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WALTON OUTREACH

INFORMATION TECHNOLOGY RESEARCH INSTITUTE

ANNUAL REPORT
2012-2013

RESEARCH

INTEREST

INTERACTION

UNIVERSITY OF
ARKANSAS
SAM M. WALTON
COLLEGE OF BUSINESS

EXECUTIVE ADDRESS

Transformation is still the theme for the Information Technology Research Institute (ITRI). The most notable change being that of the guard of the Sam M. Walton College of Business. Dr. Eli Jones was introduced as the new dean of the Walton College in July of 2012. He brings a wealth of knowledge from Louisiana State University where he was dean of the business school and Professor in Marketing. The excitement around his leadership has trickled down to all academic departments and centers, including the ITRI, bringing a renewed vigor for moving the college to the next level.
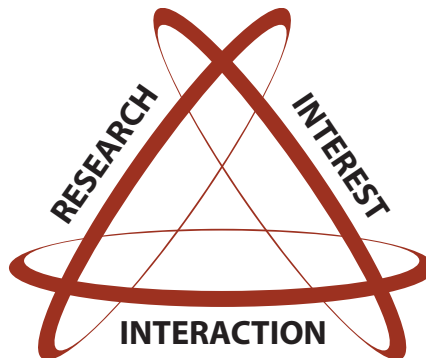
For the institute, we have taken steps over the last year to increase the value to our board member companies by providing additional opportunities for members to express their needs and goals. We have asked board members to serve to serve on committees to help define our direction in the areas of student interaction, research, curriculum, training, and programs. Over the last year we have continued to expand our highly successful events and services, such as (1) Executives in the Classroom; (2) the IT Executive Forum; (3) the Business Career Fairs; (4) Technology Awareness Program (TAP); (5) IT Day for Students; and (6) our Women in Information Technology Conference. These committees will add depth and definition to all these services and will help us develop new services in the future.

The RFID Research Center continues to thrive as its research expands.

As always we welcome and encourage your suggestions regarding the direction of the institute. We also look forward to another successful year working with you!

Sincerely,

Eric T. Bradford
Managing Director
Information Technology Research Institute

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MISSION

The Information Technology Research Institute (ITRI) is an interdisciplinary unit for research within the Sam M. Walton College of Business. The Institute's mission is to advance the state of research and practice in the development and use of information technology for enhancing the performance of individuals and organizations; to provide a forum for multi-disciplinary work on issues related to information technology; to promote student interest in the study of information technology; and to facilitate the exchange of information between the academic and business communities.

Distribution marketing participation in the securities market.
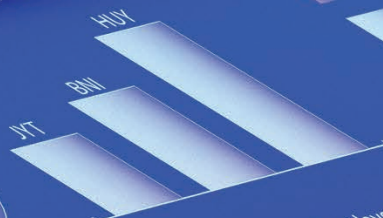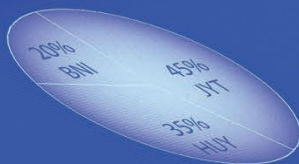
Revenue growth divisions.

TVU division

FRT division

Sales of main products in 2013

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

20%
BNI
45%
JYT
35%
HUY

HUY
BNI
JYT

Distribution of the securities market key players

Share of market activity

Changes in the activity of the active and passive market is uncertain. Established positive trends in various market segments.

25%
75%

HRT 12%
BGV
FEW
RDW
TRG 10%
RDE 9%

300
250
200
150
100
50
0 45 26 70 151 90 250 267

Passive market share

350
300
250
200
150
100
50
0

DISTRIBUTION OF NEW GOODS
IN SECONDARY MARKETS

180 EUROPE
210 USA
250 ASIA

222 AFRICA/CHINA
240

RESEARCH

The Information Technology Research Institute encourages the production and dissemination of academic research via its working paper series, which also provides industry practitioners access to leading academic findings. Additionally, the ITRI supports many research projects and regularly engages member organizations in projects.

WORKING PAPER SERIES

Responded to more than 2,100 requests for papers from the working paper series. Those requests came from IT Professionals, faculty members and students from around the world. Ten papers were added to the working paper series bringing the total to 182 papers in the library.

You can read more about these topics and other papers on our website:
http://itri.uark.edu/91.asp?code=completed

Title: Employee Adaptation to Information Systems
REFERENCE #: ITRI-WP174-1012

AUTHORS
- Hillol Bala, University of Arkansas
- Viswanath Venkatesh, University of Arkansas

ABSTRACT: Information technology (IT) implementation is a major organizational change event that substantially disrupts employees' work environment. We developed a model of adaptation behaviors that employees perform to cope with a new IT that causes such disruptions. The proposed model posits technology adaptation as a key linking mechanism between IT implementation and employee job outcomes, thus offering a holistic nomological network of adaptation behaviors.

Expectation Confirmation in IS Research: A Test of Six Competing Models
REFERENCE #: ITRI-WP175-1012

AUTHORS
- Susan A. Brown, University of Arizona
- Sandeep Goyal, Southern Indiana University
- Viswanath Venkatesh, University of Arkansas

ABSTRACT: Expectation confirmation research in general, and in information systems (IS) specifically, has produced conflicting results. In this paper, we discuss six different models of expectation confirmation: assimilation, contrast, generalized negativity, assimilation-contrast, experiences only and expectations only.

Modeling Citizen Adoption and Satisfaction of Mandatory Technology Services: A Study of Smart Cards in Hong Kong
REFERENCE #: ITRI-WP176-1013

AUTHORS
- Frank K.Y. Chan, Hong Kong University of Science and Technology
- James Y.L. Thong, Hong Kong University of Science and Technology
- Viswanath Venkatesh, University of Arkansas

ABSTRACT: While technology adoption is a major stream of research in information systems, there is limited research into the antecedents and consequences of mandatory adoption of technologies in society. In this paper, we develop a mandatory adoption model in the context of e-government. We build on the unified theory of acceptance and use of technology (UTAUT) and present antecedents and one consequence of the key predictors in UTAUT, namely performance expectancy, effort expectancy, social influence and facilitating conditions.

Sequential Pricing of Multiple Products: Leveraging Revealed Preferences of Retail Customers Online and with Auto-ID Technologies
REFERENCE #: ITRI-WP177-1013

AUTHORS
- John Aloysius, University of Arkansas
- Cary A. Deck, University of Arkansas

ABSTRACT: Technological advances enable sellers to price discriminate based upon a customer's revealed purchasing intentions. E-tailers can track items in online shopping carts and RFID tags enable retailers to do the same in brick and mortar stores. In order to leverage this information, it is important to understand how this new visibility impacts pricing and market outcomes. We propose a model in which a seller sets prices for Goods A and B, allowing for the possibility of sequentially revising the price for good B if the buyer reveals a preference for Good A by making an initial purchase decision.

