may be used as a basis for further investigation into Occupational Health and Safety.

Supervisors

Scott McCue, Dann Mallet

Duncan Caleb Padraig Burke-Shyne

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107570

Email

dburkeshyne@gmail.com

Thesis topic

On carbonate alteration zones in a greenstone keel of the East Pilbara Terrane (Doolena Gap Greenstone Belt)

Description

This thesis examines the origin and relative timing of carbonate alteration zones in the poly-deformed Doolena Gap Greenstone Belt in the East Pilbara Terrane, the type locality of Archaean dome-and-keel-terrane. The key findings demonstrate that shear-assisted carbonate alteration occurred throughout the entire tectonic history of the greenstone belt, and that weak pre- and syntectonic carbonate minerals make up 40 to 60 per cent of the examined greenstone rocks. These outcomes imply that carbonate minerals likely controlled the strength of Archaean lithosphere.

Supervisors

Christopher Schrank, David Murphy, Luke Nothdurft

Justin Case

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103702

Email

j_jamescase@hotmail.com

Thesis topic

Numerical analysis of the vibration and acoustic characteristics of large power transformers

Description

This thesis presents a numerical methodology to predict the noise and vibration characteristics of large power transformers. The approach, which focuses on a vibro-acoustic finite element simulation, has been validated by appropriate experimental measurements and is shown to identify both the local and global acoustic behaviour of a transformer under nominal operating conditions. Furthermore, analysis methods presented in this thesis have illustrated a transformer's complex vibration characteristics that result in elevated noise levels. An understanding of such vibration characteristics together with acoustic predictions will better enable transformer manufacturers to consistently meet noise emission targets set by customers and regulators.

Supervisors

Pietro Borghesani, Lin Ma, Helmut Pregartner (Siemens Ltd)

A m y

C o o k

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

104557

Email

amycookster@gmail.com

Thesis topic

Predictive models to support quoting of fixed fee consulting projects

Description

This thesis addresses the problem faced by many consulting companies within the construction industry, which sees a significant proportion of projects resulting in losses. These losses occur despite the best efforts from managers to price and execute project profitably. This research applied several machine learning and statistical techniques to case study companies' historic timesheets, clients, and invoicing data in order to predict loss-making projects. The algorithms were tested in a simulated business decision-making scenario and the best model improved profits by 9 per cent. The results from this research take a step towards helping businesses reduce risk by integrating their data into financial decisions.

Supervisors

Kerrie Mengersen, Paul Wu

Patrick Cooley

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107981

Email

p.cooley1992@gmail.com

Thesis topic

Initiation and growth of mid-Holocene coral reefs, Cleveland Point, Moreton Bay, Queensland

Description

This thesis details the geomorphology and timing of the mid-Holocene fossil reef at Cleveland Point, Moreton Bay, Queensland. This research presents the first subsurface data from percussion cores through the reef. Results reveal that Cleveland Point reef initiated quickly after rising seas flooded their foundations 7300 years ago. The reef remained in a “catch-up” growth mode from 7300 to 5700 years ago before reef accretion ceased. Age data suggests that the termination of the reef occurred 5700 years ago and coincided with a hypothesised lowering of sea-level and a possible change in terrigenous sediment distribution in Moreton Bay.

Supervisors

Luke Nothdurft, Oliver Gaede, Gregory Webb (Queensland Government)

Colin Davis

Masters by Research

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

105133

Email

colin.davis@uqconnect.eu.au

Thesis topic

Imaging analysis of morphological changes to
vertebrae in adolescent idiopathic scoliosis

Description

This thesis involves the image analysis of CT and MRI scans to comprehensively document the changing three-dimensional pedicle anatomy that occurs in the growing spine of adolescent idiopathic scoliosis patients and compare this to healthy control subjects. This study not only provides information regarding the pathophysiology of adolescent idiopathic scoliosis but also to provide critical information to spinal surgeons operating on these spines to reduce the risk of serious complications.

Supervisors

Paige Little, Caroline Grant

Melinda D' Cruz

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102840

Email

melinda.dacruz@hdr.qut.edu.au

Thesis topic

Digital strategy: Purpose, positioning and process of development

Description

Recent technological advances and the consequent social and economic change present opportunities and threats to organisations across industries. These transformations have disrupted traditional business models, prompting the need for entities to adopt digital strategies to survive, compete, and/or operate effectively in a digital world. This research explores the purpose, positioning and the process of developing digital strategies. This is a unique study, which investigates qualitatively the various conceptions of digital strategy. In addition a design-led innovation framework is proposed to aid practitioners in establishing a digital strategy.

Supervisors

Gregory Timbrell, Jason Watson

Zhe Ding

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103845

Email

shanatanmoe@gmail.com

Thesis topic

Profile-based virtual machine placement for energy optimization of data centers

Description

This thesis provides a framework for virtual resource placement to optimise energy consumption in data centers. The framework consists of profiling, task classification, and virtual machine placement, and automatically conducts virtual resource placement for given jobs and tasks. Research shows that applying this framework achieves a 12% cut of energy consumption in comparison with benchmark methods. Adopting this framework has the potential to save enterprises millions of dollars.

Supervisors

Glen Tian, Maolin Tang

R a m i

E l S a m r a

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

114099

Email

rami.elsamra@connect.qut.edu.au

Thesis topic

How digital communications impact passenger facilitation at hub airports with particular emphasis on transfer passengers

Description

This project was a step forward in developing understandings of how digital communications impact passenger facilitation at hub airports. Digital communication promotes cooperation between different stakeholders in airport settings, and thus the delivery of quality and reliable services to the customers. This research also evaluated the literature to determine the effectiveness of digital communication in customer services, and in enhancing the operation of airlines through major hubs

Supervisors

Prasad Yarlagadda, Clinton Fookes, Narayanan Srinivasan (Edith Cowan University)

J i e z h e n

F a n

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102407

Email

sean@cuzaa.com

Thesis topic

Measurement and communication uncertainty in automated aircraft separation management

Description

This thesis aims to overcome aircraft conflicts during periods of central communication failure by investigating an inter-aircraft communication and track file manager based automated separation management algorithm. This study first investigated the impact of measurement uncertainty on the estimated risk of conflict, and then compared the separation performance of several algorithms in uncertain communication environments. In doing so, this study has characterised the separation performance in communication failure situations.

Supervisors

Jason Ford, Felipe Gonzalez

S a m m y F l o r c z a k

Masters by Research

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

112580

Email

sammyflorcza@gmail.com

Thesis topic

Enhancing surface charge dissipation of Melt-electrospun 3D printed scaffolds for the fabrication of tall and well-ordered architectures

Description

This two-part project undertaken at QUT and the University of Wurzburg focused on a 3D printing technology known as Melt-electrospinning. In the first part, a melt electrospinner device was designed and assembled to fabricate tissue engineering scaffolds. An air ioniser was then used to investigate the effects of reduced surface charge on the scaffolds, such as improving the output and height of the printed structure. The goal of the second project was to fabricate scaffolds using an electro-active polymer capable of altering its shape when placed within an electric field.

Supervisors

Dietmar Hutmacher, Elena Juan Pardo, Paul Dalton (University of Wurzburg) (Julius Maximilian University)

Jennifer Gibson

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

109466

Email

jenniferlouisegibson@gmail.com

Thesis topic

Habitat selection and calling activity of the Lewin's Rail (*Lewinia pectoralis pectoralis*)

Description

Combining wildlife conservation and urban development can often be problematic. Lewin's Rail is a near threatened, cryptic ground-dwelling bird that is found on land that subject to development activity by the Brisbane Airport Corporation. This study quantified the habitat requirements of Lewin's Rail, and examined aspects of the regeneration of this habitat. By assessing the habitat requirements of Lewin's Rail, measures could be taken to facilitate the protection and integrity of remaining habitat, and also to minimise the impact of future disturbance upon the population on Brisbane airport land. The study also helps inform management of Lewin's Rail in other areas subject to human impact.

Supervisors

Ian Williamson, Andrew Baker, Wendy Drury
(Brisbane Airport Corporation)

Nicholas Green

Masters by Research

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

113727

Email

nicholas.green@health.gov.qld.au

Thesis topic

Impact of in-house 3D printing used as a preoperative planning aid for complex fracture treatment

Description

This thesis examines the role of 3D printing as a preoperative planning aid for heel bone (intra-articular calcaneus) fractures in a contemporary orthopaedics department. Three studies were conducted, observing model creation time and costs, studying their effects on surgeon diagnostic ability and image interpretation, and investigating the impact of the 3D printed models on surgical times and patient outcomes. This early pilot study demonstrates that there is value in producing 3D printed intra-articular calcaneus fractures for surgeons, patients, and the hospital, reducing surgery time for complex heel bone fractures by on average 72 minutes and reduced post-operative time in hospital.

Supervisors

Caroline Grant, Travis Klein, Vaida Glatt, Kevin Tetsworth

Jodie Haigh

Masters by Research

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103849

Email

jhaigh@wiley.com

Thesis topic

Melt electrospinning writing as a method to form novel hydrogel architectures and constructs

Description

The addition of three-dimensional porous structures in hydrogels, and the first reported instance of melt electrospinning writing (MEW) of polypropylene (PP) provides a foundation for the production of complex hydrogel systems for a variety of applications. Firstly, this project provides a novel, facile and universal method to produce porous structures in soft hydrogels, using sacrificial templates produced via MEW. Secondly, optimization of the MEW processing of PP was undertaken to provide a method to produce scaffolds from high melting point polymers for use in fiber–hydrogel composites. These methods provide a foundation for the production of complex hydrogel systems for use in tissue engineering and regenerative medicine applications.

Supervisors

Tim Dargaville, Kathleen Mullen, Paul Dalton
(Julius Maximilian University of Wuerzburg)

I z w a n

I d r i s

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

106921

Email

nie_feng@hotmail.com

Thesis topic

Real-time vehicle monitoring and positioning using MQTT for reliable wireless connectivity

Description

This project was aimed at developing affordable solutions to improve performances of real-time monitoring of road vehicles utilising low-cost satellite positioning equipment and wireless cellular communication network. This study investigates the problems by measuring and benchmarking two-way communication latency, data reliability and positioning accuracy using low-cost GPS equipment and a lightweight machine-to-machine (M2M) protocol called Message Queue Transmission Telemetry (MQTT). A prototype of vehicle monitoring platform which consists of on-board-unit and central monitoring server was developed to facilitate the research study.

Supervisors

Yanming Feng, Glen Tian

J a c k

L i n

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

105358

Email

kueiping328@gmail.com

Thesis topic

Pre-treatment of coal seam water with coagulation and electrocoagulation

Description

This thesis examines innovative methods for pre-treatment of coal seam water. In order to prevent scaling and fouling of downstream reverse osmosis membranes this research investigates both electrocoagulation and chemical coagulation using aluminium and iron based electrodes and/or coagulants. Application of electrocoagulation was found to significantly reduce the presence of problematic dissolved species, such as silica and also alkaline earth ions, which can potentially scale membranes and equipment. Chemical coagulation could also remove dissolved silica from simulated coal seam water samples but was found to be relatively ineffective when treating real coal seam water. The future study of electrocoagulation has potential to be applicatied to a wider range of coal seam water compositions and minise costs of use.

Supervisors

Graeme Millar, Sara Couperthwaite

W e n j i a o

L i u

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102335

Email

mata7890@sina.com

Thesis topic

Positioning performance of single-frequency GNSS receiver using Australian regional ionospheric corrections

Description

The thesis focuses on developing and validating a method that allows low-cost single-frequency GPS devices to improve the navigation accuracy of between 5 to 10 metres to the submetre level. The method designed is based on the estimation of regional ionospheric corrections using widely distributed GPS stations in Australia. Mass-market users, such as smartphones and vehicle users can benefit from the developed approach.

Supervisors

Yanming Feng, Hasmukh Morarji

Cassandra Madden

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102161

Email

cassandra.madden@bigpond.com

Thesis topic

Exploring user experience in records management

Description

This thesis is a qualitative study that uses semi-structured interviews and usability testing to explore the user experience of records management systems in a case study organisation in Queensland, Australia. This research identified eight themes, using the thematic analysis technique, which influenced how users feel about their experiences. These themes showed how users prefer to learn, the challenges they face with technology, their information searching patterns, their amount of time when saving documents, and identified issues with the usability and design of recordkeeping systems.

Supervisors

Helen Partridge, Elham Sayyad Abdi, Zaana Howard (Swinburne University of Technology)

Erin McColl

Masters by Research
Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

109468

Email

erin.mccoll@gmail.com

Thesis topic

Using stereolithography to 3D print GelMA hydrogels

Description

The two projects covered by this thesis describe new ways to leverage modern advancements in additive manufacturing techniques in the field of biofabrication. The initial project was a proof-of-principle study which involved the selection, customisation and use of a commercially available stereolithography (SLA) 3D printer to produce synthetic structures using GelMA hydrogels for a cartilage fabrication process. The second topic of investigation aimed to improve the accuracy, design processes and reproducibility of melt-electrospinning onto a rotating mandrel. This investigation advanced the process from a winding procedure to an accurate 3D printing fabrication method with a particular focus on tubular nerve guide construction.

Supervisors

Travis Klein, Tim Dargaville, Paul Dalton (Julius Maximilian University of Wuerzburg)

Heather McIntosh

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

111613

Email

heathermcintosh@live.com.au

Thesis topic

Soil active carbon as an indicator of nitrous oxide loss potential

Description

Agriculture is the dominant source of nitrous oxide emissions, a potent greenhouse gas associated with the use of nitrogen fertilisers. This research examined the relationship between soil active carbon and nitrous oxide to form the basis of a simple field test for farmers to use, which allows them to estimate the potential for significant nitrous oxide emissions from their soil. Fifteen agricultural soils, contrasted by land use history and management, were incubated in the laboratory, and carbon dioxide and nitrous oxide fluxes were calculated over 100 days. Active carbon was measured as the fraction oxidisable by 0.02 M potassium permanganate. These results confirmed the relationship between active carbon and nitrous oxide emissions, soil respiration and nitrogen mineralisation. A threshold of 500 mg kg⁻¹ for active carbon was established, above which there is potential for significant nitrous oxide emissions. A strong relationship was evident between active carbon and total organic carbon.

