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5th Annual Governors State University Student Research Conference Proceedings

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5TH ANNUAL GSU

Student Research Conference

Friday, May 28, 1999

Governors State University



**Proceedings of the
5th Annual GSU Student Research
Conference**

**Governors State University
University Park, IL 60466**

May 28, 1999

Editor: Shelly Kumar

Governors State University

College of Arts and Sciences

College of Business and Public Administration

College of Education

College of Health Profession

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May 1999



Dear Conference Participant,

Welcome to the Fifth Annual Governors State University Research Conference. We are pleased you have chosen to share with the academic community the product of your research. By demonstrating the creation of new knowledge, you are participating in the esteemed tradition of higher education and helping to expand the intellectual reaches of humankind. This contribution is of profound and long-lasting significance, since it causes us to move forward as a society toward better understanding in many fields.

Congratulations to you and your faculty colleagues who have prepared you to participate today. We are proud and honored to have you as a member of the Governors State University community. We value your contribution today and look forward to following your successes in the future.

Thank you for participating.

Sincerely,

[REDACTED]
Paula Wolf
President [REDACTED]

A MESSAGE FROM THE CONFERENCE STEERING COMMITTEE

The steering committee is pleased to announce the 5th Annual GSU Student Research Conference to be held on May 28, 1999. The first four conferences were successful with back to back presentations from 9 A.M. to 5 P.M. What made these conferences even more exciting is the fact that quality of the presentations were at par with presentations at any professional conferences. We are confident that today again we will witness another session of quality presentations by our students. This conference will be presented in its original format and with its original objectives:

1. To provide students an opportunity to present their research work before an audience of their peers, and to use the comments they receive to improve presentations made at professional conferences.
2. To provide a forum to highlight research accomplishments at GSU, and honor students presenting their research work.
3. To generate enthusiasm among student body in general, and encourage them to pursue research and other scholarly activities.
4. To enhance communications in the area of research among the four colleges at GSU. The interactions may also lead to collaborative work among students and faculty of different colleges.
5. To enhance the image of GSU in the area of teaching, as research is considered integral part of teaching at the university level. In the long run larger number of students attracted toward research would enroll at GSU to pursue higher education.

The committee hopes that you will enjoy the conference, that you share in the excitement of doing research, and that you will look forward to participating in the future students and professional conferences.

The Student Research Conference Steering Committee is proud to announce that the key note speaker for the lunch will be:

Dr. Leigh Estabrook

Dean and Professor, Graduate School of Library and Information Science
Professor of Sociology
University of Illinois at Urbana-Champaign

who will present a talk titled

“Issues and Challenges in Evaluating Distance Education”

Dr. Leigh Estabrook received her A.B. in history from Northwestern University in 1964, M.S. in Library Science from Simmons College in 1969, and Ph.D. in sociology from Boston University in 1980. She joined the University of Illinois in 1986 after a series of successful positions at various academic institutes.

Besides an administrator at UIUC, Dr. Estabrook is a prolific researcher. She has published 38 journal articles, and has presented numerous papers at various professional conferences and meetings. At present, she is investigating chemistry professor's views on alternative publication strategies (funded by ARL and American Chemical Society) and adult literacy services in public libraries (funded by Lila Wallace Readers Digest Fund). In addition to her research activities, Dr. Estabrook has chaired several panels and committees, and has served as a board member of a number of academic institutes and professional organizations. She is recipient of several awards and honors including Beckman Research Award from UIUC and Association for Library and Information Science Education Annual Research Award.

ISSUES AND CHALLENGES IN EVALUATING DISTANCE EDUCATION

Leigh Estabrook

**Dean and Professor, Graduate School of Library and Information Science
Professor of Sociology
University of Illinois at Urbana-Champaign**

ABSTRACT

In 1996, the Graduate School of library and Information Science at the University of Illinois at Urbana-Champaign began offering its masters degree over the Internet, with only brief periods of on-campus learning, through a program called LEEP3. Via this distance learning scheduling option, master's degree candidates without on-campus access to the UIUC are able to complete the ALA-accredited degree. This talk briefly outlines the way in which LEEP3 is designed to allow students from Japan to the Virgin Islands to obtain high quality LIS education.

Several studies about this program have been carried out by researchers. The talk will focus on some of the issues and challenges of carrying out research on students in a distance education program.

PROGRAM SUMMARY

Engbretson Hall:

8:30 – 9:00 A.M.	Conference Registration
9:00 – 9:20 A.M.	Welcome and Introduction
9:20 – 10:20 A.M.	Podium Presentations
10:20 – 10:40 A.M.	Refreshment Break
10:40 – 12:00 Noon	Podium Presentations

Hall of Honors:

12:00 Noon – 12:45 P.M.	Lunch
12:45 P.M. – 1:00 P.M.	Greetings and Introduction of Speaker
1:00 P.M. – 1:30 P.M.	Keynote Speaker, Dr. Leigh Estabrook
1:30 P.M. – 2:20 P.M.	Mixer and Poster Presentations

Engbretson Hall:

2:20 P.M. – 2:30 P.M.	Certificate Presentation
2:30 P.M. – 3:30 P.M.	Podium Presentations
3:30 P.M. – 3:50 P.M.	Refreshment Break
3:50 P.M. – 4:50 P.M.	Podium Presentations
4:50 P.M. – 5:00 P.M.	Concluding Remarks

