

**Proceedings**

# **ISECON 2001**

**18th Annual  
Information Systems Education Conference**

**Information Systems Education -  
Technology in the 21st Century:  
Where Innovation and Information  
Converge**

Hyatt Regency Hotel  
Cincinnati, Ohio USA  
November 1--4, 2001

**Editors:**

Don Colton, Brigham Young University Hawaii  
Susan Feather, Pace University  
Michael Payne, Purdue University  
William Tastle, Ithaca College

© 2001 Foundation for Information Technology Education  
AITP: The Association of Information Technology Professionals



Foundation for  
Information Technology  
Education

ISECON 2001 is the eighteenth in an annual series of international conferences devoted to education in the field of Information Technology. Conferences such as this are possible only because of the continuing interest and support of the Information Systems educational community, expressed by their submission of high-quality papers and their attendance at the conference. The ISECON 2000 Conference Committee and sponsors gratefully acknowledge all the authors, session chairs, and other participants for contributing to the success of this conference.

ISECON (the Information Systems Education Conference) is sponsored by the Foundation for Information Technology Education. Additional support is provided by EDSIG (the AITP Special Interest Group for Education) and AITP (the Association for Information Technology Professionals). The conference has also received extensive support from the School of Computer Science and Information Systems at Pace University and the School of Computer and Information Sciences at the University of South Alabama.



# Table of Contents

Title Page .....	1
Sponsoring Organizations .....	2
Table of Contents .....	3
Colophon .....	3
ISECON 2001 Conference Committee .....	4
ISECON History .....	4
ISECON 2001 Chairman’s Welcome, Stuart Varden .....	5
EDSIG President’s Welcome, David Feinstein .....	6
Education Foundation President’s Welcome, Brian Reithel .....	7
Friday Afternoon Keynote Speaker, Don Gotterbarn .....	8
Saturday Awards Luncheon Speaker, John A. N. (JAN) Lee .....	9
Saturday Afternoon Special Speaker, Paul Gray .....	10
Educator of the Year, Herbert (Bart) Longenecker .....	11
Best Paper Award, Wendy Cukier, Denise Shortt, Irene Devine .....	11
Papers (Session, Title, Authors, Abstract) .....	12
Workshops .....	44
Keyword Index of Papers .....	46
Alphabetical List of Papers by Title .....	50
Papers by School .....	52
Papers by Author .....	53

## Colophon

The ISECON 2000 Proceedings were produced from author-provided source documents, predominantly in Microsoft Office (Word) format. Title, authorship, and abstract were collected into an Adobe PageMaker document. The predominant font is Times New Roman.

Paper numbering reflects the session number followed by a letter indicating position within the session, a is first, b is second, and so on.

The CD-ROM is the official proceedings, and contains the original author’s full text of each paper in .doc format (Microsoft Word). For maximum portability and interoperability across computing platforms, now and in the future, the papers were also converted into .txt format (ascii text), .ps format (PostScript), and .pdf format (Portable Document Format, read by Adobe Acrobat Reader). The CD-ROM was mastered on a Linux (Red Hat 7) workstation using the “cdrecord” suite of tools.

# ISECON 2001 Conference Committee

Conference Chair  
Stuart Varden  
Pace University  
svarden@pace.edu

Proceedings Chair  
Don Colton  
BYU Hawaii  
don@colton.byuh.edu

Web Development, Web Registration  
Keith Lynn  
University of South Alabama  
lynn@cis.usouthal.edu

Program Co-Chair  
Neelima Bhatnagar  
Univ. of Pittsburgh, Johnstown  
bhatnagr+@pitt.edu

Vendors Co-Chair (Publishers)  
Margaret Thomas  
Ohio University  
thomas@topdog.cs.ohiou.edu

Web Site Support  
Bruce White  
Quinnipiac University  
whiteb@pluto.dsu.edu

Program Co-Chair  
Chuck Woratschek  
Robert Morris College  
Woratsch@robert-morris.edu