Supervisors

Peter Grace, David Rowlings, Clemens Scheer

Rebecca McMaster

Masters by Research

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

109910

Email

rebecca.mcmaster@hotmail.com

Thesis topic

A simple method towards 3D-printing and crosslinking partially hydrolysed poly(2-ethyl-2-oxazoline)

Description

The two projects covered by this thesis represent advancements in the field of biofabrication. The first project was a proof-of-principle study focused on the development of a new polymer ink for 3D-printing. Scaffold structures were printed with a hydrophilic polymer and characterised to determine optimum printing parameters. Crosslinking strategies to create hydrogels with properties similar to human tissue were also explored. The second project was focused towards developing adipose grafts for soft tissue defects. Microfibre scaffolds were designed and 3D-printed with pores suitably sized for seeding with aggregates of human stem cells, and differentiated into fat tissue under in vitro conditions.

Supervisors

Tim Dargaville, Travis Klein, Paul Dalton (Julius Maximilian University of Wuerzburg)

Malcolm Napier

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103979

Email

bnapier63@gmail.com

Thesis topic

An integrated hydrological and hydrochemical study of surface and groundwaters in the Bungawalbin Creek catchment, northeast NSW, Australia

Description

Using a variety of geoscientific techniques, this catchment-wide study examines the connections between surface waters and groundwaters in the Bungawalbin Creek drainage system, northern NSW. This thesis developed a 3D geological model of the catchment based on mapping and geophysical surveys. Geochemical, isotopic and hydrological data were used to establish dynamic processes within the geological model and highlight the central role of the shallow, alluvial aquifer and its hydrological connections to surface waters. Research outcomes have applications in the future management of water resources, land management, and climate variability in the area.

Supervisors

Malcolm Cox, Lucy Reading, Jessica Trofimovs, Matthias Raiber (Commonwealth Scientific and Industrial Research Organisation)

P a r d e e p

O a d

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102160

Email

pardeep.oad@hdr.qut.edu.au

Thesis topic

Innovation in the road construction sector and its benefits to the industry

Description

Innovation in road construction industry offers important industry and community benefits. This refers to the use of better materials for the purpose of road construction, such as solar roads, eco-friendly roads, and recycled materials. This thesis reviews the use of innovative practices internationally, examines different case studies from different countries, and explores the suitability of the practices under several road conditions. The study results indicate that trials underway in several countries demonstrate potential for innovative technologies in road construction.

Supervisors

Arun Kumar, Stephen Kajewski

Shoshannah O'Connor

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

101891

Email

shoshannah.oconnor@hdr.qut.edu.au

Thesis topic

A geomorphological study of the South Wellesley Islands, southern Gulf of Carpentaria

Description

This thesis details a geological history of the South Wellesley Islands, Southern Gulf of Carpentaria in Queensland, Australia, over the mid- to late-Holocene. Field studies of the mixed bioclastic and siliciclastic coastal deposits on the South Wellesley Islands yielded significant data that was analysed in order to determine age constraints, the palaeo-depositional environment, rock composition and diagenetic history. The results of this research provide fundamental data for further work in producing a combined Holocene sea-level curve for the Southern Gulf of Carpentaria and the influence of sea-level change on the evolution of coastal environments in the tropical north of Australia.

Supervisors

Craig Sloss, Luke Nothdurft

N a o m i P a x t o n

Masters by Research
Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

107202

Email

n.paxton@qut.edu.au

Thesis topic

Designing patient-specific melt-electrospun
scaffolds for bone regeneration

Description

This thesis developed a method for designing 3D printed implants to restore bone loss. Using melt-electrospinning 3D printing technology and patient medical scan data, the researcher designed and fabricated anatomically-accurate scaffolds using biodegradable polymers in order to facilitate bone regeneration. The method presented was applied to three clinically-relevant case studies and can now be used for the design of a range of other implants based on patient scan data. The application and importance of this method was discussed as a key element in the biofabrication process for the fabrication of biologically-relevant, patient-specific human tissues and organs.

Supervisors

Mia Woodruff, Sean Powell, Juergen Groll
(University Hospital of Wurzburg)

C h a n t e l l e

R e b e l l o

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

114079

Email

chantelle.rebello@nexusdelivery.com.au

Thesis topic

Coal seam gas water quality and impacts on downstream treatment technologies

Description

The coal seam gas industry is booming in Queensland, however extraction of the gas is accompanied by water containing several salts. To facilitate beneficial water reuse for applications such as crop irrigation, treatment methods are required. One challenge is the variability of water quality produced. This project was directed at understanding the composition of 150 water samples from an operating gas field, determining correlations between components, and suggesting appropriate remediation methods. This research revealed the diversity of water compositions, informed management procedures by developing improved correlations between dissolved species and predicted the performance of reverse osmosis for desalination.

Supervisors

Sara Couperthwaite, Les Dawes, Graeme Millar

Sultan Akbar Rianto

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

105587

Email

sultan.rianto@outlook.com

Thesis topic

Identifying risk in shariah compliant financing for transport infrastructure projects in Indonesia

Description

This research investigates the risks of Shariah compliant financing in developing Indonesia's infrastructure, and provides a strategic approach to managing the identified risks. The Government of Indonesia considers Shariah compliant financing a suitable approach, considering factors such as increasing market appetite for Islamic finance products and the risk-sharing principles in their transaction. However, Indonesia is still in the early stages of adopting this method, with the first Shariah compliant financed public infrastructure project taking place in 2013. This research identified the sources and types of risk in Indonesia's practice of using Shariah compliant financing within the transport sector, in particular railway, seaport, and airport projects; and provided a strategic approach to manage the identified risks.

Supervisors

Connie Susilawati, Fiona Lamari, Ayomi Rarasati
(University of Indonesia)

A h m a d

S a l e h i S h a h r a k i

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

101501

Email

ahmad.salehi.shahraki@gmail.com

Thesis topic

Data flow and access control policy models in wireless body area network for healthcare

Description

This thesis investigates the interactions, in terms of data flow, between parties involved in body area networks (or BANs) under healthcare scenarios targeting outdoor and indoor environments. Using these scenarios, data flow requirements between BAN elements and parties involved in BANs such as patients and doctors were identified. These requirements were used to generate BAN data flow models. Data flow models and key information security and privacy requirements were then used to design an access control policy model that would allow authorised parties to access medical resources and data securely.

Supervisors

Seyit Camtepe, Dhammika Jayalath

Andrew Schwenke

Masters by Research
Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102339

Email

schwenke@live.com

Thesis topic

Riparian vegetation condition influences movement and microhabitat use by *Mixophyes fasciolatus* in South East Queensland

Description

Riparian vegetation has been impacted by urbanisation in many parts of Australia, resulting in population declines in numerous species of stream-associated frogs. This study was the first to investigate movement and microhabitat use of the stream-associated frog, *Mixophyes fasciolatus*, in sites that differed in the ecological condition of riparian vegetation in south-east Queensland. Twenty-nine frogs were tracked over a 48-hour period and their fine-scale movements and microhabitat use were examined and found to be related to riparian vegetation condition. These results have significant implications for the conservation management of this species.

Supervisors

Susan Fuller, David Hurwood

B r e n a i n n

S i m p s o n

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

114094

Email

brenainn.simpson@gmail.com

Thesis topic

Identifying magma recharge using cryptic mineral variations in the Somerset Dam igneous complex, Queensland, Australia

Description

This project is another step forward in a long tradition of geological research into understanding magmatic systems in the crust that cannot be directly observed. This has been an ongoing field of research in igneous petrology for over 100 years and continues today. This thesis utilises the latest in analytical data collection technology to collect high resolution in situ chemical data to test the hypothesis of magmatic replenishment in layered mafic intrusions. The results have implications for the understanding of how magma is emplaced within the crust which has been an active research topic in the last 10 years.

Supervisors

David Gust, Patrick Hayman

Thomas Spring

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

104233

Email

thom@geochempet.com

Thesis topic

Reconstruction of the physical volcanological processes and petrogenesis of the 3.5Ga Warrawoona Group pillow basalt of the Warralong Greenstone Belt, Pilbara Craton Western Australia

Description

This research attempts to address some knowledge gaps in the formation of the Archean in age Warralong greenstone belt in the East Pilbara terrane through geochemical and petrographic analysis. This research also addresses the possible formation mechanisms for Ocelli, a liquid immiscible texture observed in pillow lavas throughout the East Pilbara terrane and Archean greenstone belts throughout the world.

Supervisors

David Murphy, Jessica Trofimovos, Craig Sloss

T a n a

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

104978

Email

tana5@connect.qut.edu.au

Thesis topic

Characterization and utilization of cellulosic ethanol by-products

Description

Bioethanol is an attractive, clean and renewable energy source. This research examines the properties of lignocellulose biomass, such as sugarcane bagasse or eucalyptus wood, which is used to produce bioethanol. This project examines the properties of the by-products and investigates the valorisation of the waste. Findings show that aromatic value-added products can be produced from the by-products and waste from ethanol production.

Supervisors

William Doherty, Huai Yong Zhu, Jan Zhang, Darryn Rackemann

David Vosolo

Masters by Research
Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

109789

Email

david_vosolo@live.com.au

Thesis topic

Investigation on geotechnical engineering properties of coal mine spoil subjected to slaking

Description

This research project led to the development of a new approach to assess the saturated and unsaturated properties of soil material subjected to slaking. Constant saturation, along with overburden pressure, resulted in a larger vertical deformation of coal mine spoil subjected to slaking. This research's results indicate that material slaking was occurring due to saturation and overburden pressure. This will have a substantial benefit to the mining operations with distinctive interest associated to safety of the mine spoil slopes, limiting failures to protect workers, equipment, and operational costs.

Supervisors

Chaminda Gallage, Jay Rajapakse

K a t a r z y n a

W a l c z a k

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103630

Email

k.walczak89@gmail.com

Thesis topic

Prototype decision support framework using geospatial technologies for analysing human health risk

Description

This thesis uses GIS (Geographic Information System) to develop a prototype framework that can determine health risk in Semarang, Indonesia. Using the landscape epidemiology concept, this thesis developed a prototype Decision Support Framework. Semarang was selected as the site as it is representative of a rapidly urbanising area in a developing country. The Decision Support Framework examines climatic, landscape and socio-economic factors identified as having significant impacts on water quality and subsequent causation of waterborne and water-related diseases. The research outcomes have the potential to be applied worldwide to identify and isolate areas most vulnerable to the effects of the mentioned diseases, therefore improving quality of life in developing countries.

Supervisors

Ashantha Goonetilleke, John Hayes

R u w a n

W e e r a k o o n

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102052

Email

ruwanpw@yahoo.com

Thesis topic

Investigating opportunities for improving sustainability outcomes in post disaster road infrastructure recovery projects

Description

This research developed a sustainability assessment checklist for improving sustainability outcomes in post-disaster infrastructure recovery projects. Key elements taken into consideration were the social, economic, environmental factors, including engineering and governance. This research analysed three case studies and the existing disaster recovery strategies that were implemented to rebuild infrastructures damaged by natural disasters. This research sought to develop a comprehensive triple bottom line sustainability assessment checklist for post-disaster management in road infrastructure.

Supervisors

Arun Kumar, Cheryl Desha

Thomas Woodley

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

101960

Email

twood416@eq.edu.au

Thesis topic

Designing and fabricating PEIT systems

Description

At the nanoscopic level, light interacts with matter in interesting ways. Plasmonics is the study of one such interaction where light interacts with electrons at the surface of particles. The oscillation of the electrons when light interacts with them are called Plasmons and have many properties, one of which can cause nanoparticles to become “cloaked” or more precisely: transparent. The application of “cloaking” extends to sensors, solar cells and numerous other uses. This research investigates how changing the geometry of nanoparticles alters “cloaking” behaviour and findings show that thicker particles in close proximity can be transparent in the visual region.

Supervisors

Kristy Vernon, Esa Jaatinen

Z u t a o

W u

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103083

Email

zutao.wu@hdr.qut.edu.au

Thesis topic

Kmer-based sequence representations for fast retrieval and comparison

Description

This thesis presents a study of alignment-free methods for genetic sequence comparison. By using representations based on k-mers short subsequences of length k, sequence similarity can be measured rapidly and accurately by calculating the distance between these paired representations. This research utilises and adapts conventional methods of information retrieval to generate novel representations for k-mers and sequence fragments. Precision was further improved through the use of machine learning approaches, especially neural networks, to learn relationships between k-mers and to generate enhanced sequence representations. These approaches have applications in large scale sequence comparison, especially in the analysis of metagenomic samples.

Supervisors

Jim Hogan, Wayne Kelly

Pittaya Yamo

Masters by Research

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

108005

Email

pittayachanai@yahoo.com

Thesis topic

Learner intrinsic motivation in online social learning platforms: A case study of massive open online course (MOOC) in Thailand

Description

This qualitative case study aims to better understand how intrinsic motivation plays an important role in massive online open courses (MOOCs). Most of the research on MOOCs has been largely conducted using developed country MOOCs to examine the experiences and motivation of MOOC learners. However, very little empirical research using developing country MOOCs has been conducted to investigate the same phenomenon. In particular, qualitative case study research examining learner intrinsic motivation in Thailand has been urgently needed, and therefore examined in this research. The findings indicate that social, environmental and cultural conditions influence learner intrinsic motivation in Thailand. Social conditions include peers, course facilitators, self-motivation, colleagues, and family members. Environmental conditions include accessibility, learning activities and resources, collaboration tools, learning systems, discussion forum, and feedback. Cultural conditions include Thai learners' traits and seniority

Supervisors

Jason Watson, Elham Sayyad Adbi, Karen Nelson

Farah Binti Ahmad

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

102133

Email

farahahmad1125@gmail.com

Thesis topic

Microbial oil production from oil palm empty fruit bunch

Description

Oil palm empty fruit bunch (EFB) is one of the major solid wastes from palm oil processing. EFB is a lignocellulosic biomass and has the potential to be converted into microbial oil through biochemical routes, where the oils can be further used for biodiesel production. This PhD research aims to develop and optimise a process for microbial oil production from EFB. The microbial oil production process involves cultivation by oleaginous microorganisms including microalgae, yeasts and fungi on EFB hydrolysates as carbon substrates. The study demonstrates that EFB is a promising low cost non-food feedstock for biodiesel production. The integration of microbial oil production from oil palm biomass with existing palm oil processing could enhance the profitability and sustainability of the palm oil industry.