CONFERENCE PROGRAM

Conference Registration

8:30 A.M. Hall of Governors

Program Commencement Engbretson Hall

9:00 A.M. **Welcome and Introduction:**
Dr. Shelly Kumar
Division of Science
College of Arts and Sciences

Greetings:
Dr. Paula Wolff, President

Podium Presentations Engbretson Hall

Session I Moderator:
Dr. Frances Kostarelos
Division of Liberal Arts
College of Arts and Sciences

9:20 A.M. "THE IMPACT OF DIGITAL PRINTING TECHNOLOGY ON INFORMATION SYSTEMS AND DATA ASSET MANAGEMENT", Rawsam Alasmar, Akkanad Isaac*, Business Administration, CBPA. p 15.

9:40 A.M. "EMIGRATION TO THE UNITED STATES: FROM CENTRAL AMERICA AND THE CARRIBEAN 1993-1998", Dianne Kronika, Adriela Fernandez*, CAS. p 16

10:00 A.M. "CHRISTIAN BELIEFS AND MENTAL HEALTH: DO THEY GO TOGETHER?", Nilda Alexandra Bunker, Lori McKinney*, Psychology, CE. p 17.

10:20 A.M. **Refreshment Break**

Session III Moderator:
Dr. Linda Buyer
Division of Psychology and Counseling
College of Education

10:40 A.M. "GOOD IN PRINT...BETTER IN CYBERSPACE" Barbara Fillicaro, Mary Lanigan*, Human Performance & Training, CAS. p 18.

11:00 A.M. "RELIGION IN THE MEDIA: IS SOCIETY GETTING A CLEAR PICTURE?", Teresa Cline and Ana Kong*, Communications and Training, CAS. p 19.

11:20 A.M. "PHTHALATE ANALYSIS USING GC-MS", Jamice Adams, Joseph Addison*, Analytical Chemistry, CAS. p 20

11:40 A.M. "THE CASE AGAINST ELECTING ADMINISTRATIVE AND FINANCIAL OFFICIALS IN THE CITY OF CHICAGO", Timothy Thomas, Jr. and Paul Green*, Public Administration, CBPA. p 21

Conference Lunch Hall of Honors

12:00 P.M. *Lunch*

12:45 P.M. *Greetings and Introduction of Speaker:*
Dr. Tobin Barozzo, Provost

Keynote Speaker

Dr. Leigh Estabrook

Dean and Professor, Graduate School of Library and Information Science
Professor of Sociology
University of Illinois at Urbana-Champaign

speaking on

"Issues and Challenges in Evaluating Distance Education"

Mixer and Poster Presentations Hall of Honors

1:30 P.M. "A COMPARISON STUDY OF GROUP VERSUS INDIVIDUAL OCCUPATIONAL THERAPY TREATMENTS: ADULT CLIENT PREFERENCES & SATISFACTION", Sara Anderson, Cynthia Carr*, Occupational Therapy, CHP. p 29.

"COMPARING EFFECTIVE COMMUNICATION AND CLIENT SATISFACTION IN THE VENTILATOR-DEPENDENT PATIENT IN THE INTENSIVE CARE UNIT USING AIDED AND UNAIDED COMMUNICATION", Fetima R. Davis, Jessica Pedersen *, Occupational Therapy, CHP. p 30.

"THE CHARACTERIZATION OF PHASEOLIN STORAGE PROTEIN WITH THE PERIODIC ACID SCHIFF REACTION", David A. Rogel, Joyce Mohberg *, Analytical Chemistry, CAS. p 31

"AN EXPLORATION OF THE ROLE OF OCCUPATIONAL THERAPY IN ADULT DAY CARE CENTER AND THE SUBSEQUENT IMPACT OF OCCUPATIONAL THERAPY ON A CLIENT'S LIFE SATISFACTION", Foluke Akinosun, Cynthia Carr*, Occupational Therapy, CHP. p 32.

"JAVA APPLETS AND THE WEB", Andrew Hardt, Jane Wells *, Computer Science, CAS. p 33.

“A PARENT’S PERCEPTION OF THE USE OF PLAY IN OCCUPATIONAL THERAPY INTERVENTION”, Kristen DeYoung, Elizabeth Cada *, Occupational Therapy, CHP. p 34.

“SYNTHESIS OF AMINO ACID DERIVATIVES TO STUDY PROTEIN CROSS-LINKING”, James Plucinski, Shailendra Kumar *, Chemistry, CAS. p 35.

“RESEARCH SPEARHEADS HEALTH ADMINISTRATION’S INTEGRATION PROJECT”, Alicia Ferguson, Margaret Schulte, Catherine M. Crawford*, Physical Therapy, CHP. p 36.

“SELECTING THE MOST BENEFICIAL HORSE FOR CHILDREN WITH A DISABILITY”, Alison Howard, Beth Cada *, Occupational Therapy, CHP. p 37.

“PERCEPTIONS OF MULTIDISCIPLINARY TEAM PERCEPTION’S REGARDING THE PURPOSE AND EFFECTIVENESS OF OCCUPATIONAL THERAPY SERVICES”, Christina A. Sederwall, Patti Kalvelage *, Occupational Therapy, CHP. p 38.