Citizens' Preference Structures for Transactional E-government Services
REFERENCE #: ITRI-WP178-1012

AUTHORS
- Viswanath Venkatesh, University of Arkansas
- Kwok Yue Chan, Hong Kong University of Science and Technology
- James Y.L. Thong, Hong Kong University of Science and Technology

ABSTRACT: This paper investigates service design in an e-government context. Using transactional e-government services as the setting, the authors address the following questions: What are the key attributes driving adoption and use of transactional e-government services, and what are citizens' preference structures across these attributes? The authors identify four key attributes: complexity, computer resource requirement, technical support provision, and security provision.

EEHype or Help? A Longitudinal Field Study of Virtual World Use for Team Collaboration
REFERENCE #: ITRI-WP179-1012

AUTHORS
- Viswanath Venkatesh, University of Arkansas
- Jamie Windeler, University of Cincinnati

ABSTRACT: Despite increasing organizational interest and investment in virtual worlds (VWs), there is a lack of research on the benefits of VWs. When and how does the use of VW systems engender better organizational outcomes than traditional collaborative technologies? This paper investigates the value of VWs for team collaboration.

Effects of ICT Service Innovation and its Complementary Strategies on Brand Equity and Customer Loyalty in a Consumer Technology Market
REFERENCE #: ITRI-WP180-1012

AUTHORS
- Viswanath Venkatesh, University of Arkansas
- Xin Xu, Hong Kong University of Polytechnic University

ABSTRACT: This paper examines the effects of information and communication technology (ICT) service innovation and its complementary strategies on brand equity and customer loyalty toward ICT service providers. We draw from research on brand equity and customer loyalty, ICT innovation management, and strategy complementarity to propose a model that includes new constructs representing ICT service innovation.

Understanding The Role of Transactive Memory Systems and Knowledge Management Mechanisms on Team Performance
REFERENCE #: ITRI-WP181-0313

AUTHORS
- Mary M. Dunaway, University of Arkansas
- Rajiv Sabherwal, University of Arkansas

ABSTRACT: Teams are increasingly faced with obstacles that can hurt their performance. Social cognitive skills are emerging factors that that have shown the potential to influence how well team members work together. However, the interplay of transactive memory systems (TMSs) and knowledge management (KM) mechanisms within technology teams has not received much research attention.

Mechanisms Underlying Social Loafing in Technology Teams: An Empirical Analysis
REFERENCE #: ITRI-WP182-0313

AUTHORS
- Sankara-Subramanian Srinivasan, University of Arkansas
- Likoebe M. Maruping, University of Louisville
- Lionel P. Robert, University of Michigan

ABSTRACT: Prior research has identified team size and dispersion as antecedents of social loafing in technology-enabled teams. However, the underlying mechanism through which social loafing unfolds is not well researched. That is, how team size and team dispersion cause the individual to engage in social loafing is yet to be thoroughly understood.

THE NEW RFID CENTER

Pharmacy & Convenience Store

Grocery & Consumer Goods

Store Backrooms

Manufacturing & Distribution Center

Household

Department Store

Offices
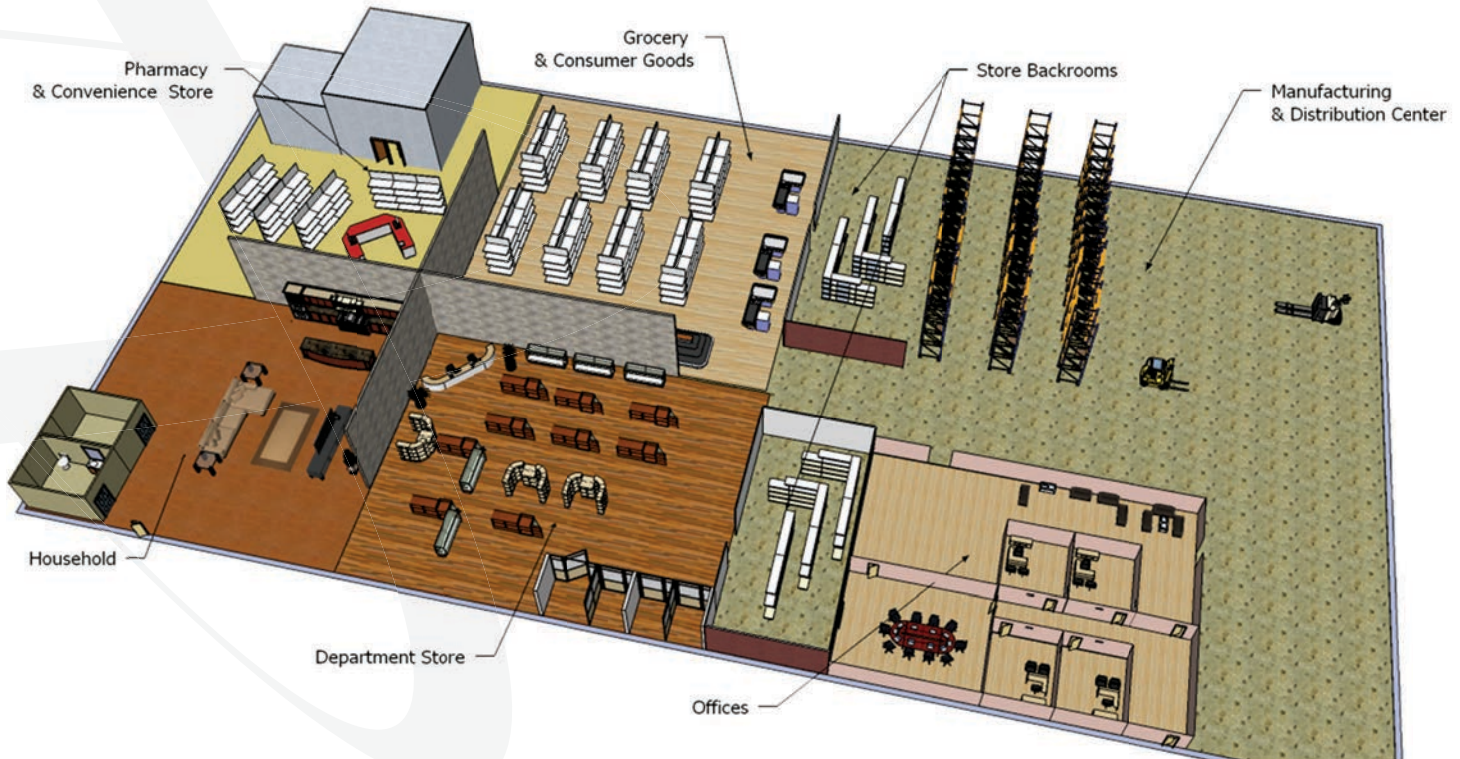
2012 was a momentous year for the RFID Research Center, dominated by the opening of the long-awaited 20,000 square foot research facility on Fred Hanna Drive in Fayetteville. The new center allows for the simulation of an entire supply chain under one roof. Offers a new level of flexibility to pursue new research projects, demonstrations, and educational opportunities for board member companies, University students and faculty, as well as RFID stakeholders from around the world. The grand opening kicked off RFID Week, which as dedicated to showcasing the leadership role the Research Center has secured for itself in the field of Retail Technology.