Supervisors

Ian O'Hara, William Doherty, Jan Zhang

Abdullah Al Dahami

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103533

Email

abdul.aldahami@gmail.com

Thesis topic

A stage-based model for enabling decision support in process mining

Description

This thesis introduces a decision support system tool that is representing the process tasks of a spaghetti-like model in stages for understanding business process mining results. In addition, this representation helps to evaluate the proposed solution and compare it with others. This tool can break the issue of visualising and aligning tasks in process model and clearly show the comprehensive flow relations with more accurate dependencies for decision-makers in terms of the business's perspective.

Supervisors

Yuefeng Li, Taizan Chan

M o a t h A h m e d

A l Y a h y a

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112502

Email

moath.alyahya@gmail.com

Thesis topic

Construction organisations' readiness for electronic tendering: Saudi Arabian experience

Description

This research investigates the issues behind the slow uptake of electronic tendering in construction. The study found that organisations are not prepared in certain arenas that affect their readiness for electronic tendering. The researcher's developed model includes a new hypothesis that could improve organisational readiness. The model has been empirically tested in Saudi Arabia. The results confirm that the hypothesis has an important effect on organisations' readiness to take up electronic tendering.

Supervisors

Martin Skitmore, Adrian Bridge, Madhav Nepal, David Cattell (Bond University)

Shafiqul Alam

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102099

Email

sksqalam@yahoo.com

Thesis topic

Developing life cycle environmental indicators for road infrastructure

Description

This study delivered a comprehensive life cycle carbon footprint indicator for sustainable development and management of road networks. The developed indicator termed Road Use Greenhouse Factor (RUG Factor) is scientifically validated for its quantification, impact assessment on the conventional cost-benefit analysis based economic interventions, and suitability of integration with other indicators required for sustainable road asset management. This study also made important contributions on quantitative indicator development methodology, dynamic aspect of life cycle assessment, road social indicator study, road sustainability index development and road carbon map development.

Supervisors

Arun Kumar, Les Dawes

H a s s a n

A l i

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112479

Email

hali24953@gmail.com

Thesis topic

Improvement of centrifugal wet scrubber design through laboratory experimentation and computational fluid dynamics

Description

Flue gas scrubbing devices are used to clean exhaust gas from industrial plants and play an important role in the drive to conserve the planet. Centrifugal wet scrubbers are one such type of widely used scrubbing device. Unfortunately, their design, which is often based on rules of thumb, can contribute to operational problems that are costly to rectify. This project employed experiments and computational fluid dynamics to develop an improved understanding of the flow processes inside a centrifugal wet scrubber and proposed design modifications for improved performance.

Supervisors

Anthony Mann, Philip Hobson, Floren Plaza, Sagadevan Mundree

S i n a

A m i n m a n s o u r

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112765

Email

sina.aminmansour@gmail.com

Thesis topic

Video analytics for the detection of near-miss incidents at railway level crossings and signal passed at danger events

Description

Railway collisions remain a significant safety and financial concern for the Australian railway industry. Collecting data about events that could potentially lead to collisions helps gain a better understanding of the causal factors of railway collisions. This research introduced Artificial Intelligence and Computer Vision algorithms that use cameras installed on trains to automatically detect near-miss incidents at railway level crossings, and Signal Passed at Danger (SPAD) events. A SPAD is an event when a train passes a red signal without authority due to technical or human errors. These experimental results demonstrate that it is possible to reliably detect these events.

Supervisors

Frederic Maire, Gregoire Larue, Christian Wullems (European Space Agency)

Andre Asena

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103983

Email

andre.asena3@gmail.com

Thesis topic

Dosimetry in the vicinity of high-density materials in radiotherapy

Description

The success of radiation therapy treatments is largely dependent on the ability to accurately deliver the prescribed dose to a patient within a narrow tolerance. However, the human body consists of many components, which vary in density, causing treatment complications. This research developed a methodology whereby the effects of high-density medical implants on radiotherapy treatments can be quantified accurately and efficiently. A better understanding of the impact of these medical implants on radiotherapy dose distributions results in more accurate treatments that can be delivered with increased confidence, positively impacting patient outcomes.

Supervisors

Jamie Trapp, Scott Crowe, Tanya Kairn

Jannah Baker

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

104455

Email

jannahbaker@hotmail.com

Thesis topic

Bayesian spatiotemporal modelling of chronic disease outcomes

Description

This thesis contributes to Bayesian spatial and spatiotemporal methodology by investigating techniques for spatial imputation and joint disease modelling, and identifies high-risk individual profiles and geographic areas for type II diabetes mellitus (DMII) outcomes. DMII and related chronic conditions including hypertension, coronary arterial disease, congestive heart failure and chronic obstructive pulmonary disease are examples of ambulatory care sensitive conditions for which hospitalisation for complications is potentially avoidable with quality primary care. Bayesian spatial and spatiotemporal studies are useful for identifying small areas that would benefit from additional services to detect and manage these conditions early, thus avoiding costly sequelae.

Supervisors

Kerrie Mengersen, Nicole White

Jeremy Baldwin

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

110638

Email

jeremy.baldwin.qld@gmail.com

Thesis topic

Unravelling the mechanisms behind periosteal regeneration and its application in bone tissue engineering

Description

This thesis explored the mechanisms underlying the structure and function of the periosteum in bone homeostasis and repair. The knowledge gained from these studies was then applied to the development of both a new tissue-engineered periosteal construct for bone regeneration and a novel orthotopic in vivo platform to be used as a pre-clinical research tool for screening potential tissue engineered constructs.

Supervisors

Dietmar Hutmacher, Elena Juan Pardo

Alexander Baldwin

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102669

Email

alexander.baldwin@deakin.edu.au

Thesis topic

Balancing act: the effect of dynamic difficulty adjustment in competitive multiplayer video games

Description

This thesis deconstructs and investigates the use of Multiplayer Dynamic Difficulty Adjustment (MDDA) features in competitive multiplayer video games as a means of balancing player performance between differently skilled players. As enjoyment can be negatively affected by unbalanced challenge, MDDA features seek to adjust player performance to improve enjoyment and motivation for continued play. This research deconstructs MDDA features using a framework and tests the effects on the player experience of both low and high-performing players. As a result of this research, methods of using MDDA to balance player performance can be easily identified and optimised.

Supervisors

Daniel Johnson, Peta Wyeth

M d A b u l B a s h a r

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

105561

Email

mdabul.bashar@hdr.qut.edu.au

Thesis topic

A Personalised ontology framework for interpreting discovered knowledge in text information

Description

Many text mining techniques have been developed to discover useful knowledge from text data. However, these methods produce a large body of knowledge without semantic information, making it difficult to interpret the meaning of discovered knowledge and therefore limiting its potential use. In response, this research proposes a new framework that mines a personalised ontology to improve the semantic interpretation of discovered knowledge. This framework combines the discovered knowledge with a knowledge-base ontology and the data context. This research tested the new framework through qualitative and quantitative evaluations, which confirm the merits of the proposed framework that has addressed the existing challenges in the mining process.

Supervisors

Yuefeng Li, Richi Nayak

Vicki Bayati

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112170

Email

vjb112@gmail.com

Thesis topic

Exploring the impact of embedded social media within the corporate websites of media organisations

Description

This research studies the impact of popular third-party embedded social media within media organisations websites (such as widgets and applications). This research examines the experience of this phenomenon from both a media organisation perspective and a website user/news reader perspective. The findings demonstrate how embedded third-party code brings technical and business challenges to an organisation, which affects their website users browsing experience. A set of 26 recommendations have been presented to assist any organisations using social media to tailor their own IT based social media policies and assist in making websites more efficient and enhance their end user experience.

Supervisors

Sylvia Edwards, Helen Partridge

A r i x i n

B o

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

105649

Email

a.bo@qut.edu.au

Thesis topic

Investigation of the mechanical and electron interaction properties of layered titanate nanowires

Description

This project reports first-hand knowledge on the mechanical and electron interaction properties of titanate nanowires, which possess a broad range of applications. Using experimental techniques, the mechanical bending and tensile behaviours of individual nanowires are analysed. From this analysis, a time-dependant recovery and an atypical reversible defect motion of the nanowires are observed. Applying electron beam irradiation, joint formation between two titanate nanostructures is demonstrated with the underlying mechanisms explained. The electron-titanate interaction phenomenon is also shown to be a practical tool for tailoring structures at nanoscale.

Supervisors

YuanTong Gu, Huai Yong Zhu, John Bell

Joshua Comrade Buru

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102084

Email

joshuacomradeburu@gmail.com

Thesis topic

Comparative biology of two forms of an invasive vine, *Dolichandra unguis-cati* (L.) Lohmann (Bignoniaceae): implications for weed spread and biocontrol

Description

This thesis consists of a comparative study of the cat's claw creeper, which is an invasive vine that has two distinct forms ('long pod' and 'short pod'). The two forms have different prevalence rates in Australia and this research examines plant traits that could explain this variation. This research examines seed biology, anatomical and growth traits, together with physiological traits in response to two levels of light, water and nutrients resources. In addition, this study assesses preferences of two bio-agents (insects) against the two forms of cat's claw creeper to ascertain bio-control efficacy. The outcome of this study is a prospectus of traits that help explain why the short pod form is more widespread than the long pod form. Short pod possesses many of the traits that are associated with fast growing plants that easily colonise habitats. Generally, insects feed and lay eggs on both forms.

Supervisors

Tanya Scharaschkin, Jennifer Firn, Kunjithapatham Dhileepan (Department of Employment, Economic Development and Innovation), Olusegun Osunkoya (Queensland Department of Agriculture and Fisheries)

P r i t h w i R a j C h a k r a b o r t y

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

108023

Email

p1.chakraborty@qut.edu.au

Thesis topic

Detecting viewer interest in video using facial and heart rate responses

Description

This project investigates different methodologies to understand and quantify interest and engagement evoked in viewers. Interest is difficult to measure due to its subtleness, dependence over personal preference and viewed content. This project uses machine intelligence to measure interest in response to sports and movie videos. The findings of this project can be applied and extended in several fields, including but not limited to, teaching and learning, multimedia, and human computer interaction.

Supervisors

Dian Tjondronegoro, Vinod Chandran, Yuefeng Li,
Ligang Zhang (Xi'an University of Technology)

■

Charmaine Yi Ting

Cheah

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

112464

Email

cheah@HUESKER.de

Thesis topic

Development of a methodology to quantify installation damage on geotextile for coastal application

Description

This study was a step forward in enhancing the knowledge to quantify installation damage on geotextiles' properties for coastal protection structures. It examines the geotextiles' properties with the Drop Rock Test developed, which replicates construction stress on geotextiles during installation process. The thesis investigated the influence of construction stress on geotextiles' robustness, mechanical strength, physical deformation, and filtration properties. The influence of subgrade characteristics (i.e moisture condition) on geotextiles' robustness during installation was examined in this study as well. Design charts to predict the robustness of geotextile during installation were developed to allow engineers and designers to select the appropriate geotextile to minimise the risk of damage during installation.

Supervisors

Chaminda Gallage, Les Dawes, Preston Kendall (Geofabrics Australasia)

Jason Chin Shin Chia

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

109617

Email

jc.chia@qut.edu.au

Thesis topic

Walking accessibility and connectivity of transit: Modelling and impact analysis on transit choice and network coverage

Description

This research examined the walking accessibility to transit in relation to travellers' socio-economic standings, and the impact of cognitive transfer location in transit network connectivity. This thesis makes a significant contribution to advancing transit network connectivity quantification. Findings of this research support transit agencies and transport planners to more accurately assess the spatial coverage of the existing transit systems to improve the effectiveness, and to support planning and designing of new transit services and routes.

Supervisors

Brian Lee, Connie Susilawati, MD Kamruzzaman

M a r k

C o t t m a n - F i e l d s

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

104232

Email

cofiem@gmail.com

Thesis topic

Virtual birding: Extending birdwatching to review acoustic recordings

Description

This thesis investigates methods that enable bird watchers (birders) to review audio recordings collected by environmental sensors. Birders have valuable experience that is essential for identifying highly variable bird calls. Accurate bird call identifications can provide reliable information for avian research and conservation efforts.

This thesis aims to understand birders' activities through five studies, which include the evaluation by birders of two prototype websites designed for analysing audio. The findings demonstrate that audio segments, visualisations, and tailored feedback in a website interface support accurate identifications of bird calls that may otherwise remain undetected.

Supervisors

Paul Roe, Margot Brereton

B i y a n v i l a g e

D a r e e j u

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102697

Email

sampathdareeju@gmail.com

Thesis topic

Performance evaluation of unsaturated rail track foundations under cyclic moving wheel load

Description

This research explores the performance of rail track foundations under a cyclic moving wheel load. This thesis developed an alternative laboratory testing method to evaluate the response of the unsaturated soils of rail track foundations under repeated moving wheel loadings. The novel laboratory testing method is more capable of producing the realistic strength-deformation characteristics of the unsaturated soils with the effects of principal stress axis rotation (PSAR), which can be used to redesign the conservative rail track guidelines.

Supervisors

Chaminda Gallage, Manicka Dhanasekar, Li-Ang Yang, Parsons Brinckerhoff

Jonathan Davis

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

106914

Email

jon.davis@internode.on.net

Thesis topic

Machine learning and feature engineering for computer network security

Description

This thesis studies the application of machine learning to the field of Cyber security. Machine learning algorithms promise to enhance Cyber security by identifying malicious activity based only on provided examples. However, a major difficulty is the unsuitability of raw Cyber security data as input. In an attempt to address this problem, this thesis presents a framework for automatically constructing relevant features suitable for machine learning directly from network traffic. We then test the effectiveness of the framework by applying it to three Cyber security problems: HTTP tunnel detection, DNS tunnel detection, and traffic classification.