Certificates Presentation

Engbretson Hall

2:20 P.M.

Dr. Paula Woff, President

Podium Presentations

Engbretson Hall

Session II Moderator:

Dr. Akkanad Issac
Division of Management, Marketing, and Public
Administration
College of Business and Public Administration

2:30 P.M.

“THAILAND’S ECONOMIC CRISIS: THE NECESSITY OF THE IMF ASSISTANCE”, Wanwalee Inpin, Political and Justice Studies, CAS. p 22.

2:50 P.M.

“PURIFICATION OF LACTALBUMIN BY CONTINUOUS-ELUTION ELECTROPHORESIS”, Tara N. Turner, Joyce Mohberg *, Analytical Chemistry, CAS. p 23.

3:10 P.M.

“AUTISM: SEPARATING FACT FROM FICTION”, Matthew Williams, Maribeth Montgomery Kasik*, Phillip Boudreau*, Multicategorical Special Education, CE. p 24.

3:30 P.M.

Refreshment Break

Session IV Moderator:
Dr. Carolyn Fraser
Division of Nursing and Health Sciences
College of Health Professions

- 3:50 P.M. **“SYNTHESIS OF AN AROMATIC HPLC STATIONARY PHASE FOR SEPARATION OF FULLERENES AND ENDOHEDRALS”**, Curtis L. Gurnea, Shailendra Kumar*, Analytical Chemistry, CAS. p 25.
- 4:10 P.M. **“MOTION GRAPHIC ARTS WORK”**, John Jung, Paul Schranz*, Photography, CAS. p 26.
- 4:30 P.M. **“COMMUNICATING NUCLEAR WEAPONS: BUILDING AN IDEOLOGY”**, Dennis Michael Wesner, Ana Kong *, Communications and Training, CAS. p 27.
- 4:50 P.M. *Concluding Remarks*
Dr. Shelly Kumar

ABSTRACTS OF PAPERS

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Governors State University
University Park , Illinois

PODIUM PRESENTATIONS

THE IMPACT OF DIGITAL PRINTING TECHNOLOGY ON INFORMATION SYSTEMS AND DATA ASSET MANAGEMENT

Rawsam Alasmar, Akkanad Isaac*

**Business Administration
CBPA**

ABSTRACT

Marketplace demands tactics more efficient than mass-marketing campaigns. The converging of database technology with variable-data printing is creating an impending explosion in the information system industry. Variable-data printing is headed for a high degree of success because it creates higher response rates for direct marketing.

This project is a study of the impact of value added digital printing technology on information systems and data asset management. The project demonstrates how database and information management are utilized in the deployment of marketing campaigns. In addition, issues such as target marketing (one-to-one marketing), customized information distribution and data asset management are explored.

This project specifically deals with the following topics:

1. A brief introduction to the process and the technology of variable-data printing.
2. Database, asset management, digital workflow and bottleneck issues.
3. Printing is no longer a commodity, it is information and communication management and distribution.
4. The end-users' awareness and level of education to both the printing process and data asset management.
5. Information accuracy and quality assurance.
6. Industries that can benefit from these emerging technologies.
7. Security and legal rights issues.

**EMIGRATION TO THE UNITED STATES
FROM CENTRAL AMERICA AND THE CARRIBEAN 1993 - 1998**

Dianne Kronika, Adriela Fernandez*

Political & Justice Studies
Division of Liberal Arts, CAS

ABSTRACT

Migration has become a worldwide dilemma. Increasing populations coupled with wars, poverty, persecution, and various other factors make it necessary to seek solutions that promote global equity. To determine ways through which promoting global equity would be possible, understanding the motivations behind migratory movements is necessary.

This paper considers a small piece of the picture, the migration of peoples from five Latin American countries to the United States over a period of six years (1993 - 1998). The countries were chosen because they were consistently within the top ten countries of origin for immigrants to the U.S. over this period.

Further, this paper attempts to answer the questions: What needs are not being met, and can anything be done to meet those needs? This is undertaken in an effort to pinpoint policies which can or should be changed within the countries of origin and/or the United States to enable those who would migrate access to the opportunities they lack.

CHRISTIAN BELIEFS AND MENTAL HEALTH: DO THEY GO TOGETHER?

Nilda Alexandra Bunker, Lori McKinney*

Psychology
Division of Psychology and Coounseling, CE

ABSTRACT

The relationship between Christian beliefs and depression as well as the relationship between Christian beliefs and anxiety were investigated. One hundred and eight psychology students participated in this study. Christian beliefs were measured by the Shepherd scale. Depression and Anxiety were measured by the Costello-Comery Depression and Anxiety Scales (CCDAS). The results indicated that Christian beliefs and depression are weakly correlated and that Christian beliefs and anxiety are not significantly correlated. Findings are discussed in terms of the limitations of the experiment. Suggestions for future research are presented.

GOOD IN PRINT...BETTER IN CYBERSPACE?

Barbara Fillicaro, Dr. Mary Lanigan*

Human Performance & Training
Division of Arts, CAS

ABSTRACT

Imagine this: You are a training department with materials that you want to convert to Web-based training. Your budget is limited and you may or may not have experienced staff to complete the project on-time.