The Center opened its doors in 2005 and has grown in parallel with the RFID industry as a whole, keeping pace with the increasing importance retailers place on Omni-Channel enablement and innovation. RFID Week featured a discussion group for Arkansas Radio Compliance, a subsidiary organization of the Research Center, which leads the field of RFID testing standardization, working hand in hand with GS1US to normalize the once-fragmented field of RFID and Retail Technology testing.

The Center's scope and influence within the field of Retail Technology increased dramatically in 2012. Founded with the goal of creating a neutral, third-party research and testing facility for RFID technology, the Center has expanded its core competencies and scope to include emerging retail and supply chain technologies. This evolution is facilitating additional educational opportunities for students and faculty of the University of Arkansas, and providing opportunities for the beneficial alignment of the organizational goals of the University and Center partners in private enterprise.

Interest in the Center's educational opportunities is at an all-time high among members of the University community as well as citizens and visitors to the Fayetteville area. University groups, stakeholder companies and private citizens routinely tour the Center, a bona fide destination in Northwest Arkansas. Demand for tours, conducted by Research Center interns gaining practical lab experience, continues to grow.

Often requested as speakers, our staff addressed audiences this year in Scandinavia, Western Europe, and a variety of locations in North America. Board of Trustees members are encouraging the organization to further expand its scope and stated purpose to include a wider array of retail and supply chain technologies and processes. Board member interest and participation are at all-time highs.

RFID FORUM

On September 11th and 12th of 2012, the RFID Research Center, in partnership with the Council of Supply Chain Management Professionals and GS1US, held the Fifth Annual RFID Forum. The Forum convened as part of the grand opening ceremonies for the RFID Research Center's new 20,000 square foot facility located on Fred Hanna Drive in Fayetteville.

"It's more important than ever to have the right product on the right shelf, at the right time – and to implement new technology the right way." was appropriate as the forum explored a wide array of retail technology topics during the event: regulatory compliance, customs, fashion apparel, product inventory accuracy, EPC implementation, and supply chain innovation.

Speakers at the event included Joe Andraski of VICS, Nicole Collinson of International Trade and Government Relations, Dr. Antonio Rizzi – University of Parma, Jay Craft of VF, and Geoge Kuharick of Goodyear. RFID Research Center staff; Justin Patton, Center Director, and David Cromhout, Director of Research, also participated as panelists.

Joe Andraski said about the Forum: "The goal is about education and helping retailers and suppliers understand the value of implementing EPC-enabled, item-level RFID. The information shared can help companies determine individual strategies, which have an impact on effectiveness, efficiency and improved consumer satisfaction."

COMPANY REPUTATION SURVEY

In order to continue efforts to strengthen the linkage between industry and students, the ITRI conducted its 12th annual company reputation survey of students. Freshmen through graduate school students in Information Systems and Computer Science and Computer Engineering from the Sam M. Walton College of Business and the College of Engineering were asked to respond to an anonymous on-line survey. With the information gathered, the ITRI provides interested member companies with insightful information regarding the level of knowledge IT students possess concerning their companies. A total of 105 responses were received more than 596 students (approximately a 18% response rate).

By conducting this survey, we hope to enhance the understanding of companies that hire technology students and ultimately create more job opportunities in the future. As a survey incentive, we gave away an iPod nano randomly to two of the respondent.

We are dedicated to promoting student interest in the study of information technology as well as increasing interest in new information technology topics among professionals.

As part of our mission to promote interest in the study of information technology the ITRI established, funded, and coordinated the Technology Awareness Program (TAP) in partnership with the Office of Diversity and Inclusion and the Information Systems Department July 7th – 12th. This program is designed to expose high school students in under-represented groups (women and racial minorities) to the field of IT and to college life. It also serves to recruit students to the University of Arkansas and promote their interest in IT as a degree concentration and career path.

Twenty-four high school students from under-represented groups were introduced to the field of information systems, college life, and careers in information technology. Participants traveled from Arkansas, Oklahoma, Mississippi and Texas with an average GPA of 3.71 on a 4 point scale.

The students took part in a challenging team project designed by Susan Bristow and Beverly McDaniel, Professors in the Information Systems Department. Through the assigned project students developed their skills in the areas of research, teamwork, communication, and oral presentation. The project taught the students how to analyze big data through the creation of an interactive dashboard.

Participants also had the opportunity to interact with top business professionals and observe them in their work environments by touring J.B. Hunt Transport Service, the Wal-mart Innovation Lab, and Crystal Bridges Museum of American Art. For fun they took a trip to Fast Lane Entertainment for bowling, laser tag, go-karts, and video games.

The program concluded with students presenting their projects, followed by a dinner with college staff, faculty, and parents. Parents can be a big influence on a student's college choice.   It is our hope that by allowing the parents to see our campus they will feel confident in entrusting the University of Arkansas with their child.
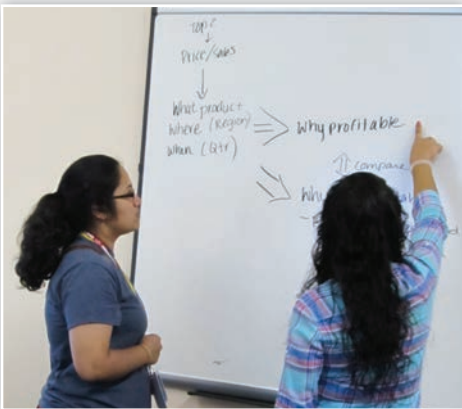
TRAGEDY INTO LEGACY

The families of Wyndell and LaKeysha Greene have turned a tragedy into a legacy with the establishment of the Wyndell Kyle and LaKeysha Michelle Greene Family Memorial Endowed Scholarship.

In May 2010, Wyndell (MBA '98), LaKeysha (BSBA '97, M.Ed. '99) and their two children, Wesleigh and Kyle, were involved in a tragic car accident near Terrell, Texas. The accident killed LaKeysha and the children and left Wyndell badly burned. He passed away from complications several months later. Theirs is the story no family wants to experience. However, the extended families of Wyndell and LaKeysha are making a heartbreaking situation more heartwarming with the creation of this scholarship.

The gift from the Wyndell Kyle Greene Estate established an Access Arkansas scholarship and received a one-third match from the Pat and Willard Walker Family Need-Based Scholarship Challenge. The scholarship will benefit students who are residents of St. Landry Parish, Louisiana, or Lafayette County, Arkansas, where Wyndell and LaKeysha were from, respectively. Closer consideration is also given to any student who attended the Technology Awareness Program sponsored by the Walton College.