Supervisors

Ernest Foo, Matthew McKague, Olivier De Vel (Defence Science and Technology Organisation)

Danielle De Rosa

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

112419

Email

agr.derosadaniele@gmail.com

Thesis topic

Optimizing the use of organic amendments in sub-tropical vegetable cropping systems for improved environmental and agronomic outcomes

Description

This study aimed to improve the efficiency of the use of organic amendments as a valid substitute for chemical nitrogen fertiliser in sub-tropical vegetable cropping systems. The results proved that predicting and accounting for the nitrogen release from organic amendments offers significant potential agronomic and environmental advantages by maintaining soil fertility and reducing the chemical nitrogen use.

Supervisors

Peter Grace, David Rowlings, Clemens Scheer

Suchitra Waruni De Silva

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

106920

Email

suchitra13@gmail.com

Thesis topic

Numerical investigation on low dimensional materials for gas adsorption and separation

Description

This thesis is a study of gas separation by low-dimensional nanomaterials through selective adsorption and membrane separation. The study uses first-principles quantum mechanical simulations and classical molecular dynamic simulations to study the gas separation behaviour of doped fullerenes, porous boron nitride membranes and graphitic carbon nitride membranes. The thesis further demonstrates how chemical affinity and size exclusion behaviour of the adsorbent and membrane materials are tweaked to achieve the targeted separation, and how the separation behaviour can be tuned to match the application by charge tuning, strain tuning and structure tuning.

Supervisors

YuanTong Gu, Aijun Du, Wijitha Senadeera

K a v e h

D e i l a m i

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107656

Email

kaveh.deilami@gmail.com

Thesis topic

Modelling the urban heat island intensities of alternative urban growth management policies in Brisbane

Description

When urban areas experience higher temperature than their surrounding rural areas, this phenomenon is called the urban heat island (UHI) effect. UHI contributes to global warming. Urban planning policy plays a significant role in controlling the UHI. This study examines the UHI effects of urban planning policy scenarios for Brisbane, including: a) business as usual; b) transit oriented development; c) infill development; d) motorway oriented development; and e) sprawl development. The findings show Infill development will be effective but will generate pockets of extreme UHI. Sprawl development will generate a moderate UHI effect but will be distributed throughout the city.

Supervisors

MD Kamruzzaman, John Hayes

D M N a y a n a D i s s a n a y a k e

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112812

Email

nayanansd@yahoo.com

Thesis topic

Fuzzy Multi-Attribute Analysis (FMAA) model for Engineering-Procurement-Construction (EPC) contractor selection

Description

This research develops a Fuzzy Multi-Attribute Analysis (FMAA) model to select the most appropriate contractors for Engineering-Procurement-Construction (EPC) projects. It will enable EPC project owners to eliminate the over-reliance on subjective contractor selection and risks associated with incomplete information, imprecise data and vagueness in human decision making. With the combination of fuzzy set theory and multi-attribute analysis, this model addresses the fuzzy nature in human decision making and helps EPC clients achieve the best value of the contract.

Supervisors

Bo Xia, Martin Skitmore, Bambang Trigunarsyah

Benjamin James Dowling

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

108960

Email

dowling.bj@gmail.com

Thesis topic

Provable security of internet protocols

Description

Secure communications over the Internet are typically established by first running an authenticated key exchange protocol, which computes a secret key between two users, which is then utilised in an encryption protocol. In this work we examine novel security properties of the most prominent communications protocols, including the Transport Layer Security and Secure Shell protocols. We introduce new security frameworks for analysing security properties of protocols involving negotiation, multiple ciphersuites, long-term key reuse, and time synchronisation. Our results have increased confidence in the security of real-world protocols, and our analyses of next-generation protocols have informed their development by standardisation bodies.

Supervisors

Douglas Stebila, Colin Boyd

E a r l

D u n c a n

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

112356

Email

earl.w.duncan@gmail.com

Thesis topic

Bayesian approaches to issues arising in spatial modelling

Description

This thesis addressed several contemporary issues arising in the analysis of spatial data and the broader statistical methodology. Two state-of-the-art statistical models were developed for the purpose of identifying unusual trends, a new algorithm to deal with label switching was devised which outperforms existing solutions, and new approaches to spatial smoothing were explored. The outcomes from this thesis should be of interest to managers in the health sector, biostatisticians, and researchers who deal with spatial data.

Supervisors

Kerrie Mengersen, Nicole White

Godfred Odame Duodu

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

103672

Email

jogd14@yahoo.com

Thesis topic

Characterisation, source apportionment and ecological risk assessment of some pollutants in Brisbane river sediment

Description

This thesis presents the first simultaneous analysis of heavy metals and organic residues in the Brisbane River sediment post 2011 and 2013 floods. The research developed new methods for rapid analysis of elements in sediment allowing for the assessment of ecological risk. This thesis provides crucial information regarding levels, distribution, sources and ecological risks of the pollutants in the sediment. The findings of this research will assist in risk management and formulation of effective pollution mitigation. The generic outcomes of this thesis are expected to provide essential guidance for monitoring and regulation of pollutants in urban waterways worldwide.

Supervisors

Godwin Ayoko, Ashantha Goonetilleke

R e b e k a h

E d e n

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107158

Email

rebekah.eden@gmail.com

Thesis topic

The conceptualization and investigation of user capital and its impact on effective use and information systems success

Description

The use and success of Information Systems (IS) is becoming increasingly reliant on users. Therefore, this study sought to develop and test a construct around the notion of User Capital, which this research defines as the attributes possessed by an individual that enable them to use an IS to perform tasks. User Capital was formed by the dimensions of self-regulation, competence, mastery orientation, and attitude. In order to test the construct, a largely quantitative field study approach was adopted. User Capital was found to be a significant driver of effective use and a key construct in the examination of IS success.

Supervisors

Erwin Fielt, Glen Murphy

Darshika Ekanayake

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

106918

Email

thilinie86@gmail.com

Thesis topic

The mating system and courtship behaviour of the Queensland fruit fly, *Bactrocera tryoni* (Froggatt) (Diptera: Tephritidae)

Description

The Queensland fruit fly is Australia's most destructive horticultural insect pest. The flies need to mate to successfully reproduce, but there are significant gaps in knowledge about how they find and select mates. This research shows that male and female flies likely use physical landmarks to find each other in the environment. This thesis also describes how the flies, having found potential mates, use fine-scale courtship behaviour, and demonstrated that young, large male flies are most successful at securing a mate. This research also makes significant advances in our understanding of the potential for close-range chemical communication to play a role in mate identification and selection. This research directly informs sustainable management strategies against this pest.

Supervisors

Mark Schutze, Anthony Clarke

Adam Ellery

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

106798

Email

adam.ellery@outlook.com

Thesis topic

Modelling transport through biological environments that contain obstacles

Description

Transport through biological environments that are densely crowded with obstacles is often classified as anomalous, rather than Fickian diffusion. Researchers often describe these transport processes using either a random walk model or a fractional order differential equation model. This research simulates transport through a crowded environment that is populated by impenetrable and immobile obstacles. This work suggests that it may be inappropriate to model transport through a crowded environment using these standard approaches. This thesis proposes a new analytical method for modelling the transport of an agent through a crowded environment. Using this method, we calculate the exact long-time diffusivity as well as the crossover time, which is the time scale required for the transport process to effectively become Fickian. Finally, we extend our new model to include interactions between the motile agent and the obstacles such as adhesion and repulsion.

Supervisors

Matthew Simpson, Scott McCue

F a h a m e

E m a m j o m e

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

105645

Email

f.emamjome@qut.edu.au

Thesis topic

Re-conceptualisation of information quality: A critical realist perspective

Description

This thesis presents detailed methodological guidelines and a comprehensive conceptual framework to guide and harmonise studies on information quality as a multi-disciplinary object of study. Despite the abundance of literature on information quality, this phenomenon has not been defined clearly and research efforts have failed to address practical challenges resulting from complex contextual situations and technological advancements. In response, this thesis built a meta-framework for conceptualising information quality to align research efforts with real world problems. This framework is built on the tenets of applied Critical Realism, Peircian Semiotics and social science methodological guidelines.

Supervisors

Wasana Bandara, Guy Gable, Alison Gable (The University of Queensland), Mary Tate (Victoria University of Wellington)

Andrew English

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

112916

Email

andrew.engl@gmail.com

Thesis topic

Visually-aided localisation for autonomous agricultural vehicles

Description

This thesis presents an approach to visually-aided navigation of agricultural robots in cropping fields. In doing so it develops several novel visual crop-row tracking methods, along with sensor fusion methods to enable practical, reliable and cost effective localisation systems suitable for navigating future fleets of agricultural robots.

Supervisors

Peter Corke, David Ball, Ben Upcroft

G a i u s D e b i E y u

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

112500

Email

feldeg2002@yahoo.com

Thesis topic

Flow-assisted corrosion in coal seam gas infrastructure

Description

This thesis contributes to the investigation of critical factors that affect the corrosion behaviour of mild steel in coal seam gas (CSG) produced water (single phase) and explores mitigation approaches using eco-friendly corrosion inhibitors. This work includes the study of the effect of surface roughness, fluid flow, surface roughness, immersion time, and water chemistry (bicarbonate ion, chloride ion and dissolved oxygen) on the electrochemical behaviour of mild steel in CSG-produced water and simulated conditions using rotating disc electrode (RDE). Ipomoea batatas leaf extract (IBLE) and the combination of sodium nitrite (NaNO₂) and potassium iodide (KI) as corrosion inhibitors were studied.

Supervisors

Geoffrey Will, Wim Dekkers

S a b a

F a r n a g h i

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

103634

Email

saba.farnaghi@hdr.qut.edu.au

Thesis topic

Role of hypercholesterolemia in osteoarthritis
development

Description

Several lines of research indicate that osteoarthritis (OA) is not only a joint disorder associated with mechanical stress and aging but also a metabolic syndrome in which several risk factors work together to contribute to disease initiation and/or development. One such metabolic risk factor could be high cholesterol levels in the body. Even though having a high cholesterol level is a well-known risk factor for cardiovascular disorders, its possible role in musculoskeletal diseases, particularly OA, is not clear. This thesis examines the fundamental viewpoints on cholesterol involvement in the pathogenesis of OA, stressing the need for understanding the molecular mechanisms behind this association.

Supervisors

Yin Xiao, Indira Prasadam, Ross Crawford

Benjamin Fitzpatrick

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

112365

Email

ben.r.fitzpatrick@gmail.com

Thesis topic

Ultrahigh dimensional variable selection for interpolation of geostatistical data: Case studies in soil carbon modelling

Description

This thesis explores statistical methodologies for predicting maps of soil carbon levels from small numbers of soil core observations. Each of these methods improves the accuracy of mapping by discovering and exploiting empirical relationships between soil carbon observations and data on large numbers of potentially related environmental characteristics. In tandem, data visualisation techniques are applied in novel ways to represent the roles of the many environmental characteristics used in these models of soil carbon distributions. This thesis also holds relevance for the widespread task of leveraging maps of potentially related, ancillary data when predicting maps from point referenced observations.

Supervisors

Kerrie Mengersen, Peter Grace, David Lamb
(University of New England)

J o h a n n e s F r i e d l

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

108060

Email

johannes.friedl@qut.edu.au

Thesis topic

Denitrification losses from intensively managed pastures in the subtropics: Key controls and mitigation

Description

Intensively managed pastures receive high inputs of nitrogen via fertiliser application, but inefficiencies result in large losses of nitrogen to the environment. This project identified the microbial process of soil denitrification as a major pathway of nitrogen loss from subtropical pastures, establishing the agronomic and environmental significance of denitrification losses for these agroecosystems. The research shows how soil water management and enhanced efficiency fertiliser can be combined to reduce denitrification losses from pasture soils. This strategy to improve nitrogen use efficiency provides both mitigation and productivity benefits and represents a win-win scenario for the future management of intensively managed pastures.

Supervisors

Clemens Scheer, Peter Grace, David Rowlings

G u o p i n g

G a o

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

109443

Email

ggp1234563344@gmail.com

Thesis topic

Computational design of catalysts for clean energy conversion and storage

Description

This project focuses on the computational design of novel catalyst for artificial synthesis: converting sunlight into fuels. With the atomic-scale insight of catalysts obtained by theoretical calculations, many efficient and optimum catalysts for these processes have been designed and engineered. The outcomes of this thesis are expected to provide theoretical solutions for current global energy and environmental challenges.

Supervisors

Aijun Du, Eric Waclawik

Zongyan

Ge

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

107700

Email

z.ge@outlook.com

Thesis topic

Robust fine-grained image classification

Description

This thesis tackles fine-grained image recognition, the task of sub-category or species classification. It explores general methods to improve fine-grained image classification including the use of generative models and deep convolutional neural networks leading to novel models such as a mixture of deep convolution neural networks. This work led to nine peer reviewed publications and a Best Paper Award.

Supervisors

Christopher McCool, Peter Corke, Conrad Sanderson (National ICT Australia)

Andrew Gibson

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

106952

Email

andrew@andrewresearch.net

Thesis topic

Reflective writing analytics and transepistemic abduction

Description

This thesis presents a model of Reflective Writing Analytics that brings together two distinct ways of knowing: the human world of individuals in society, and the machine world of computers and mathematics. This investigation presents a specialised mode of reasoning called Transepistemic Abduction, which provides a way of justifying intuition and heuristic approaches to computational analysis of reflective writing.

Supervisors

Kirsty Kitto, Peter Bruza

Emma Gray

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112503

Email

el.gray@connect.qut.edu.au

Thesis topic

Ecology and status of a new species of carnivorous marsupial, the Black-Tailed Dusky Antechinus (A. Arktos) and its relationship with a sympatric congener, the Brown Antechinus (A. Stuartii)

Description

Since 2012, the number of described species in the carnivorous marsupial genus Antechinus has increased by 50 per cent. This thesis aimed to collect and analyse fundamental ecological data for one newly described species, the black-tailed dusky antechinus, Antechinus arktos, about which virtually nothing was known. Population ecology and geographic range of the species was used to determine conservation status. The foundational ecological information detailed in this thesis concerning breeding biology, diet, activity patterns and optimal detection methods, will assist in planning future conservation initiatives of this endangered marsupial.