In my research, I concentrated on whether the organizational infrastructure was adequate to support the web-based training and what the Web-based product should 'look' like.

I discovered that any training product can be converted to Web-based training—the real questions are:

- What price do you want to pay?
- How good do you want it to look?
- How big is the design task?
- Do you have the right people to do it?
- Do you have the resources to do it?
- Can you maintain the Web-based product?
- Will the learners use it?

Today we will examine three assessment tools that I found:

- 10 questions which could be considered a "Minute Rice" survey.
- A survey which focuses on basic considerations which look at the training product and its audience and corporate considerations which focus on the organizational infrastructure and budget.
- A Web-based decision support tool which focuses on training course content, audience, technology, and organizational support structure.

So the answer is: you can design or 'repurpose' any training course materials for delivery over the Internet. The question is: Will your finished product be what you expected?

RELIGION IN THE MEDIA: IS SOCIETY GETTING A CLEAR PICTURE?

Teresa Cline and Ana Kong*

Communications and Training
Division of Liberal Arts, CAS

ABSTRACT

What has research discovered about how religion is portrayed in the mass media, particularly television and film, and what implications do these portrayals have on how religion is viewed by the general public, both secular and religious?

Religion and God play a definite role in most American households, but these issues are noticeably scarce in American media. This has resulted few significant findings about the role media plays in shaping the general public's vision of religion. Research runs mainly in three areas of study: 1) religious broadcasting, its audience, and its purpose; 2) religious themes that have been "secularized" and updated in popular entertainment media; and 3) religious characters and their portrayals in non-religious media. Findings from these areas are as follows:

- Entertainment media has a fascination with the apocalypse and the millennial myth, as a response to American society's questions about confusing times.
- Protestant viewers of religious broadcasting tend to use it to *replace* traditional worship, while Catholic viewers use it to *augment* their religious experiences and relationships with other believers.
- Religious broadcasting is viewed with suspicion because it tends to be a hybrid theology of fundamentalism and commercialism, and because it seems to promote solitary rather than corporate worship.
- Preliminary findings show that the entertainment industry largely ignores religious issues, adding them in only when it serves to move the plot line along. Religious characters are often one-dimensional and based on stereotypes.

I believe that more scientific research should be conducted in all three areas, but particularly in how various religious characters and religions themselves are presented in the entertainment media and the possible impact these portrayals have on the American public's view of religion.

PHTHALATE ANALYSIS USING GC-MS

Jamice Adams, Joseph Addison*

Analytical Chemistry
Division of Science, CAS

ABSTRACT

Over the past 40 years the effect of phthalates in the environment has been of great concern. Phthalates are used primarily in the production of flexible PVC. The most commonly used are di-2-ethylhexyl phthalate (DEHP), diisononyl phthalate (DINP) and diisodecyl phthalate (DIDP). These phthalates account for more than 80 % of phthalate consumption.

Phthalates levels in the environment are low due to their extremely low solubility in water and their rapid aerobic degradation. At these levels they do not have any toxic effect on many organisms. In anaerobic conditions, their rate of degradation is much lower, and they can be found in sediments. Studies have shown that concentrations larger than those found in the environment have no adverse effects.

Repeated oral exposure to high levels of phthalates has caused some adverse effects in the liver and reproductive systems of some smaller species. However studies have indicated that due to the metabolic differences of larger species, phthalates due not pose any carcinogenic or teratogenic threat to humans.

At present all the major phthalates are undergoing risk assessment. Proper detection of these compounds is essential. Many analytical techniques can be used for phthalate analyses. In this presentation, the analysis of a phthalate mixture is described using GC-MS. The instruments used to analyze these compounds are discussed. Electron ionization (EI) and chemical ionization (CI) are the techniques used to identify these compounds. The differences in the techniques are discussed and the spectra generated by each technique are evaluated.

THE CASE AGAINST ELECTING ADMINISTRATIVE AND FINANCIAL OFFICIALS IN THE CITY OF CHICAGO

Timothy Thomas, Jr. and Paul Green*

Public Administration
Division of Management/Marketing/Public Administration, CBPA

ABSTRACT

The City of Chicago is not adequately, efficiently and professionally served by filling certain financial and administrative positions by popular election. Specifically, the offices of City Clerk and City Treasurer have become havens for waste, corruption and unethical practices that have not been in the best operational and financial interests of Chicagoans.

The Offices of City Clerk and City Treasurer represent a replication of services which heretofore exists in City government. Additionally, due to a lack of internal controls and oversight, the very nature of electoral politics has turned these offices into breeding grounds for questionable professional and ethical activities. By submitting these offices to the vagaries of the electorate, the Mayor of Chicago is denied the Executive authority to assemble his own administrative team, a team which will have an impact on the performance of the City for which HE ultimately will be judged.

This research endeavors to advocate a case for changing the method the aforementioned positions are filled by examining the following areas:

- the past occupants of the office's qualifications and tenure,
- how other major U.S. cities fill similar positions and/or perform similar functions,
- the magnitude of the cost to Chicagoans in a financial and moral framework,
- arguments by proponents of maintaining the status quo AND
- recommendations to ameliorate the current circumstances.