Wyndell Greene's brother, Bill, said, "The Wyndell Kyle and LaKeysha Michelle Greene Family Memorial Endowed Scholarship was established to honor and strengthen their legacy by extending educational opportunities to generations of students in the future who find themselves motivated and prepared for continuing education but don't quite have the financial resources to make it happen." Wyndell and LaKeysha led philanthropic lives and often volunteered their time and resources to charitable organizations. "They both firmly believed in educational advancement as a door opener and gateway to a better life for individuals and families," Greene said.

The decision to establish the scholarship at the University of Arkansas and Sam M. Walton College of Business was obvious to the families. As a student, Wyndell was involved with the Technology Awareness Program, which promotes interest in the study of information technology to under-represented groups in high school. And, as an alumna,

LaKeysha served on the Walton College's Business Alumni Advisory Council. Greene said, "We all knew the University of Arkansas at Fayetteville held a very special place in their hearts. To the chagrin of many family members who rooted for LSU in the annual 'Battle for the Golden Boot' that we all watched religiously every Thanksgiving holiday, Wyndell and LaKeysha were proud Razorbacks who shouted and cheered gleefully when Arkansas would win."

Wyndell and LaKeysha's families want them to be remembered as "spiritually-led individuals who took 'The Golden Rule' of loving one's neighbor as they loved themselves to heart." Their passion and commitment to family, faith and education were instilled in Wesleigh and Kyle, and they hoped their children would grow up to give back to the community as they did. Bill Greene noted, "As fate would have it, their last day together as a family was spent volunteering and helping the community. This scholarship in their names continues to help the community and preserves their commitment to education and the development of a solid foundation for others – others who will live 'The Golden Rule' and pay it forward as they did."

Friends of Wyndell and LaKeysha who wish to contribute to the growth of this scholarship fund can contact Elizabeth Johnson, development manager, at (479) 575-3268 or ejohns@walton.uark.edu.

BUSINESS CAREER FAIRS

In conjunction with the Walton College Career Development Center, Center for Retailing Excellence, and the Supply Chain Management Research Center, the ITRI coordinated and hosted two career fairs; September 25, 2012 and February 26, 2013.

In an effort to provide a more comfortable atmosphere for both students and perspective employers, the spring event was held in the East Indoor Club at Razorback Stadium. This is the fourth year in this location and the move has received great reviews. More than 700 students attended to interact with the 107 companies present at the spring event. This was the largest Career fair held to date. Due to the positive feedback, both career fairs for the next academic year will be held at Razorback Stadium.
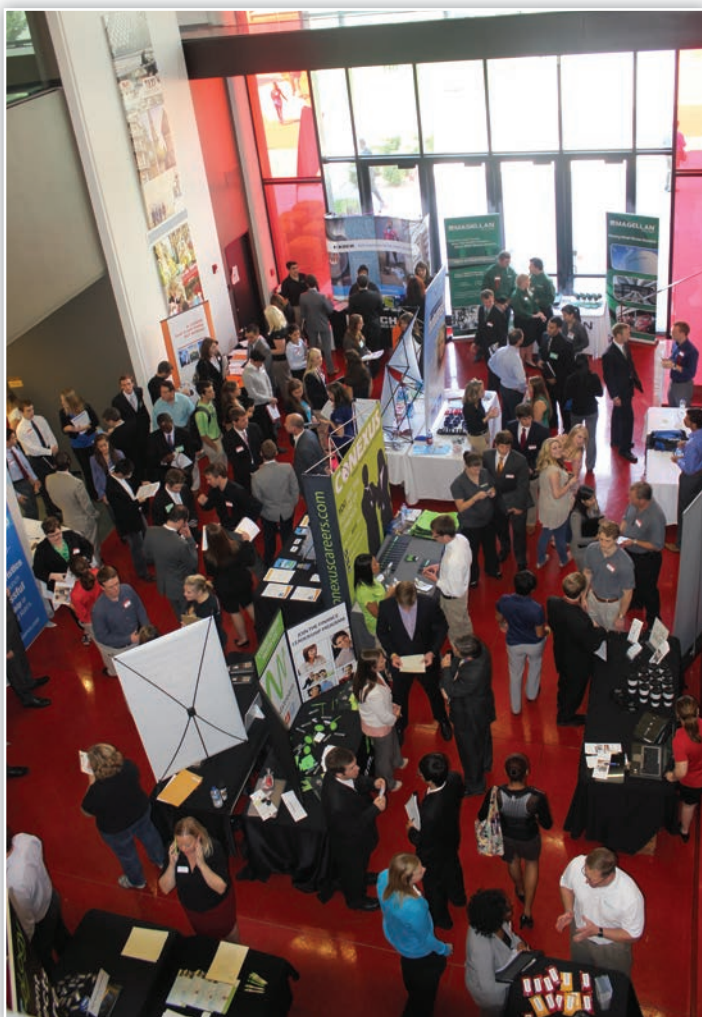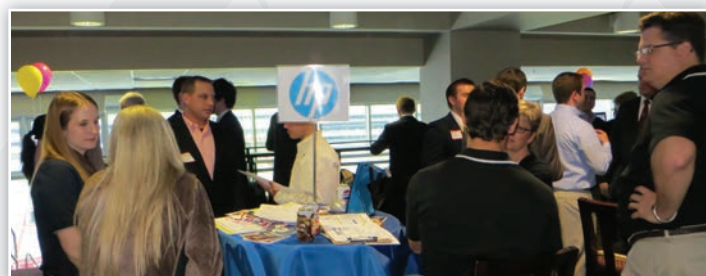
IT EXECUTIVE FORUM

On September 26, 2012, the ITRI hosted its annual IT Executive Forum. This event continues to provide a number of college and high school students a chance to interact with IT executives. Ten executives from ITRI member organizations participated in a question and answer dialogue with approximately 300 students. During this very important event, students not only get to hear from IT executives about the culture of their respective organizations, skills needed to work in the field and the need for more high quality students, but they also receive raffle tickets for an opportunity to win outstanding door prizes such as iPads, printers, iPods and TVs.

ISYS STUDENT RECEPTION WITH IT EXECUTIVES

Immediately following the IT Executive Forum held on September 26, 2012 and the IT Day for Students held on March 12, 2013 a reception was held for current information systems students. Students visited with and asked IT Executives and questions about job opportunities and the company's culture they represent in a smaller venue. Similar to speed dating; a ten-minute time limit was placed on each visit as students moved from table to table to converse with IT Executives. The executive participants, providing students an opportunity to visit with potential employers, deemed the event a success.

EXECUTIVES IN THE CLASSROOM

The ITRI's Executives in the Classroom program brings leading industry professionals to speak in the classroom each semester to share their expertise and experiences. This time in front of the students is valuable to everyone involved. It's an opportunity for our board member companies to promote their organization to students and for students to learn about the companies, their cultures, and job opportunities.