Supervisors

Andrew Baker, Ian Williamson

Daniel Grunwell

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103323

Email

daniel.grunwell@connect.qut.edu.au

Thesis topic

Designing and implementing an information accountability framework for usable and useful eHealth systems

Description

This research examined the design and implementation of an Information Accountability Framework for eHealth with the aim of enabling the creation of more useful eHealth systems. The study explored the challenges of implementing the accountability mechanisms as a means to balance patient privacy concerns and the information access needs of healthcare professionals. Through the use of modelling, user studies, and case studies, this thesis presents requirements for implementing the protocols, proposed an extended model of the framework, and provided concrete examples of modifying existing eHealth systems.

Supervisors

Tony Sahama, Leonie Simpson

Thomas Haines

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112814

Email

haines3163@yahoo.com.au

Thesis topic

Towards trustworthiness without trusted authorities

Description

This project focuses on improving public consensus systems by reducing reliance on the powerful authorities that are prevalent in modern electronic voting schemes. It investigates how new cryptographic protocols with human involvement can remove or reduce reliance on trusted authorities. It also improves the in-polling-booth electronic voting scheme “Prêt à Voter” to allow higher privacy. The research proposes an online voting scheme called “VOTOR”, which prevents the authorities from learning or casting votes, along with other desirable properties. Finally, the thesis designs a forward-secure and unconditionally anonymous linkable ring signature, with applications to online voting.

Supervisors

Xavier Boyen, Colin Fidge, Vanessa Teague (The University of Melbourne)

Michael Halstead

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112818

Email

michael.ahalstead@gmail.com

Thesis topic

Locating people in video surveillance from semantic descriptions

Description

This PhD research developed new approaches to locate individuals in surveillance footage from a semantically describable target description. Investigations in this programme focused on the use of soft biometrics such as clothing colours and patterns, and height as traits to locate a target subject in video. This facilitated the introduction of techniques that can reduce the impact on human operators in surveillance settings.

Supervisors

Clinton Fookes, Simon Denman, Sridha Sridharan

Fiona Harland

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

106745

Email

Thesis topic

How the university librarian ensures the relevance of the library to stakeholders: A constructivist grounded theory

Description

This thesis presents a substantive grounded theory that provides an understanding of how the University Librarian or Library Director can ensure the library's relevance to stakeholders in the face of digital disruption and online open access information sources. The theory suggests that the University Librarian responds to these problems in a cyclical pattern where the following strategies interact with each other: aligning strategic vision with the university; reinventing the library; engaging with stakeholders; building an agile and engaged culture; and demonstrating value to the university. These mutually dependent strategies sustain a library culture that is continually striving for improvement.

Supervisors

Glenn Stewart, Christine Bruce

J a n H e n k e l

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

109909

Email

hanna-henkel@gmx.de

Thesis topic

Bone tissue engineering in two preclinical ovine animal models

Description

This PhD research was focused on the development and evaluation of innovative scaffold-based bone tissue engineering concepts for the treatment of large volume bone defects, which still represent a major challenge in orthopaedic and reconstructive surgery. Two different types of bone tissue engineering constructs were investigated and successfully applied to regenerate critically-sized segmental bone defects in ovine animal models. The results outlined in the PhD thesis represent a significant contribution to potential future clinical translations of bone tissue engineering concepts from bench to bedside.

Supervisors

Dietmar Hutmacher, Michael Schuetz

S r i H e r w i n i n g s i h

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

109755

Email

herwie01@gmail.com

Thesis topic

Dosimetric verification of stereotactic body radiotherapy treatment plans for early stage non-small cell lung cancer using Monte Carlo simulation

Description

This thesis is an evaluation of the dosimetric accuracy of the dose calculation algorithm used for planning of lung stereotactic body radiotherapy treatments. It specifically investigates the accuracy of the collapsed cone convolution algorithm employed in the Pinnacle3 Radiotherapy Treatment Planning System by using Monte Carlo techniques as an independent verification tool. This thesis also investigates the impact of dose calculation uncertainties on treatment outcome estimation through the use of radiobiological modelling.

Supervisors

Andrew Fielding, Jamie Trapp

J o s h u a

H o w a r d

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107143

Email

jhoward86@hotmail.co.uk

Thesis topic

Catalytic conversion of sugar manufacturing by-products to 5-(chloromethyl) furfural and 5-(hydroxymethyl) furural

Description

This thesis is a contribution to the development of catalytic processes for the production of platform chemicals from agricultural residues. This research examined catalytic processes for the production of chloromethylfurfural and hydroxymethylfurfural from sugar cane bagasse and molasses. These chemicals can be used for the production of fuels, pharmaceuticals and polymers.

Supervisors

William Doherty, Lalehvasht Moghaddam, John Bartley

X i n

H u

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

112395

Email

x8.hu@outlook.com

Thesis topic

Practice mining for the development of sustainable retirement villages in Australia

Description

The research focused on providing sustainable living environment in Australian retirement villages. It proposed a novel conceptual framework of sustainable retirement villages, and designed a best-practice mining system to support the development of sustainable retirement villages. The research will facilitate the development of an age-friendly living environment for older people in Australia.

Supervisors

Bo Xia, Laurie Buys, Martin Skitmore, Wilson Lu (The University of Hong Kong)

N a s i r

H u s s a i n

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103528

Email

nasirawan_1@hotmail.com

Thesis topic

Cooperative communication in relay assisted wireless access networks

Description

This research investigates the benefits of user cooperation in wireless communications systems. In order to understand the dynamics of wireless cooperative communication systems, this research uses a comprehensive study of two essential characteristics of cooperation, optimal relay selection criteria and practical channel estimation. This thesis proposes and analyses a novel relay selection model based on realistic channel estimation. The gains are experimentally evaluated using a wireless communication testbed and the outcomes of this research reveal that incorporating cooperative techniques with an adaptive relay selection strategy into existing wireless communication can significantly reduce the required power and the impact of wireless channel impairments.

Supervisors

Dharmika Jayalath, Karla Ziri-Castro, Mohammed Amer Arafah (Kind Saud University)

J i n e n d r a K u m a r i

D i s s a n a y a k e

I m a d u w a A r a c h c h i g e

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112360

Email

jinenkd@yahoo.com

Thesis topic

The impact of water deficit on the growth and yield performance of sesame (*Sesamum indicum* L.): Analysis through mathematical modelling

Description

This thesis investigated the effect of drought stress on agronomical, and physiological characteristics of sesame plants during growth and development, and analysed such responses using Fuzzy set theory (FST) and Artificial Neural Networks (ANN), two mathematical modeling tools. Subjected to cultivar and developmental stages exposed to drought, tested sesame cultivar/s expressed versatile morphological adaptations and adjusted leaf osmotic potential as a drought tolerant mechanism to survive drought conditions. The thesis proposed FST models with various membership functions to describe germination, growth and yield responses of sesame cultivars, and ANN models to forecast sesame yield under given climatic conditions.

Supervisors

Sagadevan Mundree, My Linh Hoang, Brett Williams, S S Perera (University of Colombo), Sudheera M W Ranwala (University of Colombo)

W a n g

J i n

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

109790

Email

w1.jin@qut.edu.au

Thesis topic

Investigating the reproducibility of in vitro cell biology assays using mathematical models

Description

In vitro cell biology assays are routinely used to study cancer spreading, drug design and tissue repair. However, issues associated with reproducibility are reported in literature. In this thesis we investigate the overlooked source of variability that affects the reproducibility of cell biology assays, using a combined mathematical and experimental approach. By calibrating mathematical models to experimental data, we find that the initial degree of confluence significantly affects cell motility. Following the similar approach, we identify the two-phase growth in scratch assays. We then propose a proliferation mechanism for lattice-based, random walk models, which accounts for biologically more realistic crowding effects. At last, we use a lattice-based, random walk model to mimic the passaging process and find that the passage number could significantly affect the wound closure in scratch assays.

Supervisors

Matthew Simpson, Scott McCue

Stuart Johnston

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

109793

Email

stuart.johnston@unimelb.edu.au

Thesis topic

Mathematical models for quantifying collective cell
behaviour

Description

Collective behaviour is critical to a variety of biological and ecological processes, including tumour invasion, wound healing and spreading of invasive species. This thesis investigated mathematical models of collective cell behaviour, with an aim to develop techniques for applying these models to experimental data to obtain quantitative insight from experiments, and to develop novel models that accurately incorporate cellular mechanisms. We determined various appropriate techniques to extract quantitative information about cell movement and cell proliferation, given particular experimental data. We also developed novel mathematical models that accurately describe the average behaviour of cells undergoing birth, death and movement.

Supervisors

Matthew Simpson, Scott McCue

M a n S h a n

K a n

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

110621

Email

dmskan@hotmail.com

Thesis topic

Multi-sensor condition monitoring of bearings using support vector machines

Description

This thesis presents a study on bearing condition monitoring under variable operating conditions using Support Vector Machines. Data collected from multiple sensors, including, accelerometers, acoustic emission sensors and tachometers have been used in the studies presented in this thesis. This work has successfully demonstrated acoustic emission's superiority in bearing incipient fault detection; and the prognostic study has developed an effective prognostic approach to capture the system's dynamics with speed variations and make accurate predictions.

Supervisors

Michael Cholette, Pietro Borghesani, Joseph Mathew, YuanTong Gu

M a h n o o s h

K h o l g h i

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

112420

Email

mahnoosh.kholghi@gmail.com

Thesis topic

Active learning for concept extraction from clinical free text

Description

This thesis is a step towards automating information extraction from clinical free-text. It establishes a Cost-efficient Enhanced Active Learning framework to significantly reduce annotation cost, while ensuring high-quality extracted information. The practical significance of this research is three-fold: (1) benefitting the overall patient healthcare by facilitating downstream eHealth workflows such as supporting clinical information processing and efficient decision making, (2) benefitting the research in medical informatics by facilitating the development of rich annotated corpora from clinical free text resources, and (3) benefitting the research in machine learning by developing domain-independent and effective active learning approaches.

Supervisors

Laurianne Sitbon, Guido Zuccon, Anthony Nguyen (Australian e-Health Research Centre)

Madison Klarkowski

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112418

Email

madison.clark@hdr.qut.edu.au

Thesis topic

The psychophysiological evaluation of the player experience

Description

This thesis investigates the role of psychophysiology in the evaluation of the video game player experience. In doing so, it reports results from a program of research assessing the psychophysiological response of players to optimal and sub-optimal play experiences as moderated by challenge. The thesis identifies psychophysiological evaluation as an insightful and distinctive approach for assessing the player experience, proposes recommendations for the use of psychophysiology in related research, and clarifies current understanding of psychophysiological response to video game play.

Supervisors

Daniel Johnson, Simon Smith, Peta Wyeth

Kodikara Arachchige Tharindu Lakshitha Kodikara

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

110811

Email

tharindukatl@gmail.com

Thesis topic

Structural health monitoring through advanced model updating incorporating uncertainties

Description

This research developed comprehensive model updating systems for real structures, including a hybrid approach that enhanced an existing deterministic model. It updated techniques by providing measures to incorporate uncertainties in a computationally efficient way, compared to probabilistic model updating approaches. Further, utilising the developed hybrid approach, a methodology was developed to assess the deterioration of reinforced concrete buildings under serviceability loading conditions. The methodologies developed in this research were successfully validated utilising two real benchmark structures at Queensland University of Technology equipped with continuous monitoring systems.

Supervisors

Tommy Chan, David Thambiratnam, Andy Nguyen, Arachchillage Rupika Bandara (University of Peradeniya)

Jason Koerper

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112359

Email

j.koerper@qut.edu.au

Thesis topic

A new colour quality model for ultra-high efficiency light sources with discontinuous spectra

Description

This thesis demonstrates a novel approach to assessing the colour rendition of objects by high efficacy light sources. It establishes a relationship between a light source's output and the visual system, and develops a procedure to evaluate the colour quality of a light source based its fundamental spectral properties. Key wavelengths that link colour rendering and the human colour vision system are identified within. Furthermore, a predictive colour quality model based on the fundamental properties of a light source is presented, which is significantly different to existing, reference-based colour quality measures.

Supervisors

Gillian Isoardi, Ian Cowling

Sarah Lawson

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

112764

Email

sarah.lawson@csiro.au

Thesis topic

Concentrations, sources and processes involving volatile organic compounds (VOCs) in the marine and terrestrial background atmosphere of the Southern Hemisphere

Description

This research characterised atmospheric composition over the Southern and South Pacific Oceans, and in a smoke plume from a coastal heathland fire, with a focus on volatile organic compounds (VOCs). This work also tested the ability of a chemical transport model to simulate aerosols and primary and secondary trace gases in a smoke plume. This project greatly increases the coverage of VOC measurements in poorly sampled regions in the Southern Hemisphere and confirms a missing source of VOCs over the ocean, provides the first smoke emission factors for many VOCs for Australian fires, and demonstrates the high sensitivity of biomass burning models to emission inputs and meteorology.

Supervisors

Zoran Ristovski, Branka Miljevic

Paul Lederhose

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

105356

Email

lederhosepaul@yahoo.de

Thesis topic

From UV to NIR light, photo-triggered 1,3 dipolar cycloadditions as a modern ligation method in solution and on surface

Description

This research synthesised and explored the application of novel chemicals, which can be used to create complex polymeric architectures through light irradiation. By tuning the chemical structure, this study used ultra-violet, visible and infra-red sources to mediate these reactions. Future applications of this technology include photolithography and design of lab-on-chip sensor materials.

Supervisors

James Blinco, Steven Bottle

Xing Ju

Lee

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

103762

Email

leexju@gmail.com

Thesis topic

Statistical and simulation modelling for enhanced understanding of hospital pathogen and related health issues

Description

This thesis investigates the temporal occurrence and transmission of hospital pathogens through the use of statistical and simulation modelling. Applying this modelling to imperfect hospital data, this research provides new insights into the transmission dynamics of methicillin-resistant *Staphylococcus aureus* within a hospital ward. The findings of this investigation can assist infection control and prevention efforts. Additionally, appropriate statistical methods are identified to analyse hospital infection data, which take into account the intricacies and potential limitations of such data.