It is hoped that this research makes a meaningful contribution to effectuate a long overdue and deserved change in the presently untenable arrangement.

THAILAND'S ECONOMIC CRISIS: THE NECESSITY OF THE IMF ASSISTANCE

Wanwalee Inpin

Political and Justice Studies
Division of Art, CAS

ABSTRACT

Many years ago, the relationship between nations changed. Due to globalization, the actions of a few have come to effect the whole with global consequences. Since the world has become globalized, there are many systems that effect the entire world: educational, medical, communication, political, and certainly the economic system. Thailand, an Asian country was concerned with its economic crisis: flow of international capital, banking system weakness, and bad loans. As the Thai economic collapsed, the Thai government announced that it had reached an agreement with the IMF (The International Monetary Fund). The Thai economic crisis seems to be lessened from the IMF's help; however, it is too severe to restore in only a short time.

PURIFICATION OF LACTALBUMIN BY CONTINUOUS-ELUTION ELECTROPHORESIS

Tara N. Turner, Joyce Mohberg*

Analytical Chemistry
Division of Science, CAS

ABSTRACT

Milk proteins—casein, beta lactoglobulin and alpha lactalbumin—are low molecular weight proteins which are frequently used as molecular weight standards for SDS-polyacrylamide electrophoresis (PAGE). The aim of this project was to separate the three proteins so that each could be used as molecular weight marker. The starting materials were either an instant nonfat dry milk powder or a commercial casein product, which, judging from stained SDS gels, was about half beta-lactoglobulin. Separation was done with a Bio-Rad Mini-Prep Cell, using a 6-cm column of polyacrylamide. Gel and buffers were made by the modified Laemmli formulations (1) given by Bio-Rad in the operating manual. Lactalbumin could be separated from the other proteins with 10% acrylamide; but separation of lactoglobulin and casein required at least 15% acrylamide.

All of the proteins have isoelectric points close to 5. Therefore, instead of using SDS to convert them to negatively charged ions, it should be possible to convert them to positively charged ions by using an acidic gel. Analytical gels have shown that the three proteins are readily separated by the Panyim-Chalkley system (2), which runs at a pH of about 3. We are now testing this system in the Mini Prep unit.

1. Laemmli, U. K. *Nature*, 227, 680 (1970).
2. Panyim S., and Chalkley, R. *Arch. Biochem. Biophys.*, 130, 337 (1969).

AUTISM: SEPARATING FACT FROM FICTION

Matthew Williams, Maribeth Montgomery Kasik*, Phillip Boudreau*

**Multicategorical Special Education
Division of Education, ED**

ABSTRACT

This study was my thesis in my master's program. It examines the prevalence of myths concerning autism among mental health workers, special education teachers, and the general population. It seeks to discover which myths are more prevalent among the groups individually and collectively. It seeks to prove or disprove whether mental health workers know more about autism. The review of literature examines general information about autism, historical views and beliefs of autism, a variety of different types of autism myths, family members' perspectives of autism, a comparison of parents' and teachers' autism views, cross disciplinary perspectives on autism and people with autism perspective. A survey was developed and given to ten members of the three populations to see which of the autism myths that were included in the survey were believed in each population. The results indicated that several autism myths are still prevalent among the three populations. It concludes that mental health workers know more about autism. The significance of this research is as follows. It will add to the body of knowledge of autism. It will dispel myths concerning autism. It will reduce the stress level of parents and siblings without autism. It will educate the general population and professionals about the facts, not the myths, concerning autism.

The significance of this research is as follows. It will add to the body of knowledge of autism. It will dispel myths concerning autism. It will reduce the stress level of parents and siblings without autism. It will educate the general population and professionals about the facts, not the myths, concerning autism.

SYNTHESIS OF AN AROMATIC HPLC STATIONARY PHASE FOR SEPARATION OF FULLERENES AND ENDOHEDRALS

Curtis L. Gurnea, Shailendra Kumar*

Analytical Chemistry
Division of Science, CAS

ABSTRACT

The toluene extract of the soot produced by vaporization of graphite contains soccerball-like molecule buckminsterfullerene (C₆₀) and larger fullerenes (C₇₀, C₇₆, C₇₈, C₈₄, etc.)—the most abundant being C₆₀. Vaporization of graphite in presence of various metals produces endohedrals in which metal is encased in the carbon cage. Various separation techniques including chromatography have been applied for separation of fullerenes and endohedrals.

The overall objective of the project is to separate fullerenes and endohedrals by High Performance Liquid Chromatography (HPLC). In the present study, an HPLC stationary phase has been synthesized which will be further studied for separation of fullerenes and endohedrals. The stationary phase was synthesized by linking a chloronaphthyl group to an amino propyl silica 5 μ stationary phase by amide linkages. Prior to this derivatization of silica, a similar amide linkage was formed by reaction of 4-chloro-1,8-naphthalic anhydride with propyl amine to establish conditions for the stationary phase synthesis. The amide products in these syntheses were characterized by hydrolysis, infrared spectroscopy, and chemical tests.