These Classroom events give students an idea of what is it like to be an IT professional and helps to encourage students to seek IT as professionals. Representatives from our business partners speak to classes on range of IT topics. This is a great program that promotes student interest in the field of information technology and facilitates the exchange of information between the academic and business community.

IT DAY FOR STUDENTS

On March 12, 2013, the ITRI hosted the 6th Annual IT Day for students. The event brought approximately 300 high school students to the Donald W. Reynolds Center on the University's campus. Students learned intriguing facts about Information Technology, Sam M. Walton College of Business, and the businesses which have formed solid relationships with the ITRI. This event allows ITRI member companies, Walton College faculty, staff, and current students to connect with high school students as a recruitment program for the College, the University of Arkansas and the field of Information Technology.

Participating companies offered information on their cultures and demonstrated some of the advanced technologies used within their organizations. Students were also given insight into the many opportunities available to them from member companies. The program showcases the advantages of obtaining a degree in information systems.

Designed to increase the number of students interested in studying information systems, this fun and informative event builds connections between the business community, university faculty and students interested in the field of technology.

WALTON ALUMNI

Each year the Sam M. Walton College of Business recognizes alumni for their outstanding achievements in business, and service to the college and University of Arkansas. The Walton College held its 20th annual Awards banquet on April 18th. In addition to recognizing the achievements of its outstanding students, the Walton College honored three alumni for their business and community achievements.

The Lifetime Achievement award is reserved for a Walton College graduate who has made significant achievements in his/her career and is recognized as an industry and community leader. This individual exemplifies the core values of the Walton College, inspires students, and is a source of pride for his/her alma mater. This award is not necessarily presented every year and is bestowed as deemed appropriate by the

Awards Committee based on the pool of candidates. This year's Lifetime Achievement Award was presented to our very own and recently retired Charlie McMurtry. He received his Bachelor of Science in Business Administration in Marketing in 1970, and went on to work for companies such as NCR Corporation, Walmart Stores, Inc., Dell, and finished his career as the Sr. Vice President of Information Technology for Hewlett-Packard. Charlie served many years as a board member of the ITRI.

We congratulate Charlie McMurtry!

ASPIRATIONS IN COMPUTING

For the third year in a row, the ITRI has recognized the winners of the regional Aspirations in Computing Award during the Women in Information Technology Conference. With guidance from the National Center for Women & Information Technology (NCWIT), the ITRI conducted its third regional award for aspirations in computing. The award seeks to recognize high school women with outstanding achievements and aspirations in computing and technology through the Award for Aspirations in Computing. The ITRI's regional affiliate award included the entire state of Arkansas and Northeastern Oklahoma. By generating visibility for these young women, the award encourages continued interest in computing, increases awareness of the gender gap in computing and IT, and emphasizes at a personal level the importance of women's participation in technical fields. Three young ladies with outstanding achievements in computing were recognized during the 9th Women in Information Technology Conference.

2013 WOMEN IN INFORMATION TECHNOLOGY CONFERENCE

The 9th Women in Information Technology Conference was held on Thursday and Friday March 7-8. Attracting more than 250 attendees from the four-state region. this was the largest conference since 2007. This conference focused on "Celebrating Innovation and Developing Opportunities for Women in Technology. The two-day event included a tour of the RFID Research Center facility and the Aspirations in Technology recognition dinner.

Keynote speakers Kim Clower, director of Information Technology at General Motors and Meg Greenhouse, vice president of Strategy, Innovation, Governance and Communications at Walmart Stores, Inc., led a noteworthy group of speakers. This group included Alan Harvill, Senior Applications Sales Executive and Mobility Applications Consultant from AT&T who spoke on the topic of Bring your Own Device; Patti Leith, Mangaing Partner and Founder of EDGES, Inc. who spoke about Building Effective Relationships; and Jeff Wood, Managing Member and Principal of Arkansas Legal Tech, who spoke on a more technical level about cloud computing.

This year's conference also featured from the first time "Flast Talks". Inspired by a similar activity at the NCWIT Summit meeting, these five minute lightning talks on different topics related to innovation provoked much discussion among attendees. Flash talk participants included:

- **Brandy Mitchell** - Arvest Bank Operations
- **Melissa Wagner** - FedEx Services
- **Susan Bristow** - Sam M. Walton College of Business Information Systems Department
- **Riley Shearin** - J. B. Hunt Transport
- **Helena Gadison** - EMW Enterprises
- **Nidhi Dahiya** - Sam M. Walton College of Business Behavioral Lab
- **Amber Styles** - Emberson – Arkansas Department of Information Systems

Helena Gadison, Executive Director N.c.K Talent Academy & Management, moderated a panel discussion on the conference theme of Celebrating Innovation and Developing Opportunities for women in Technology.

THE PANEL INCLUDED:

- **Meg Greenhouse** - Walmart Stores, Inc.
- **Melissa Wagner** - FedEx Services
- **Susan Bristow** - Sam M. Walton College of Business
- **Brinda Arounnothay** - Graduate Student in Information Technology University of Arkansas

Katie Ertz, Senior Operations Director for the National Center for Women & Information Technology (NCWIT) gave a state of women in IT address as well as a recap of the previous night's Aspirations in Computing Award ceremony. She also spoke about a new campaign that NCWIT has started called "Sit with Me" which invites you to validate and recognize the important role women play in creating future technology by taking a small but symbolic action: sit in a red chair and share your story. Pull up a chair and listen to stories from others; men, women, technical and non-technical, as they sit in the red chair.

To help support this campaign, we hosted a Sit with Me event where conference attendees shared their stories while we photographed them with a red chair. This was a great opportunity support NCWIT in their efforts of spreading the word about the role that women play in computing.

SIT WITH ME

INTERACTION

The ITRI seeks to bridge the gap between academia and IT professionals as well as the gap between individual IT organizations. When we share our knowledge, everyone benefits.

GM

Austin IT Innovation Center

Main Entrance

GENERAL MOTORS JOINS THE ITRI

We are very happy to welcome General Motors and Kim Clower, its Director of Information Technology, to our advisory board. Ms. Clower's education began here, at the University of Arkansas, where she received a Master's in Computer Science. In October of 2005 she joined Hewlett-Packard where she rose to the position of Vice President of IT, Global Support and Services, supervising the customer support infrastructure for the Americas, Europe, and Asia.

In July of 2012, Ms. Clower, joined General Motors as Director of Information Technology, where she was tasked with integrating IT services for the large corporation while simultaneously ending the outsourcing of GM's IT workload. She is currently responsible for one of twelve key transformational initiatives currently underway at GM. Her primary foucs covers "Shadow IT", any IT activity that occurs outside of her organization. The initiative began as a way to "better control IT costs, eliminate duplication, and reduce the risk to the enterprise." Ms. Clower previously led major IT transformations at both Dell and HP. "GM's goal is to in-source there entire workload while completely transforming our business – so it is a very exciting place to be."