Supervisors

Tony Pettitt, Adrian Barnett, Michael Whitby

Q i n y i

L i

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107651

Email

leebluedreams@gmail.com

Thesis topic

Lattice public-key encryption: Richer, tighter, stronger

Description

Public-key encryption allows anyone to encrypt messages that only the intended recipient can decrypt. It is an essential component of most network security protocols; however, the algorithms in widespread use are inherently vulnerable to attacks by quantum computers, should they become a practical reality. This thesis looks at public-key encryption from computationally hard problems based on high-dimensional lattices believed to resist classical and quantum attacks. On those foundations, this thesis proposes three post-quantum public-key encryption schemes, respectively featuring richer access control, tighter reductionist security proofs, and stronger confidentiality in the presence of external leakage.

Supervisors

Xavier Boyen, Colin Fidge

S a k k a d e c h

L i m m a h a k h u n

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

108053

Email

sakka_lim@hotmail.com

Thesis topic

Development of functionally graded materials for innovation in bone-replacement applications

Description

This project aims to develop bone-mimic structures for bone-replacement applications. To mimic the complex structures observed in bones, various internal architectures and graded cellular microstructures were created using additive manufacturing approaches to tailor the mechanical performance of polymer and metal based scaffolds. The structure-property relation, stress shielding effect and cell response were investigated using experimental and numerical methods, at different material length scales. The optimised architectures and graded microstructures were applied to femoral implants whose performance was also investigated via mechanical testing and numerical simulations. The findings of this thesis will help develop new strategies for bone replacement.

Supervisors

Cheng Yan, Yin Xiao, Adekunle Oloyede

F e n g x i a n

M a

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

112361

Email

fengxian.ma@hdr.qut.edu.au

Thesis topic

Computational exploration of structure and electronic functionality in nanoscale materials

Description

This project is a systematic study regarding the discovery and design of nanomaterials with potential applications in electronic devices. It reveals several promising candidates, such as a new phase of transition metal dichalcogenides and the two-dimensional ionic boron sheet with novel electronic properties, which enrich the family of two-dimensional materials. The comprehensive calculations would also be a good guidance for the experimental realisation in the near future.

Supervisors

Aijun Du, YuanTong Gu

M a r c M a l l e t

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

104437

Email

marc.mallet4@gmail.com

Thesis topic

Water uptake and composition of natural
Australian cloud condensation nuclei

Description

This project was an investigation of atmospheric aerosols emitted from the Great Barrier Reef and north Australian fires. The chemical and physical properties of these aerosols were examined to determine their role in cloud formation. Interactions between aerosols and clouds are associated with the largest uncertainty in global climate models. The work of this thesis will contribute towards reducing this uncertainty by providing data for these poorly characterised regions in Australia.

Supervisors

Branka Miljevic, Zoran Ristovski, Melita Keywood
(Commonwealth Scientific and Industrial Research
Organisation)

Jorge Martinez

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

110526

Email

jorgelmarti@gmail.com

Thesis topic

Revealing groundwater-surface water exchanges and recharge processes with multiple tracers and hydrochemistry

Description

For effective resource management and to establish groundwater and surface water interactions, an innovative range of hydrological tracers and hydrochemical techniques have been applied to a total catchment in southeast Queensland. Stable and radioisotopes, carbon-14, radon-222, noble gases and SF6 were analyzed to characterise and quantify recharge sources. Statistical methods were also combined with inverse geochemical and three-dimensional geological modelling techniques, to develop regional conceptual models of groundwater movement and interaction with rivers.

Supervisors

Malcolm Cox, Oliver Gaede, Matthias Raiber (Commonwealth Scientific and Industrial Research Organisation)

Paul Mathiesen

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102231

Email

paul_mathiesen@hotmail.com

Thesis topic

Enterprise social technology in the context of business process improvement

Description

This thesis is a qualitative study, which identifies and conceptualises the affordances of enterprise social technology within the context of process improvement activities. Using a series of in-depth interviews, this research derives theoretical models that meticulously identify and define enterprise social technology affordances within process improvement contexts, showing their relationships to process improvement capabilities. A series of moderating variables effecting these relationships were also found. Based on the empirical evidence, this thesis proposes a series of normative guidelines to practice on how to best utilise enterprise social technologies for more effective and efficient process improvement efforts.

Supervisors

Wasana Bandara, Jason Watson, Michael Rosemann

Adalbert Meinert

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

Traditional

ePrint ID

105647

Email

christoph.meinert@qut.edu.au

Thesis topic

Hydrogels and bioreactors for cartilage research
and functional tissue engineering

Description

Current clinical approaches to cartilage repair fail to restore the physiological function of the tissue, prompting the development of alternative strategies. This thesis focuses on advancing technologies to generate tissue-engineered cartilage as biological implants for joint resurfacing. It examines the effects of hydrogel scaffolds and mechanical stimulation facilitated by custom bioreactor systems on the development of ex vivo engineered cartilage tissues. The findings of this thesis demonstrate that hydrogels can be engineered to be tough and cell-instructive enough to provide mechanical support and promote cartilage growth. This can further be enhanced by biaxial mechanical loading simulating the native biomechanical joint environment.

Supervisors

Travis Klein, Karsten Schrobback

G a b r i e l

M i c h a u

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103850

Email

gabriel.michau@gmail.com

Thesis topic

Link dependent origin-destination matrix estimation: Nonsmooth convex optimisation with Bluetooth-inferred trajectories

Description

This thesis tackles the traditional transport engineering problem of urban traffic demand estimation, through the use of Bluetooth data and advanced signal processing algorithms. This research proposes a method to recover vehicles trajectories from Bluetooth detectors and combine these with traditional traffic datasets in order to estimate traffic at a city level using signal processing algorithms. Involving new technologies in traffic demand estimation allowed this examination to rethink traditional approaches and come up with new methods to jointly estimate origin-destination flows and route flows. The whole methodology has been applied and evaluated with real Brisbane traffic data.

Supervisors

Edward Chung, Ashish Bhaskar, Patrice Abry (University of Lyon), Alfredo Nantes (University of Lyon)

Andelija Milic

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

102843

Email

andelija.milic31@gmail.com

Thesis topic

Chemical characterization and aging of ambient aerosols in Australian urban and remote areas with a focus on biomass burning organic aerosols

Description

This thesis presents a study of the chemical composition of rural and urban ambient aerosols in Australia. This research used Aerosol mass spectrometry and new statistical analytical packages to determine the sources of observed aerosols, as well as atmospheric aging that occurred in the measured air masses. The focus of this study was to examine the aerosols generated from prescribed and wild biomass burnings. The main aim of this research is to provide insight into the characterisation and aging of organic biomass burning-related aerosols in Australian urban and remote areas.

Supervisors

Zoran Ristovski, Branka Miljevic

■

A s m a h A l i a

M o h a m a d B o h a r i

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

106747

Email

alyiaboh@gmail.com

Thesis topic

Exploring the potential for green-oriented procurement in building projects: A case of the Malaysian construction industry

Description

This thesis provides a way forward for green construction in Malaysia by exploring the potential of green-oriented procurement of building projects in the Malaysian construction industry. The research outcomes contribute to knowledge and practice by not only developing a green-oriented procurement model for use as a planning tool, but also triggering an increased awareness within project teams and practitioners of the need for greener construction.

Supervisors

Martin Skitmore, Bo Xia, Melissa Teo, Xiaoling Zhang (City University of Hong Kong)

M o h a m e d R u s t h i

M o h a m e d I b r a l e b b e

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

110725

Email

mohamedrusthi.
mohamedibralebbe@hdr.qut.edu.au

Thesis topic

Experimental and finite element studies of light-gauge steel frame wall systems under fire conditions

Description

This research was conducted to advance the knowledge and understanding of the fire performance of light gauge steel frame wall systems through thermal property tests, full-scale fire tests of magnesium oxide board lined walls, 3-D uncoupled and coupled thermal-structural finite element analyses, and the design of walls with both unstiffened and web-stiffened channel stud sections. It has provided experimental and numerical data and improved finite element strategies and design methods to undertake structural fire design of light gauge steel frame wall systems.

Supervisors

Anthony Ariyanayagam, Keerthan Poologanathan, Mahen Mahendran

J a s o n M o r r i s

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

110527

Email

jasonmorris33@gmail.com

Thesis topic

Photosensitive alkoxyamines: Synthesis and photochemical studies for potential application in nitroxide-mediated photopolymerization

Description

Photopolymerization has increasing application in high tech domains such as microelectronics, laser direct imaging technology and 3D printing. Continued development of these technologies requires increasing control over the spatial resolution of polymer architectures, as well as the ability to tailor polymer properties to a specific application. Controlled photopolymerization methodologies, such as nitroxide-mediated photopolymerization, have demonstrated important proof of concept advances to polymer architectures and properties. In order to advance this burgeoning methodology, this thesis investigates the synthesis, as well as the photophysical and photochemical properties of novel photosensitive alkoxyamines for potential application in nitroxide-mediated photopolymerization.

Supervisors

Kathryn Fairfull-Smith, Steven Bottle, Didier Gimes (The University of Auckland)

A z a m

M o s h t a g h i

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107457

Email

azi.moshtaghi@yahoo.com

Thesis topic

Identification and characterization of candidate genes influencing salinity tolerance in *Macrobrachium australiense* : a model for the molecular basis of colonization of low ionic environments

Description

Climate change models suggest increased sea levels will alter salinity gradients within coastal freshwater systems. This project aims to identify candidate genes involved with osmoregulation in an endemic Australian freshwater prawn, *Macrobrachium australiense*, in order to understand the molecular basis of adaptation to low ionic environments. Next generation sequencing was used to identify important genes and functional mutations that underpin osmoregulation. These genes were tested by maintaining prawns under different salinity conditions to validate their osmoregulatory roles. Results indicate this species is able to tolerate a range of salinities and will be able to cope in salinity levels under climate change scenarios.

Supervisors

David Hurwood, Peter Mather

M a r i a L o u r d e s

M u e r z a - C a s c a n t e

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

102707

Email

mlmuerza@hotmail.com

Thesis topic

Engineering an in vitro model of the
haematopoietic stem cell niche

Description

This project designed and developed a novel in vitro model of the haematopoietic stem cell niche. Components of the endosteal niche and the perivascular niche, essential in the bone marrow haematopoietic stem cell niche microenvironment, were integrated in a single platform using a multiphasic approach that combined melt electrospun written scaffolds with starPEG-heparin hydrogels. Haematopoietic stem cell response was analysed after 3D co-culture with the tissue engineering niches.

Supervisors

Dietmar Hutmacher, Daniela Loessner, David Haylock (Commonwealth Scientific and Industrial Research Organisation)

B e k t i

M u l a t i n i n g s i h

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112768

Email

bmulatiningsih@gmail.com

Thesis topic

#networkedLISprofessionals: Library and information science professionals' experience of social media

Description

This thesis reports on a qualitative study that explores Library and Information Science professionals' experience of social media in and out of their profession as an LIS professional. The research method used for this study is Constructivist Grounded Theory. The outcome of this study is a substantive theory called the Theory of Networked Library and Information Science Professionals. This theory entails 13 categories grounded in participants' experience of social media, affected by technological, psychological, belief, emotional, and political factors.

Supervisors

Helen Partridge, Kate Davis

Erica Mulowayi

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

104750

Email

erica.mulowayi@gmail.com

Thesis topic

The influence of infrastructure interdependencies on post-disaster recovery

Description

Through an exploratory study and a case study approach, this research provides an understanding of elements of infrastructure interdependencies that have the potential to impede post-disaster recovery. The research revealed how types of interdependencies have the potential to induce cascading and escalating failures, and how degrees of interdependencies can dictate the propagation of failures across infrastructures. The proposed theoretical framework provides practical guidance in prioritising the recovery of interdependent infrastructures.

Supervisors

Vaughan Coffey, Jonathan Bunker, Bambang Trigunaryah

H a j a n a n t h

N a l l a i v a r o t h a y a n

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

106947

Email

hajananth@yahoo.com

Thesis topic

Video based detection of normal and anomalous behaviour of individuals

Description

This research investigates the use of novel computer vision and machine learning algorithms in the video detection of normal and anomalous behaviour of individuals. Varieties of Hidden Markov Models were designed to model the temporal and spatial causalities of crowd behaviour. A Markov Random Field on top of a Gaussian Mixture Model is proposed to incorporate spatial context information during classification, in addition to a discriminative conditional random field method. This thesis proposed novel features to extract motion and appearance information. Findings show that the majority of proposed approaches comprehensively outperform other techniques on publicly available datasets.

Supervisors

Clinton Fookes, Sridha Sridharan, Andry Rakotonirainy, Simon Denman

Dinesha Chathurani Nanayakkara Wasam Uluwitage

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

104286

Email

dineshachathu.456@gmail.com

Thesis topic

Content based image retrieval with image signatures

Description

This thesis investigates a system that allows users to search for relevant images by inputting a particular image as a query. The concept is similar to text search in Google or Yahoo. However, understanding image content is more difficult than text content. In response, this system provides a method to efficiently retrieve similar images pertaining to the query, allowing end users to repeatedly refine the original query when they have no effective way to reformulate the original image query. The results suggest that this proposed system is fast and provides a broad spectrum of images even with underlying changes.

Supervisors

Shlomo Geva, Vinod Chandran, Guido Zuccon

A f s a n e h

N a r i m a n i Z a m a n a b a d i

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103703

Email

a.narimanizamanabadi@qut.edu.au

Thesis topic

Optimal allocation of central storage in segmented rural distribution networks considering operational costs and reliability

Description

In this research, a novel approach is established to optimise the capacity of storage devices that are owned and operated by aggregator/retailers, and centrally installed in each load populated segmenting structure of rural distribution networks. The objective of this optimization framework is to minimise investment, maintenance and energy purchase costs for the aggregator/retailer while achieving a certain level of network reliability. Genetic algorithm and fmincon optimization methods are used in this work.