MOTION GRAPHIC ARTS WORK

John Jung, Paul Schranz*

Photography
Division of Liberal Arts, CAS

ABSTRACT

I am very concerned with finding ways to orchestrate the way a viewer experiences my art. In any art form it is important to structure the way the viewer receives information so that it has the maximum impact. A lot of my art is created using Adobe Photoshop. Usually I'll collect photographs and sort through them, and try to create groups of individual images that make sense next to each other. Then I find a way to create transitions or overlays between the individual images in Photoshop to create a single composite image out of the individual photographs.

Although I am still collecting the images in the same way, I have recently started experimenting with an alternative way to composite them, using motion graphics to composite the images together instead of a final still image. The resulting image becomes more expressive because the video has added motion, sound and time to the piece.

Comparing video to still imagery—what do motion, sound, and time add?

1. The motion makes the image a little more immediately compelling, and gives me a little bit more time to win casual viewers over than with still images.
2. I can layer music or sounds on top of the image. This lets me orchestrate the emotional mood of the scene more fully. Sound produces a more raw, abstract reaction for the viewer, while images provide narrative, and more logical content. This is the same way movies are structured—suspenseful movies use music that is increasingly fast paced and up-tempo to create more excitement for the viewer.
3. As opposed to a still image, it is time-based. Every work of art demands a certain amount of time to really appreciate it, whether it's a still image or video. In a video work the "suggested" amount of time for concentrating on the piece is built-in—the length of the piece. This is very different from still images, which most people usually look very casually and quickly at.

COMMUNICATING NUCLEAR WEAPONS: BUILDING AN IDEOLOGY

Dennis Michael Wesner, Ana Kong*

Communications and Training
Division of Liberal Arts, CAS

ABSTRACT

In May 1998, India and Pakistan tested nuclear explosives, increasing the potential for an arms race or even a nuclear exchange between the two rival nations. In the aftermath of the Cold War, a lesson learned is that costly nuclear weapons programs are of dubious value. Why would two countries with economies far weaker than those of the United States and the Soviet Union embark on such programs? The answer lies in the ideology created and perpetuated by the superpowers during the Cold War.

An ideology is a set of beliefs people use to understand the world around them. In the political arena, it can also be a tool to exercise control over others. Not all individuals speak with the same amount of power behind their words. The greater an individual's power, the more that individual can define reality for others. During the Cold War, the leaders of the two most powerful nations on Earth defined nuclear weapons as a necessity for national defense. A 1980 report of the United Nations Secretary-General stated that the superpowers' reliance on nuclear weapons affirmed their value as implements and symbols of power.

The speech of the American and Soviet leaders during the Cold War added to the belief in nuclear deterrence. Strict control of communication regarding US-USSR relations fueled tensions which political leaders used to perpetuate the arms race. Fear of a nuclear attack by the enemy was reason enough to accept the idea of nuclear deterrence. The spiraling arms race resulting from this belief, however, eventually led to the collapse of the Soviet Union and left the United States with a trillion-dollar national debt. The ideology of nuclear deterrence, though, has not gone away.

POSTER PRESENTATIONS

A COMPARISON STUDY OF GROUP VERSUS INDIVIDUAL OCCUPATIONAL THERAPY TREATMENTS: ADULT CLIENT PREFERENCES & SATISFACTION

Sara Anderson, Cynthia Carr*

OCCUPATIONAL THERAPY
Nursing & Health Sciences, CHP

ABSTRACT

The purpose of this study was to investigate adult clients' preferences for and satisfaction with group occupational therapy treatment versus individual occupational therapy treatment. Group occupational therapy is frequently used with the adult population. Often these clients receive occupational therapy services for debilitating illnesses that affect their psychological, social, and physical well being. Utilizing a client-centered perspective, the therapist must address many issues, however, the clients may not feel that he/she received the attention needed, or desired, in group occupational therapy. A group consisting of three adult clients that received both group and individual occupational therapy based services at a Southwest Suburban Skilled Nursing Facility were subjects in this study. The other subject included the occupational therapist that conducted the group occupational therapy session and supervised the delivery of the individual occupational therapy sessions. All subjects participated in a qualitative research design and were interviewed in person.

This research adds to the knowledge base in occupational therapy by identifying the relationship between adult clients' satisfaction with receiving group occupational therapy sessions versus individual occupational therapy sessions, and by examining their preference for one of these services, or both? The information gathered from this study addressed the client's perspective on group and individual occupational therapy interventions. Previous literature available on group occupational therapy and its benefits represented only the therapist's point of view. This study addressed both the therapist and clients' points of view regarding adult clients' preferences for group or individual occupational therapy treatments, or a combination of both.

**COMPARING EFFECTIVE COMMUNICATION AND CLIENT SATISFACTION
IN THE VENTILATOR-DEPENDENT PATIENT IN THE INTENSIVE CARE
UNIT USING AIDED AND UNAIDED COMMUNICATION**

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ABSTRACT

The ability to communicate with others is a basic self-care act of everyday life. The need to communicate becomes more critical if one requires hospitalization. The inability to speak and the associated communication difficulties that result can be a major source of distress for the tracheal intubated patient. While hospitalized and intubated, the role of independent person is replaced with helplessness fostered by healthcare personnel. Feelings of anxiety and helplessness may be compounded in the patient who cannot verbally communicate.