"We are building a quality IT team from the ground floor, and we are very aggressively hiring in our Innovation Centers located across the US," said Ms. Clower.

"A large piece of our strategy is to recruit at colleges such as the University of Arkansas, where we have been very successful finding top talent. As part of the ITRI Board, we are able to work directly with the Faculty and Staff, understanding how we can continue to support the University of Arkansas and our graduates."

"Top focus should continue to be the students and helping them to be successful in their field of study… Helping to connect students to companies based on their specific areas of interest, needs, and skills."

The ITRI wishes Kim Clower success in her ambitious undertaking at General Motors, and recognizes her contribution to the Information Technology Research Institute and the University of Arkansas.

RFID BOARD MEETING

E ach quarter the RFID Research Center convenes a meeting of its Strategic and Business Board of Advisors. In September of 2012, the Advisory Board meeting was held in conjunction with RFID Week, which featured the grand opening of the new RFID Research Center Facility, RFID Forum, and the Arkansas Radio Compliance Discussion Group.

The new center was the primary focus of the Advisory Board meeting, though several other topics were addressed. Dr. Matthew Waller offered a quarterly update of the activities of the University of Arkansas Supply Chain department, an increasingly important Research Center stakeholder. David Cromhout, the Center's head of research, Dr. Brent Williams and Dr. John Aloysius presented new research on Electronic Proof of Delivery. The Director of the Center for Advanced Spatial Technologies, Dr. Jack Cothren discussed research innovation as well as his organization's partnership with the Center on upcoming projects. David Cromhout spoke on the topic of Change Management within the field of Retail Technology. Additionally, Dr. Senthil Kumar and Center Lab Manager Aaron Vasgaard provided an update on Center activities and outlined recent advances in Field Data Capture techniques. An informal RFID Board Dinner followed at Hoghaus Brewery on Dickson Street in Fayetteville.

ITRI BOARD MEETING

The ITRI holds two board meetings each year where we provide updates on programs and initiatives and board members provide direction for the future of the institute. The Information System Department, the Master's Program, and the Computer Science Computer Engineering department also gave updates.

Increasing the research component of the ITRI has been a theme over the last couple of years. As a part of that initiative, Mary Dunaway, a Ph.D student in the Information Systems Department, presented the results of her research on Emotional Intelligence and thanked board members for their participation in that research.

During the spring board meeting a handful of soon-to-graduate information systems students were invited to visit with board members. This portion of the meeting takes place without the presence of university faculty and staff, and allows students to speak their mind to board members about their educational experiences.

This year we formed five committees to increase board member participation, ensure we are meeting the needs of member companies, and to solidify the future of the ITRI. Committees will address membership and development, student interaction, research, training and events, and curriculum. We expect these committees to help guide the ITRI toward increased effectiveness and success in facilitating the exchange of information between the academic and business communities.

TOP 10 PRIORITIES

ABOUT THE ITRI'S TOP 10...

Each spring, the ITRI Board of Advisors modifies and updates its list of Top 10 priorities. Rather than focusing on technologies that change rapidly, this list reflects those things currently on the minds of the leading IT executives of 16 major organizations (both public and private). The list represents more enduring priorities that are not as volatile as pure technologies, such as programming languages or operating systems. We first produced the list in 2001 and it acts as a barometer for activities in these organizations and serves as a signpost for the academic community for research and curriculum priorities. The ITRI creates the list after listening to IT executives discuss and rank priorities that are currently at the forefront of their organizations at this time.

1 BUSINESS INTELLIGENCE AND ANALYTICS

2012 Rank:	No. 3
2011 Rank:	No. 6
2010 Rank:	No. 7
2009 Rank:	No. 9
2008 Rank:	No. 6
2007 Rank:	No. 4
2006 Rank:	No. 5
2005 Rank:	Not ranked

Business Intelligence and Analytics tops our list this year. It jumped two spots to grab the top ranking pushing the three-year reining number one topic, Corporate Strategic Alignment, to the number two spot. Listed simply as Business Intelligence in previous years, the topic gained Analytics in its description this year due to the growing importance of making sense of all the data available to an organization.

2 CORPORATE STRATEGIC ALIGNMENT

2012 Rank:	No. 1
2011 Rank:	No. 1
2010 Rank:	No. 1
2009 Rank:	No. 5
2008 Rank:	No. 1
2007 Rank:	No. 1
2006 Rank:	No. 2
2005 Rank:	Not ranked

After a three-year reign the top of the list, Corporate Strategic Alignment remains very important to board members as it only moved down one spot. Since its emergence in 2006, it has never been ranked below #5 and has been ranked #1 five times. No other item on list has been ranked as such. This truly shows that it is imperative to have IT at the table when an organization develops its strategic plans. Corporate Strategic Planning's continued presence at the top seemed to be fueled by the resurgence of the economy and the corresponding need to examine strategies for capitalizing on this upswing. Organizations are now planning for future growth with particular emphasis on an increasing reliance on IT.

3 GROWTH & ACQUISITIONS

Ranked for the first time

A new topic jumps on the seen in a big way. Coming in at the #3 spot this year is a new topic that jumps on the scene in a big way. Like other items on the list, Growth and Acquisitions seems to reflect larger changes in the overall economy. A related topic, impact of the economy, fell off this year's list. These two changes taken together indicate a growing confidence by IT professionals in the overall economy and its effect on their businesses.

4 SOCIAL COLLABORATION

Ranked for the first time

The 4th item on the list is also brand new to the Top 10. Social Collaboration refers to processes or tools that help people interact, network and share information in order to complete a task or goal. The subject came up in a board discussion around how our companies could help the University attract more high quality students to the field of Information Technology and how they can retain those students one they go to work at their companies.

5 SPEED OF BUSINESS/PROJECT MANAGEMENT

2012 Rank:	No. 2
2011 Rank:	No. 3
2010 Rank:	No. 3
2009 Rank:	No. 2
2008 Rank:	No. 2
2007 Rank:	No. 3
2006 Rank:	No. 6 (Speed of Business); No. 4 (Project Management)

The Speed of Business and Project Management have been a hot topic since their emergence on the Top 10 list. Since combined in 2007, the item has only been ranked lower than number #3 once, and that is this year as it appears in the #5 spot. This shows the topic is still very important even with the fact that the two items above it are brand new to the list.