Supervisors

Ghavameddin Nourbakhsh, Gerard Ledwich, Geoff Walker

Christopher Noune

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

113154

Email

cnoune@gmail.com

Thesis topic

Dynamics, diversity and evolution of Baculoviruses

Description

This thesis describes an innovative application of leading-edge bioinformatics and sequencing technology to analyse strain diversity, dynamics, and evolution in Baculoviruses under selection in vivo and in vitro. It provides evidence for the first time that these double-stranded DNA viruses are quasispecies. It develops and demonstrates a novel application of high-throughput sequencing and new computational techniques to analyse strain variants in non-model organisms, with potential applications in health, biosecurity and microbial ecology.

Supervisors

Caroline Hauxwell, Jim Hogan

Ayokunle Olubunmi Olanipekun

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

112501

Email

ayokunleolubunmi.olanipekun@hdr.
qut.edu.au

Thesis topic

Motivating project owners to increase their commitment towards improving the delivery performance of green building projects

Description

This study provides empirical support of the ways that project owners' motivation can increase their commitment to improving the delivery performance of green building projects, with focus on the Australian construction industry. The self-determination theory of motivation is used to explain project owners' motivation, and the relationship with owner commitment was examined using the structural equation modelling technique. In doing so, strategies for improving the delivery performance of green building projects are proposed, with important implications for the design and implementation of government policies and programs for green building and related practices in the construction industry.

Supervisors

Bo Xia, Carol Hon

Mary Nyambeki Onsarigo

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

114098

Email

onsarigomary99@gmail.com

Thesis topic

Assessment of Banana Streak MY virus-based infectious clone vectors in *Musa ssp.*

Description

Banana streak disease, caused by a range of banana streak viruses, occurs in most banana-producing countries worldwide. In this PhD thesis, the infectivity of one banana streak virus species was assessed in a broad range of wild and cultivated bananas. The results showed that most bananas were susceptible to infection but that, generally, minimal effects on the growth were observed. However, symptom variability was considerable with different bananas expressing distinct symptoms. Measurements of virus accumulation showed that this was also highly variable between plants. This work has improved the understanding of virus resistance in bananas and will lay the foundation for further research on virus resistance.

Supervisors

Anthony James, James Dale, Rob Harding

Thisara Shamane Pathirage

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112767

Email

pathiragets@gmail.com

Thesis topic

Identification of prestress force in prestressed concrete box girder bridges using vibration based techniques

Description

This research aimed to develop a new vibration based non-destructive method to identify the effective prestress force in prestressed concrete box girder bridges. The research study included theoretical development, finite element analysis and laboratory testing of a scaled down box girder bridge model. A new approaches for vibration analysis of box girder bridge decks and prestress force identification were developed and tested successfully.

Supervisors

Tommy Chan, David Thambiratnam, Himenshu Praveen (Burchills Engineering Solutions)

Gallage Sunari Peiris

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

113715

Email

gspeiris@yahoo.com

Thesis topic

Pd and Pd based alloy nanoparticles as visible light photocatalysts for coupling reactions under ambient conditions

Description

This PhD thesis presents an investigation of the development of novel metal nanoparticle (NP) photocatalysts, including non-plasmonic NPs and their alloy NPs, for several important organic synthesis reactions. This study has provided information and advances in new materials design, synthesis and application for photocatalysis. The findings of this study demonstrate the use of visible light or sunlight to drive chemical reactions, which is an important aspect in the view of a sustainable and green chemistry.

Supervisors

Huai Yong Zhu, Sarina Sarina

O w e n

P l a g e n s

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

105375

Email

owen.plagens@gmail.com

Thesis topic

Investigation of combustion products of metal rods in normal and reduced gravity

Description

This research studied the combustion products generated from the burning of metals in high-pressure oxygen. The work revealed the effects of oxygen pressure and gravity level on the products produced. The findings contribute to our understanding of how bulk metals burn, the morphology and size distribution of the products produced and is relevant to applications in terrestrial and space environments of fire safety, forensics, particle generation and fundamental combustion science.

Supervisors

Ted Steinberg, Geoffrey Will

M d M a h m u d u r R a h m a n

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

108952

Email

mahmud05@gmail.com

Thesis topic

Investigations into source contributions and spatial distribution of airborne pollutants in an urban airshed by the development and application of advanced statistical models

Description

This thesis developed novel statistical modelling methods to quantify airborne gaseous and particle concentrations and their source contribution in an urban area. In particular, the research developed a novel Land Use Regression (LUR) model for predicting the daily average concentration of airborne gaseous concentrations, a novel Bayesian modelling approach to quantify airborne ultrafine particle source contribution, and a geostatistical modelling approach for quantifying spatial concentrations of airborne pollutants. Additionally, nighttime new particle formation mechanisms and their physical properties have been investigated for the first time. The findings have applications in urban planning and management as well as in epidemiological studies.

Supervisors

Lidia Morawska, Mandana Mazaheri, Martin Cope (Commonwealth Scientific and Industrial Research Organisation), Xavier Querol (Institute of Environmental Assessment and Water Research)

Suramya Rathnayake

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

104320

Email

indunil.rathnayake30@gmail.com

Thesis topic

Synthesis, characterisation and application of inorganic-organic clays for water purification

Description

This thesis reports a new remediation approach for the removal of toxic and high priority water pollutants based on the use of modified clays. Novel types of modified clays called inorganic-organic clays (IOCs) were synthesised and their structures and properties were characterised using various techniques. Adsorption behaviours and removal efficiencies of the IOCs towards both organic and inorganic water pollutants in Single and Binary Contaminants Systems were investigated. The work provides new insights into the structures, properties and potential environmental applications of IOCs in water remediation.

Supervisors

Ayoko Godwin, Ray Frost, Yunfei Xi

Katrina Raynor

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107711

Email

katrina.raynor@unimelb.edu.au

Thesis topic

Defining the density debate: Social representations of urban consolidation in Brisbane

Description

This thesis is concerned with understanding the social representations that impact on how stakeholders understand, value and act in relation to urban consolidation, a planning policy designed to increase the density of housing in existing urban areas. This study reveals that urban consolidation is a complex topic that involves associated issues of land use conflict, regional population management, investment and property, home and housing affordability, neighbourhood change and urban renewal. Urban consolidation is a political topic subject to vested interests and often doesn't achieve the positive outcomes for which it is promoted in policy documents.

Supervisors

Severine Mayere, Carl Grodach, Tony Matthews (Griffith University)

A d a m

R e d m a n

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

110505

Email

reddo1@gmail.com

Thesis topic

Modelling of vacuum drying of Australian hardwood species

Description

In this thesis, a coupled heat and mass transfer and drying stress failure model was developed to predict vacuum and conventional drying behaviour of Australian hardwoods. The method was based on extensive measurement of key model parameters that were used as input data for the Multiphysics and finite element analysis models, and then validated against semi-industrial drying trials. The research outcomes provide the Australian hardwood industry with a tool that can be used to reduce current drying time, costs and waste due to drying degradation.

Supervisors

Ian Turner, Elliot Carr, Henri Bailleres (Queensland Department of Agriculture and Fisheries), Patrick Perre (Laboratory of Studies and Research on Wood Material)

H e r n a n A l f o n s o

R e t a m a l e s

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103531

Email

hretamalesr@gmail.com

Thesis topic

Phylogeny of Myrteae (Myrtaceae) with an emphasis on the Chilean species: Insights into character evolution and historical biogeography

Description

This thesis investigates the evolutionary history of plants in the tribe Myrteae (family Myrtaceae), with a particular emphasis on the Chilean species. This research, which included many new species for the first time, used a comparative study of foliar and floral morphology and anatomy at a tribal level. Phylogenetic analyses based on combined and separate analyses of molecular and morphological data was examined to reconstruct relationships and infer historical biogeography and character evolution.

Supervisors

Tanya Scharaschkin, Matthew Phillips, Rosa Scherson (University of Chile)

I r i n a R o m a n o v a

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

108162

Email

irina.romanova.aus@gmail.com

Thesis topic

Volcanology and geochemistry of the Cretaceous volcanoclastic deposits and basalts from Ori Massif, Shatsky Rise Oceanic Plateau

Description

This study enhances our understanding of the origin and evolution of Ori Massif, Shatsky Rise Oceanic Plateau. Key findings from this research are: 1. Volcanoclastic deposits were formed by Surtseyan style phreatomagmatic activity, suggesting that the summit of Ori Massif was shallow-marine to near sea-level; 2. Basaltic fragments from the volcanoclastic deposits provide further evidence for geochemical variation of magmas from Ori Massif and indicate a significant involvement of depleted mantle in its source; 3. Element mobility during seawater alteration of basalts from Ori and Tamu Massifs depends on stratigraphy, cooling rates and magma chemistry.

Supervisors

David Murphy, Scott Bryan

M o h a m m a d A d e l

R o s t a m Z a d e h B a k h t i y a r i

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

109490

Email

adel.bakhtiyari@gmail.com

Thesis topic

Applying enterprise architecture to business networks

Description

This study explores the application of enterprise architecture (EA) for business network planning, building upon relevant and well-established descriptive and prescriptive aspects of EA. Prescriptive aspects include integrated models for services, business processes, and resources among other organisational artefacts, at both business and IT levels. Descriptive aspects include ontological classifications of business functionality, which allow EA models to be aligned semantically to both business operations and business strategy. In order to explore and develop the extension of EA, a list of six novation constraints were conceptualised and defined through a literature review and insights from case studies.

Supervisors

Alistair Barros, Glenn Stewart

M d R i f a t

S h a h r i a r

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107650

Email

rsbdce@gmail.com

Thesis topic

Electrical signature analysis-based condition monitoring of wind turbine drivetrain

Description

This thesis focuses on improvements of Electrical Signature Analysis, in order to enable the implementation of this extremely cost-effective technique to a wide range of wind turbine diagnostic applications. This research quantifies, in detail, the previous limitations of the technique and proposes a novel solution, which has been validated using a specifically designed QUT test-rig and an innovative full-scale wind turbine simulation model. Major contributions of this thesis include a novel technique for demodulation of low frequency carriers, the quantification of converter and wind-induced speed fluctuations and their effect on diagnostic capabilities, and the experimental validation of the proposed methods by means of novel realistic experiments.

Supervisors

Pietro Borghesani, Gerard Ledwich

Hansinee Sakunthala Sitinamaluwa

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

107551

Email

hansiuom@gmail.com

Thesis topic

Characterization of mechanical and electrochemical properties of silicon based electrodes for Li-ion batteries

Description

This work aims to understand the electrochemical and mechanical behaviour of silicon thin film electrodes in Lithium-ion batteries. The evolution of microstructures, mechanical stresses and material damage have been investigated via combined experimental and molecular modelling approaches. Possible mechanisms responsible for electrochemical behaviour, volume change and material failure during charging/discharging processes have been proposed. The outcome of this work will benefit the development of novel electrode materials for high-capacity Lithium-ion batteries.

Supervisors

Cheng Yan, Wijitha Senadeera, Geoffrey Will

Shaun Smith

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102759

Email

shaunsmith108@gmail.com

Thesis topic

Development of gel dosimetry for radiotherapy

Description

Gel dosimeters have the potential to track radiation beams, improving safety and treatment effectiveness for radiotherapy patients. However, despite extensive research over the last three decades, gel dosimeters have yet to achieve widespread clinical acceptance. In this research, a new version of the 'Fricke' gel dosimeter was developed, which is more clinically viable. The method performs chemical manipulations on the gel ingredients to eliminate the blurring effect of dose information, which is their existing primary drawback.

Supervisors

Jamie Trapp, Kye-Simeon Masters, Scott Crowe

Hasti Tajtehranifard

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

110525

Email

hasti.tajtehranifard@gmail.com

Thesis topic

Incident duration modelling and system optimal traffic re-routing

Description

Traffic incidents are among the most significant contributory factors to congestion, particularly in metropolitan areas. In this dissertation, we have developed state-of-the-art statistical models to provide in-depth insights into how various incident-specific characteristics and the associated temporal and spatial determinants impact freeway incident durations. Next, we have proposed, developed and tested two novel and computationally efficient System Optimal incident traffic re-routing algorithms that provide optimal traffic flow patterns, for minimised total system travel time. Specifically, a single-destination System Optimal Dynamic Traffic Assignment model and a multi-destination System Optimal Quasi-Dynamic Traffic Assignment model have been proposed, developed and demonstrated, in order to improve total system travel times, both under incident-free and incident scenarios.

Supervisors

Ashish Bhaskar, Shimul Haque, Edward Chung

Shiang Yen Tan

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

108958

Email

tsyen@outlook.com

Thesis topic

Towards a framework for realizing actionable insight from complex data: A machine-augmented cognition approach to data exploration, information synthesis, and knowledge actualization

Description

Research in data analytics has emphasised technical advancements and largely undermined the importance of user intuition and knowledge in the analytics process. This study proposes a new data analytics framework for designing and evaluating data analytics systems that harness both the flexibility of human intuition and the rigor of machine-driven analytics techniques. This study contributes to a systematic understanding of the analyst's workflow, behaviours, and information needs. It also produces a set of empirically-tested design principles that can be used to effectively support these human elements during the data analytics process.

Supervisors

Ernest Foo, Taizan Chan, Yue Xu

J i m m y M o s e s

T i n d a m a n y i r e

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112816

Email

tindajm@gmail.com

Thesis topic

Pro-vitamin A biofortified “Cavendish” banana:
Trait stability in the field

Description

Vitamin A deficiency (VAD) is a major public health problem in the developing world, affecting an estimated 250 million people worldwide. The majority of these people live in developing countries and are dependent on starchy staples such as cassava, maize, potato, rice and banana, which are largely deficient in critical micronutrients such as pro-vitamin A. This PhD Thesis demonstrates that pro-vitamin carotenoid content can be enhanced in the fruit of genetically modified “Cavendish” banana plants through the over-expression of a single banana gene. Importantly, the newly conferred trait was stable for several years in the field and the expression of other endogenous carotenoid biosynthesis genes remained unchanged. This research provides important background information for the successful expansion of this technology to Uganda where bananas are the major staple.