Persons that require tracheal intubation and artificial ventilation from a machine to breathe are unable to verbally communicate. Providing a communication board to these patients to communicate may prove to be more effective than gesturing. This study will compare communication effectiveness and patient satisfaction in the use of a communication board in the ventilator-dependent patient in the Intensive Care Unit, with unaided communication.

Occupational Therapy is concerned with adapting the environment to enhance patient independence and self-care. Providing this patient population with a choice of communication strategies will decrease the sense of helplessness, and promote a sense of empowerment and independence.

THE CHARACTERIZATION OF PHASEOLIN STORAGE PROTEIN WITH THE PERIODIC ACID SCHIFF REACTION

David A. Rogel, Dr. Joyce Mohberg*

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Abstract

Phaseolin, a glycoprotein, is the major seed storage protein in Phaseolus vulgaris or the common bean which includes the pinto, kidney, and the Great Northern bean. Phaseolin allows biochemical classification of the common bean into three groups: Middle American, Intermediate or Northwestern South American, and Andean South American. S type phaseolin exists mainly in the Middle American group, which includes the landraces: Mesoamerica, Jalisco, and Durango. The T type phaseolin prevails in the Andean South American group which includes the landraces: Neuva Grenada, Peru, and Chile. The Intermediate or Northwestern South American group shows the I type phaseolin which displays properties intermediate to the S and T phaseolins. The current experiment uses the periodic acid Schiff (PAS) test, which identifies glycoproteins, as an additional way to characterize phaseolin. Past experiments use Coomassie Blue stain which targets proteins in general (Laemmli, 1970). The experimental procedure was (1) extraction of phaseolin from the bean flour with saline cracking buffer (Ma, 1983); (2) the standardization of the protein content of phaseolin by the fluorometric arginine analysis (Conn, 1959); (3) performance of the SDS-PAGE electrophoresis to separate the phaseolin protein into a series of bands. The gels were stained with Coomassie Blue stain for proteins and the PAS reaction for polysaccharides (Caldwell, 1965).

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**AN EXPLORATION OF THE ROLE OF OCCUPATIONAL THERAPY IN
ADULT DAY CARE CENTER AND THE SUBSEQUENT IMPACT OF
OCCUPATIONAL THERAPY ON A CLIENT'S LIFE SATISFACTION.**

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ABSTRACT

The purpose of this single case qualitative study was to explore the role of occupational therapy in adult day care center and the subsequent impact of occupational therapy on a client's life satisfaction.

An adult day care center in the South suburbs of Chicago that is managed by two occupational therapists was used for this study. The research subject is a lady who had attended an adult day care center without occupational therapy services and is now at a facility that renders occupational therapy services. The research subject's primary caregiver and the occupational therapist also participated in this study.

The Occupational Performance History Interview tool was used for this study. Semi-structured interviews were conducted with the research subject, her caregiver and occupational therapist. In addition, narrative self-reports, and observations of the research subject while at the adult day care center were utilized for this study.

The researcher hypothesized that this single case study emphasized the role and importance of occupational therapy at adult day care centers. The adults who receive occupational therapy services at adult day care centers will be more functionally independent compared with adults who do not receive occupational therapy services. The clients' families will be aware of the clients' independence and satisfaction, which results from the provision of occupational therapy services in the adult day care center.

JAVA APPLETS AND THE WEB

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ABSTRACT

Have you ever visited a web site only to find out that you need to download and install some software to be able to utilize the site? Java is the answer to that problem. Java applets are programs that are designed to run as part of a web page. An applet occupies a portion of a web browser's window and responds instantly when the user evokes an event, eliminating the need to retrieve a new response from the server. Everything that is needed by the applet is downloaded at the same time the initial page is downloaded. For security reasons, applets can't access files or other resources on the user's local computer, but they can initiate network connections to the machine from which the applet was downloaded. This presentation demonstrates the use of Java applets on the World Wide Web. Numerous examples of applets will be demonstrated including a detailed example that shows the step by step coding of an actual applet. Through the power of Java, programmers can provide the same web features to users of different kinds of computers from Apples to Dells.

A PARENT'S PERCEPTION OF THE USE OF PLAY IN OCCUPATIONAL THERAPY INTERVENTION

Kristen DeYoung, Elizabeth Cada*

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ABSTRACT

Play is the main occupation of children. Although it is vital for a child's development, the benefits of play in therapy may be difficult for parents to understand. A lack of parental understanding of play as an intervention in occupational therapy may cause a decrease in a parent's participation and motivation in their child's therapy. This may impact a child's ability to progress toward goals in therapy. The literature reviews some key components of play in occupational therapy that may contribute to a parent's perceptions. The study describes a parent's perception and level of understanding of play as an OT intervention. It also describes play as an intervention from an occupational therapist's perspective. Finally, the study reveals what factors contributed to the parent's perceptions of play as an OT intervention. Data for the study was gathered through semi-structured interviews with a parent of a child receiving OT services and the occupational therapist who provided the services. The findings from the interviews were analyzed and compared to the literature to gain insight into the participants' feelings, attitudes, and beliefs about play as an OT intervention.