6 SECURITY AND PRIVACY

2012 Rank:	No. 4
2011 Rank:	No. 7
2010 Rank:	No. 6
2009 Rank:	No. 7
2008 Rank:	No. 5
2007 Rank:	No. 2
2006 Rank:	No. 1
2005 Rank:	No. 1
2004 Rank:	No. 2
2003 Rank:	No. 2
2002 Rank:	No. 4
2001 Rank:	No. 6

Security and Privacy dropped a couple of slots this year, but has occupied a spot on this list since its inception. It will always be a critical component of concern as companies must stay ahead of hackers, both internal and external. Information security breaches in major organizations and governmental agencies threaten the exposure of sensitive data and bring attention to an already publicized area. Almost all companies, regardless of the industry, are aware of the importance of and need for proper security for the protection of an individual's privacy. Cloud computing was mentioned in the discussion as it relates to standards in the area of security and privacy.

7 RATIONALIZATION & MODERNIZATION OF INFRASTRUCTURE

Rationalization & Modernization of Infrastructure holds tight at the #7 spot. In 2010 the item was listed as Lowering the Cost of Infrastructure and was ranked #9 on the list. The name change echoes the significant emphasis on the priority of justification and modernizing while lowering the cost of infrastructure. It is important to make sure there is strong justification for actions taken and to take advantage of any new innovative ways to accomplish the tasks.

8 RATIONALIZATION & MODERNIZATION OF APPLICATIONS

This item slides down two spots this year to the #8 spot. In a previous life it was listed as as Streamlining Applications. The name change emphasizes the focus of a couple of things while streamlining applications. One is to make sure there is strong justification for the things being done, and the other is to take advantage of new innovations. Though the economy is improving, the need to streamline applications to help reduce costs and increase productivity remains an important part of improving productivity.

9 INNOVATION

Although Innovation dropped four spots this year. Innovation is still an important topic to IT organizations and definitely belongs on the list. Companies have to do a better job of selecting projects with firm justification. So, how does one value "innovation"? IT groups are often viewed as facilitators of innovation. Yet, with many demands on resources, IT organizations continue to prioritize projects based on their potential to provide maximum return on investment (ROI). Unfortunately, measuring ROI on products and services that primarily provide intangible benefits, even for strategically relevant items, presents a hefty challenge.

10 INCREASING QUANTITY AND DIVERSITY OF IT MAJORS WITH EMPLOYEE RETENTION AND DEVELOPMENT

Increasing the quantity and diversity of IT majors with Employee Retention and Development rounds out this year's Top 10 list. Although it moved down a spot that doesn't reflect the importance of this topic to both the academic and business communities.   It is still a top priority.   This year the words "Employee Retention and Development" were added to the title. This reflects the importance member companies place on the need to retain employees especially those of the younger generation. This matter is closely related to the #4 item on this year's list called Social Collaboration as companies place a higher priority on keeping the employees of which they have invested time and money. Providing those employees with development opportunities is another tool to help retain them.

NOTES

Those that have dropped out of the Top 10
• Impact of the Economy
• Governmental Regulations and Compliance

Priorities that have been ranked all 12 years:
• Security and privacy
• IT workforce issues (various)
• Project management

TOP 10 IT TECHNOLOGIES

Historically the Top 10 list has not focused on technologies that change rapidly. It has focused on the things at the forefront of the minds of IT executives of major organizations. Board members were also asked to provide a list of technologies that board members feel will be important during the upcoming year.

1. Big Data – Map Reducing Technologies
2. Cloud Computing
3. Integration Technologies
4. Virtualization
5. Mobile Technologies
6. In-Memory Computing
7. Security and Privacy –Technology to Support IT
8. Social Media
9. Unified Communications
10. Web Technologies

INDUSTRY/BOARD MEMBER

Teradata, the global leader in enterprise data warehousing and analytic technologies, began partnering with the University of Arkansas in 2000 to provide processing of large datasets for corporations such as Dillard's, Tyson Foods, Inc. and Walmart to students and faculty for research and teaching purposes.

The University of Arkansas is the only university that has an academic-only Teradata system and shares those resources with faculty and students worldwide, said David Douglas, university professor in the Information Systems department at the Walton College.

"Having such a powerful data warehouse system coupled with large datasets provides learning opportunities that would not otherwise be possible," Douglas said.

Experts predict there will be a 50-fold growth in data by 2020. "Systems for storing and organizing digital data will become increasingly more important," according to Douglas.

Joe Rarey, Director at Teradata, Team Lead for Walmart Account

Teradata not only provides the hardware and software for the database but also takes care of the upgrades and maintenance of the system. With the support of Joe Rarey, the Walmart account team leader, Teradata upgraded the university's systems in 2005 and again in November 2010.

"The datasets provide Teradata University Network (TUN) faculty and students worldwide access to millions of rows of data," Rarey said. "It's imperative students have access to this volume of real-world information if they are to graduate understanding the big analytical challenges of business."

According to TUN, Teradata has been a force in business technology for more than 30 years and Teradata is consistently ranked as a leader in the Data Warehouse industry businesses space.

"We are exceptionally thankful to Teradata, TUN and Joe Rarey for all the great support for our academic programs," Douglas said.

Joe Rarey has served as a ITRI Board member since its inception, 1999.

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Brittany Bright
Instructor
- MA, University of Arkansas-Fayetteville, Information Systems
- BS, University of Arkansas-Fort Smith, Information Technology

Susan Bristow
Instructor
- MBA, University of Arkansas

Paul Cronan
Professor
- M.D. Matthews Endowed Chair in Information Systems
- DBA, Louisiana Tech University, IS/Management Computer/Professional Ethics, Performance Analysis and Effectiveness

Fred Davis
Professor
- David D. Glass Chair in Information Systems
- Ph.D., Massachusetts Institute of Technology, Management
- User Acceptance of Information Technology

David Douglas
Professor
- Ph.D., University of Arkansas, Computer Modeling Distance Education, Object-Oriented Technologies, E-Commerce

Joseph Ehrhardt
Adjunct Instructor
- B. S. Computer Engineering, Unveristy of Arkansas
- M.I.S, University of Arkansas

Eric Hatch
Adjunct Instructor
- MIS, University of Arkansas, Information Systems
- BFA, University of North Texas, Fine Arts

Hartmut Hoehle
Assistant Professor
- Bachelor of Commerce, Victoria University of Wellington, E-Commerce
- Bachelor of Commerce, Victoria University of Wellington, Information Systems
- Ph.D., Victoria University of Wellington, Information Systems

Thomas Jones
Professor
- Ph.D., Virginia Polytechnic Institute and State University, Statistics/Industrial Engineering Applications of Statistical and Operations Research Techniques

John Launder
Adjunct Instructor
- M.A., University of Missouri, Journalism
- B.A., Westminster College, History

Beverly McDaniel *
Instructor
- M.Ed., University of Arkansas
- Educational Technology

Jeffery Mullins *
Executive in Residence
- Masters, University of Arkansas, Information Systems

Rajiv Sabherwal
Professor
- Edwin & Karlee Bradberry Chair in Information Systems, Information Systems Department Chair
- B.E., Regional Engineering College, India, Electronic Engineering
- P.G.D.M., Indian Institute of Management, India, Business Administration
- Ph.D., University of Pittsburgh, Business Administration