Supervisors

Jean-Yves Paul, James Dale, Bulukani Mlalazi,
Cara Mortimer

M a h s h i d T o o t o o n c h y

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

105562

Email

m.tootoonchy@gmail.com

Thesis topic

Investigating the PMO and PfM co-transformation:
A routine perspective

Description

Project management offices (PMOs) are expected to assist organisations in the successful delivery of projects portfolios, but often fail to meet expectations. This study contributes to the academic and practitioner understanding of project and portfolio success by providing a detailed insight into the factors and processes that drive the evolution of PMOs, using routines as the unit of analysis. PMOs are assumed to be the agent of change and strategy implementation; so, the organisational leaders need to understand the organisational context and how successful PMOs re-shape themselves over time to increase their value to the organisation.

Supervisors

Christophe Bredillet, Stephanie Tywoniak

Monique Tourell

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

103997

Email

monique.tourell@gmail.com

Thesis topic

Translational and rotational dynamics of water molecules in aligned collagenous tissues: Implications for assessing collagen organisation with magnetic resonance imaging

Description

This thesis investigates the restricted rotational and translational dynamics of water molecules as they interact with collagen fibre networks. Knowledge of the relationship between these motions and the magnetic resonance proton signal can be used to determine collagen fibre organisation in anisotropic, collagen-rich tissues. Both experimental magnetic resonance techniques and theoretical computer simulations were used to probe water-collagen interactions. The results of this work allow for a more comprehensive analysis of collagen organisation, and changes to this organisation as a result of biomechanical load, in collagen-rich tissues using magnetic resonance imaging.

Supervisors

Konstantin Momot, Mark Wellard

Ryan Turner

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

106951

Email

ryan.turner@qld.gov.au

Thesis topic

Environmental implications of greywater irrigation within an urban development

Description

This doctoral thesis examined the sustainability of greywater irrigation in an urban setting with particular focus on environmental impacts on the terrestrial (back yard) and local aquatic environments. The findings will help to strengthen the long-term sustainability of greywater irrigation, foster the known benefits in urban water use savings, improve guidelines for installation of greywater systems and enhance water reuse policy by providing data to minimise the impacts on the environment. Data from this thesis is already being used by the Queensland Government to assist with future guidance on greywater reuse management policy.

Supervisors

Les Dawes, Geoffrey Will

M d J a s i m

U d d i n

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107850

Email

mdjasim.uddin@hdr.qut.edu.au

Thesis topic

Synthesis and analysis of metamaterial structure for microwave frequency applications

Description

This thesis involves analysis of artificial materials to investigate metamaterial behavior and characteristics. Extraction techniques were used to validate the electromagnetic properties and different microwave applications investigated. A new geometric structure was designed using dual star split ring resonator, which introduces a sharp, wide rejection band. A metamaterial microwave absorber suitable for dual-band operation and insensitive to incident polarization was also developed.

Supervisors

Jacob Coetzee, Richard Taylor

Lona Van Delden

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

109076

Email

lona.vandelden@gmail.com

Thesis topic

Implications of urbanization related land use change on the Carbon and Nitrogen cycle from subtropical soils

Description

This research established the first non-CO₂ Global Warming Potential for subtropical peri-urban environments from the N₂O and CH₄ soil-atmosphere gas exchange dynamics after land use change due to urbanisation. Two years of high temporal gas flux measurements identified immediate, seasonal and inter-annual C and N flux changes after turf grass establishment compared to forest and pasture land use, to highlight the impact of our growing cities on the environment. Despite the fact that turf grass establishment increases soil greenhouse gas emissions, which increases the Global Warming Potential, the subtropical climate of SEQ may increase the potential to reduce these emissions in the long-term.

Supervisors

David Rowlings, Peter Grace, Clemens Scheer

Fernando

Vanegas Alvarez

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103846

Email

fervanegas@gmail.com

Thesis topic

Uncertainty based online planning for UAV missions in GPS-denied and cluttered environments

Description

This thesis explores the use of Unmanned Aerial Vehicle (UAV) navigation for target finding and mission tracking in the uncertainty of cluttered and GPS-denied environments. This research developed a new approach using a framework implemented as a modular system, which formulates the missions as online Partially Observable Markov Decision Processes (POMDP). The online POMDP computes a motion policy that balances multiple mission objectives optimally. The motion policy is updated by on board sensor observations while the UAV is flying. This new approach provides technology for UAV missions in challenging environment, for example it could be applied to search and rescue, biodiversity assessment, underground mining, and infrastructure inspection.

Supervisors

Felipe Gonzalez, Duncan Campbell, Hanna Kurniawati (The University of Queensland)

Tommaso Francesco Villa

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

114062

Email

tommaso.f.villa@gmail.com

Thesis topic

Development of an Unmanned Aerial Vehicle (UAV) system for in-situ characterization of combustion source emissions

Description

This research developed an Unmanned Aerial Vehicle System for atmospheric pollution assessment, contributing new methodology and knowledge to the fields of air quality, human health and human exposure. This system was tested, validated and employed to characterise gaseous and particle pollutant concentration generated by traffic from a motorway in open space within the atmospheric column, and emitted from a ship while operating at sea, to develop ship emission factors. It allows measurements of air pollution under conditions where sampling with the existing techniques is not feasible or poses too high risk.

Supervisors

Lidia Morawska, Felipe Gonzalez, Rohan Jayaratne

T h u H a n g

V u

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

112385

Email

hangvu.aus@gmail.com

Thesis topic

Equity issues in land acquisition: A source of delays in large construction projects in Vietnam

Description

Delays in construction projects are a recurring and global problem, and delays in land acquisition are considered one of the largest contributors to delays in large construction projects in Vietnam. This research aims to investigate the formation of equity perceptions of land-acquired households, and the relationship between equity issues and delays in construction projects. The thesis proposes a theoretical model with four propositions, linking equity issues, comparisons, equity perceptions, and responses of land-acquired communities that cause delays in large construction projects in Vietnam. Using a case study approach, semi-structured interviews of 40 land-acquired households were conducted across two large construction projects in Vietnam. The findings of this research provide a better understanding of the relationship between equity issues and delays, which can help minimise delays in large construction projects.

Supervisors

Melissa Teo, Stephen Kajewski, Seokho Chi (Seoul National University)

Sarah Walden

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

114126

Email

sarah.lou.walden@gmail.com

Thesis topic

Nonlinear optical properties of ZnO and ZnO-Au composite nanostructures for nanoscale UV emission

Description

This thesis investigates the nonlinear optical properties of ZnO and ZnO-Au composite nanostructures. For applications such as photodynamic therapy, it is desirable to use nanoparticles to generate localised UV emission while illuminating them with visible or infrared light. This is possible using nonlinear optical processes such as two photon absorption. Nonlinear optical processes however, are extremely weak, so this work investigates the potential of increasing the efficiency of two photon absorption in ZnO nanoparticles by coupling them to metal nanoparticles. Using new experimental methods, the two photon absorption and resulting UV emission from the nanoparticles are measured.

Supervisors

Esa Jaatinen, Kristy Vernon, Eric Waclawik

L o n g y a n

W a n g

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

102912

Email

wangleslie2012@gmail.com

Thesis topic

Numerical optimization of wind farm layout and control strategy

Description

This research aims to study the optimisation of wind farm layout and control strategy by incorporating the realistic wind farm elements including different wind turbine hub heights, irregular wind farm boundary and non-flat terrain. This thesis develops a framework of simultaneously optimising wind turbine positions and their operation conditions to achieve the maximum wind farm profitability. It investigates the selection of the most time-efficient and cost-effective wind farm design methods and optimisation models by comparative study.

Supervisors

YuanTong Gu, Michael Cholette

X i n y u

W e i

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

101959

Email

xinyu217@gmail.com

Thesis topic

Modelling and predicting adversarial behaviour using large amounts of spatiotemporal data

Description

This research represents pioneering work to exploit new and rich data from tracking system to model player behaviour in sports. This thesis proposes novel methods for understanding and predicting player behaviour. The key contribution of this research is the development of an algorithm that captures the style of players from trajectory data. Experimental results show improved prediction performance in various sports including tennis, basketball and soccer.

Supervisors

Sridha Sridharan, Clinton Fookes

Daniel Wiemer

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102985

Email

thujaoccidentalis@hotmail.com

Thesis topic

Tectonic evolution of the Early Archaean Doolena Gap Greenstone Belt, East Pilbara Terrane, Western Australia

Description

This thesis examined how the oldest core of the Australian continent formed more than 3.5 billion years ago. Unraveling the complex tectonic and petrologic history of ancient rocks of the East Pilbara in Western Australia provided important new insights into how and why continents developed on our hot, young planet. A multifaceted methodology of field-based structural geology, uranium-lead (U-Pb) dating of zircon, whole-rock geochemistry, and petrology improved our understanding of early Archaean mass and heat transfer, including the history of the associated planetary surface environment, which hosted some of the earliest life on Earth.

Supervisors

David Murphy, Christoph Schrank

K a n g

X i a

PhD

Science and Engineering Faculty

Institute

na

Thesis type

By Publication

ePrint ID

102705

Email

UarDus@hotmail.com

Thesis topic

Numerical characterization of the mechanical properties of graphene and graphene-based structures

Description

This project thoroughly investigates the deformation mechanisms of graphene and graphene-based structures under various loading conditions. This research sheds light on the facilitation of the engineering applications for graphene and graphene-based structures. Overall, this work extends and enhances the existing knowledge and understanding of graphene and graphene-based structures and all delineated models and theoretical analysis methods established in this study are applicable to future studies on other nanostructures.

Supervisors

YuanTong Gu, Haifei Zhan

L a n

X i a o

PhD

Science and Engineering Faculty

Institute

Institute of Health and Biomedical
Innovation

Thesis type

By Publication

ePrint ID

105357

Email

271633099@qq.com

Thesis topic

Dissecting the role of sphingosine 1-phosphate-
sphingosine 1-phosphate receptor 1 in
inflammatory bone remodelling

Description

This thesis provides potential new therapeutic
approaches for the prevention and treatment of
destructive bone diseases. It investigates the
cellular and molecular mechanisms of abnormal
bone remodelling under inflammation, therefore
sheds light on the pathogenesis of inflammation
induced bone loss.

Supervisors

Yin Xiao, Yinghong Zhou, Ross Crawford

J i e

X i e

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

103530

Email

xiej8734@gmail.com

Thesis topic

Acoustic classification of Australian frogs for ecosystem survey

Description

This research developed novel bioacoustics signal processing techniques to classify frog vocalisations in both trophy and field recordings. The research is useful in helping ecologists monitor frog community activity and species richness over long-term periods. Two major contributions are the construction of novel feature descriptors in the Cepstral domain, and the design of novel classification systems for multiple simultaneously vocalising frog species.

Supervisors

Jinglan Zhang, Paul Roe, Michael Towsey, Vinod Chandran, Yonghong Yan (Chinese Academy of Sciences)

N o r r u l A z m i Y a h y a

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

105498

Email

azmi_216@yahoo.com

Thesis topic

Strategies for mitigation of the failure of concrete pedestals supporting bridge girder bearings

Description

This thesis describes the numerical study of localised damage mechanisms in concrete pedestals supporting bridge girder bearings. It examines the structural response of concrete pedestals dealing with complex contact interaction behaviour between steel bearing plate and concrete. Three dimensional nonlinear explicit finite element micro models of concrete pedestals were analysed with various pedestal heights, edge clearance distances, loading geometries, confinement reinforcements and loading eccentricities. The thesis also proposes mitigation strategies to minimise the effect of localised failure and therefore improve the structural performance of concrete pedestals.

Supervisors

Manicka Dhanasekar, Arun Kumar, Ross Pritchard (Queensland Department of Transport and Main Roads)

T a t h e e r Z a h r a

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

109907

Email

t.zahra@qut.edu.au

Thesis topic

Strategies for improving the response of drystack masonry to compression

Description

Drystack or mortarless walling can be constructed faster with less skilled labour compared to the traditional mortared masonry walls; however, the contact surface unevenness of the blocks affects the constructability of drystack systems. This thesis is aimed at studying the contact surface properties of drystack masonry and to propose suitable mitigation through systematic experimental and numerical studies so that this masonry type could be constructed with ease and used as a structural system. New genre composite materials are proposed to improve the performance of drystack masonry by embedding between the blocks and by providing protective layering on the drystack walls.

Supervisors

Manicka Dhanasekar, Xuemei Liu

L i a n g

Z h a n g

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

107097

Email

z.liang4182@gmail.com

Thesis topic

Classification and ranking of environmental recordings to facilitate efficient bird surveys

Description

This thesis develops novel computer-assisted techniques to facilitate in the surveying of bird species from a large number of environmental audio recordings. These techniques are applicable to both manual and automated recognition of bird species, by removing irrelevant audio data and prioritising those relevant data for efficient bird species detection. This work also represents a significant step towards using automated techniques to support experts and the general public to explore and gain a better understanding of vocal species.

Supervisors

Raul Roe, Michael Towsey, Jinglan Zhang, Xiaoli Zhong (South China University of Technology)

L i b i a o

Z h a n g

PhD

Science and Engineering Faculty

Institute

na

Thesis type

Traditional

ePrint ID

102042

Email

libiao.zhang7@gmail.com

Thesis topic

Modelling uncertain decision boundary for text classification

Description

Text classification is the process of classifying documents into predefined categories by learned classifiers. Classic text classifiers cannot unambiguously describe the decision boundary between relevant and irrelevant documents because of uncertainties caused by feature selection and knowledge learning. This research proposes a three-way decision model for dealing with the uncertain decision boundary based on rough sets and centroid solution to improve classification performance. It partitions training samples into three regions by two main boundary vectors, and resolves the boundary region by two derived boundary vectors to generate decision rules for making 'two-way' decisions.

Supervisors

Yuefeng Li, Dian Tjondronegro, Yue Xu

QMomentum

For three years after graduation, QUT provides additional support to assist PhD graduates transitioning to their research future in industry, government, community or academia.

QMomentum can support you with:

- Information resources
- Research development workshops
- Publishing
- Commercialisation
- Career advice
- Early career resources
- Grant writing
- Research networking

For more information visit the [QMomentum web page](#)