SYNTHESIS OF AMINO ACID DERIVATIVES TO STUDY PROTEIN CROSS-LINKING

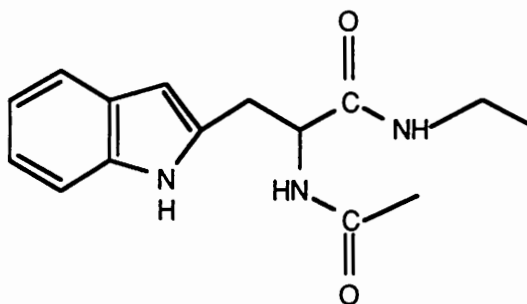
James Plucinski, Shailendra Kumar*

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ABSTRACT

Oxidation of eye lens protein in the presence of light causes crosslinking and aggregation of protein, which, in turn, are responsible for most type of cataracts. In the literature, crosslinking in proteins is mainly attributed to covalent disulfide bonds formed by the combination of two cysteine moieties. However, other amino acids, particularly, methionine, tryptophan, histidine, tyrosine, and phenylalanine are also susceptible toward photooxidation, and are oxidized to a large number of photooxidation products. The products of these "active" amino acids contain far more organic functionalities than their precursors. It is likely that several types of non-disulfide covalent bonds may form during protein crosslinking by further reactions of photooxidation products/intermediates of these amino acids.

We are investigating non-disulfide covalent linkages by photooxidation of peptide resembling derivatives of these "active" amino acids. One representative derivative (of tryptophan) is shown below. In the present work, synthesis of three of these amino acid derivatives is carried out. The photooxidation reactions of these model compounds by themselves and in pairs are also being carried out. Dimers, coupling adducts, etc. are being sought among the products. In a parallel study, photooxidation of crystallins obtained from bovine eye lens is also being done.



RESEARCH SPEARHEADS HEALTH ADMINISTRATION'S INTEGRATION PROJECT

Alicia Ferguson, Margaret Schulte, Ph.D., and Catherine M. Crawford, Ph.D.*

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ABSTRACT

This poster session will summarize a four-month strategic initiative, which resulted in the creation of an innovative integration program for both the undergraduate and the graduate Health Administration students at Governors State University. This initiative entitled "The Integration Project" came out of the program's need to revise its field experience programs to serve an unusually diverse Health Administration student body and to assure that its field experience effectively prepares them for successful careers in health administration.

The Integration Project was initiated with a literature search to ground the team in existing theory and research about integration programs and to help define a direction for the project. The team undertook a process of : (1) evaluating the existing program through interviews with faculty, preceptors, students, alumni and reviewing student project reports; (2) analyzing student demographic data; and (3) reviewing integration programs in other accredited health administration programs. The team developed a series of recommendations, which are being incorporated into a newly designed integration program that will better prepare students for future career success. The initiative and resulting integration program will be summarized in this presentation.

SELECTING THE MOST BENEFICIAL HORSE FOR CHILDREN WITH A DISABILITY

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Division of Nursing and Health Sciences, CHP

ABSTRACT

This study attempts to determine new or additional information about the factors a therapist could use to select a horse, to be used for hippotherapy, with a child with a disability. Selecting a horse is important to the outcome. Hippotherapy can assist the child to develop improved posture, balance, mobility, and function. The literature suggests that children who participate in hippotherapy can experience physical, emotional, and mental rewards. This study includes 3-5 therapist that are currently providing hippotherapy and have met the inclusion criteria. A case scenario and questionnaire was used to collect the data. The case scenario presented a story about a child with a disability and asks the therapist to respond to the factors used to select a horse. The therapist were asked to describe how they would select a horse for the child in the case study. Based on the responses from the therapist, the factors that influenced the selection of a horse for hippotherapy are presented. These include the commonalities, differences, and patterns found among the respondents as well as relating the findings of this project to the literature.

**PERCEPTIONS OF MULTIDISCIPLINARY TEAM PERCEPTION'S
REGARDING THE PURPOSE AND EFFECTIVENESS OF OCCUPATIONAL
THERAPY SERVICES**

Christina A. Sederwall, Patti Kalvelage*

Occupational Therapy
Division of Nursing & Science, CHP

ABSTRACT

Occupational therapy services have been employed in the public school system since 1975, however, since then federal legislation has changed the roles in which occupational therapy practitioners deliver services to school based children. Several studies have been conducted and results indicate a lack of communication between occupational therapists and educators, and consequently confusion regarding roles and responsibilities of occupational therapists in school based settings.

The purpose of this study is to determine how school based multidisciplinary team members perceive occupational therapy services, and if/how they have received knowledge of how students can benefit from occupational therapy services. This study is significant to occupational therapists and school personnel because if there is a lack of understanding about the roles and responsibilities of occupational therapists in a school-based setting, then the children in need of these services will not be properly referred, and will get the services they need and are entitled to in order to become successful in school.

The research design will be qualitative in nature. Five to seven school-based multidisciplinary team members will participate in semi-structured interviews in which their knowledge base of occupational therapy services will be assessed using a list of research questions devised by the principal investigator, utilizing the American Occupational Therapy Association's Uniform Terminology. Once data has been collected responses from the interview will be transcribed and analyzed in an effort to answer all research questions. Upon completion of this study the principal investigator will be able to determine the multidisciplinary team members' perceptions of occupational therapy services, whether they view occupational therapy to be a valuable service to students, and to determine if there is a need for further education regarding the roles and functions of occupational therapy services in a school-based setting.

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