Christina Serrano
Assistant Professor
- Ph.D., Management Information Systems, University of Georgia Health Informatics, IS & Organizational Change

Pankaj Setia
Assistant Professor
- Ph.D., Michigan State University,
- Information Technology and Management Creating and leveraging IT capabilities
- for superior organizational performance

Tracy Ann Sykes
Assistant Professor
- Ph.D., University of Arkansas (Information Systems) Social networks and technology implementations Technology implementations in developing countries Technology and Healthcare

Bill Thompson *
Adjunct Instructor
- Ph.D., Georgia State University, Management

Viswanath Venkatesh
Professor
- George and Boyce Billingsley Endowed Chair in Information Systems Ph.D., University of Minnesota, Business Management Electronic Commerce, Gender and Age Differences in Technology Adoption and Usage

* indicates non-tenure track professors

ACHIEVEMENTS
IN TEACHING, RESEARCH, AND PUBLIC SERVICE

Susan Bristow
- Received the 2013 Outstanding Faculty of the Year Award from the Associated Student Government and the Residents' Interhall Congress
- Received the 2013 Outstanding Faculty Advisor of the Year
- Received the 2013 Outstanding Mentor sponsored by University of Arkansas Office of Nationally Competitive Awards

Fred Davis
- Continued to serve as the Senior Editor for Informational Systems Research
- Served as Senior Editor, Journal of the Association for Information Systems, Special Issue on "Methods, Tools, and Measurement in NeuroIS Research"
- Served as Guest Editor, Information Systems Frontiers, Special Issue on "The Role of Information Technology (IT) in the Delivery of Services"

David Douglas
- Appointed Walton Professor of Information Systems.

Rajiv Sabherwal
- Continued to serve as Editor-in-Chief of IEEE Transactions on Engineering Management.

Pankaj Setia
- Received the Best Reviewer Award. CIST (Conference on Information Systems and Technology), INFORMS, Phoenix, AZ, 2012

Viswanath Venkatesh
- Received the university-wide research award at a function of the Arkansas Alumni Association in November 2012. He was also honored at halftime during a Razorback football game.
- Wrote a paper which appeared in the Journal of Operations Management in the past year; has been nominated for the best paper award at the journal.
- Continued to serve as the Senior Editor of MIS Quarterly.

STUDENT INFORMATION

- 39 undergraduate students graduated with an ISYS major in 2012-2013. Of these, 35 students were seeking a full-time job. Twenty-seven of them (or 77%) were employed by graduation. Five percent of the graduating class were continuing their education. The average ISYS salary for the fall 2012- spring 2013 undergraduates was $55,177. Employing companies included Cerner Corporation, Dillard's, General Motors, Hewlett-Packard, Phillips66, and Wal-Mart Stores, Inc.

- Of the nine MIS graduates for the 2011-2012 academic year, information was gathered from seven students who were seeking a full-time job. All of them (100%) were employed by graduation. The average starting MIS salary for the 2012- 2013 graduates, who included some international students, was $53,125. Employing companies included Acxiom, FedEx, Hilti, Mobley Technologies, Sam's Club, Vision Chain, and Wal-Mart Stores, Inc.

The Information Systems Department is consistently ranked ninth worldwide for research publication activity in the top two Information Systems Research journals (MIS Quarterly and Information Systems Research) for 2008-2012

NOTABLE ADDITION

Eli Jones became dean of the Sam M. Walton College of Business on July 1. He also holds the Sam M. Walton Leadership Chair in Business. Previously, Jones served as dean of the E. J. Ourso College of Business and Ourso Distinguished Professor of Business at Louisiana State University. He was on the faculty at the University of Houston from 1997 to 2008 and received a bachelor of science in journalism, a master of business administration and his Ph.D. from Texas A&M University. Before becoming a professor, he worked for three Fortune 100 companies: Frito-Lay, Nabisco Foods and Quaker Oats. His research and teaching interests are in marketing strategy, particularly sales and sales management. He has published widely in academic journals and serves on two editorial review boards, a corporate board and numerous charitable boards. He also is co-author of the new Professional Edition of the book, Selling ASAP: Art, Science, Agility, Performance.

We welcome Eli Jones to the University of Arkansas and the Walton College of Business.

STAFF PROFILES

Eric Bradford
ITRI Managing Director

Eric Bradford earned a Bachelor of Science in Business Administration and a Masters of Information Systems from the Walton College. He was a defensive back on the Razorback football team from 1984 to 1988. He joined the Walton College from Tyson Foods, Inc., where he was a business analyst working in the information systems department of the fleet group. He taught introduction to computers and worked for the University of Arkansas athletics department while getting his master's degree. He also worked in Dallas, Texas, for Central and South West Service, Inc., the parent company of Southwestern Electric Power Company.

Justin Patton
RFID Research Center Managing Director

Justin Patton earned his undergraduate degree in physics from Hendrix College and his master's degree in Computer Engineering from the University of Arkansas. As managing director, he oversees the world's only academic EPCglobal-accreditted lab in exploring various industry research and implementation areas with several RFID partner organizations, including technology vendors, retailers and suppliers. Patton also serves as co-chair of the EPCglobal Performance Test Center Council.

David Cromhout
RFID Research Center Research Director

Prior to his position at the RFID Research Center, David Cromhout served for five years as the project coordinator for the Nanotechnological Materials Research Laboratories in the Department of Mechanical Engineering. He earned a Bachelor of Science in Business Administration in transportation and logistics from the Walton College in 2007.

Senthilkumar Chinnappa-Gounder-P
CP RFID Research Center Technical Director

Senthilkumar received his B.E. from Bharathiar University, Coimbatore, India in 2004 and an M.S. and Ph.D. in Computer Science from University of Arkansas – Fayetteville in 2007 and 2010 respectively. Senthil's projects have a common goal of making RFID adaptation more secure, efficient, reliable and useful. Senthil's current focus is on Arkansas Radio Compliance, the industry's first program to streamline the adaptation of RFID tags in a multi-partner RFID supply chain.

Carlan Pine
Program Specialist

Carlan Pine graduated from the University of Arkansas with a Bachelor of Arts degree in Communication. As program specialist, she serves as a business liaison with the board of advisors for the ITRI, coordinates the Institute's events and projects, and operates as the business manager for the ITRI and the RFID Research Center. She is pursing her master's degree in workforce development.

Aaron Vasgaard
RFID Research Center Manager

Aaron Vasgaard received his Bachelor of Science in Business Administration with a degree in Finance from the University of Arkansas. Prior to entering his role as RFID Research Center Manager, Aaron worked as an intern in the RFID Research Center while completing his degree. He also held an internship position with Walmart's Innovation Department. Aaron currently oversees the student workforce and runs the off-campus footprint of the RFID Research Center.

RESEARCH INTEREST INTERACTION

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