Vendors Co-Chair (Non-Publishers)  
Anne Marie Smith  
La Salle University  
smitha@lasalle.edu

Registration Desk, Attendee Services  
Kathy Ford  
University of South Alabama  
ford@cis.usouthal.edu

Papers Chair  
Bill Tastle  
Ithaca College  
tastle@ithaca.edu

Awards Chair  
Buzz Hensel  
University of Texas Arlington  
hensel@uta.edu

Promotion  
Sharon Vest  
University of South Alabama  
vest@cis.usouthal.edu

Associate Papers Chair  
Susan Feather  
Pace University  
sfeather@pace.edu

Local Arrangements Chair  
Debbie Tesch  
Xavier University  
tesch@xu.edu

2002 Conference Chair  
David Zolzer  
Northwestern State University  
dzolzer@cp-tel.net

Associate Papers Chair  
Michael Payne  
Purdue University  
mjpayne@tech.purdue.edu

Finance & Administration  
David Feinstein  
University of South Alabama  
feinstein@cis.usouthal.edu

EF/ISECON Liaison  
Bill Reaugh  
EF Regent  
71524.3070@compuserve.com

## ISECON History

The first ISECON, titled as the "National Conference on Information Systems Education sponsored by the DPMA Education Foundation" was held from March 22-24, 1982 at the McCormick Inn in Chicago. Below is a complete list of all past ISECON years and locations.

1982	1st	Chicago, IL	1988	7th	Dallas, TX	1997	14th	Orlando, FL
1983	2nd	Baltimore, MD	1990	8th	Chicago, IL	1998	15th	San Antonio, TX
1984	3rd	Anaheim, CA	1992	9th	Nashville, TN	1999	16th	Chicago, IL
1985	4th	Houston, TX	1993	10th	Phoenix, AZ	2000	17th	Philadelphia, PA
1986	5th	Atlanta, GA	1994	11th	Louisville, KY	2001	18th	Cincinnati, OH
1987	6th	San Francisco, CA	1995	12th	Charlotte, NC	2002	19th	San Antonio, TX
			1996	13th	St. Louis, MO			

# ISECON 2001 Cincinnati

*WELCOME TO ISECON 2001*

## THE EIGHTEENTH ANNUAL CONFERENCE FOR INFORMATION SYSTEMS EDUCATORS

Dear Colleagues:

Welcome to ISECON 2001. This year brings the ISECON Conference to historic Cincinnati, the Queen City, along the Ohio River.

The conference offers over 110 presentations including 96 refereed papers, 5 workshops, and 4 panels. In addition to these activities, there is a program of dynamic and highly interesting invited speakers and “special feature” presentations that exemplify this year’s conference theme: Technology in the 21st Century — Where Innovation and Information Converge. And there are our usual status updates on important educational issues, such as IS program accreditation and IS model curricula.

None of this would have been possible without the outstanding effort put forth by this year’s ISECON 2001 Organizing Committee. Our Proceedings team, Dr. William Tastle, Ithaca College, our Papers Chair, Dr. Susan Feather, Pace University, and Dr. Michael Payne, Purdue University, Associate Papers Chairs, has significantly improved the paper quality through their hard work. And Dr. Don Colton from Brigham Young University – Hawaii Campus, our Proceedings Chair and Editor, has done his usual outstanding job. Also, our Program Co-Chairs, Prof. Neelima Bhatnagar, University of Pittsburgh – Johnstown and Dr. Charles Woratscheck, Robert Morris College, have done a wonderful job under trying circumstances. And once again we have strong vendor participation due to the worthy efforts of Prof. Margaret Thomas, Ohio University and Anne Marie Smith, La Salle University.

And the support and guidance of the Education Foundation through this year’s President, Dr. Brian Reithel, Director, William Reaugh, and President-Elect of AITP, Kevin Jetton, and has been very helpful. Just as instrumental has been the work and support of the EDSIG Board. Finally, the work of the folks at the University of South Alabama under the leadership of EDSIG President, Dr. David Feinstein, has been indispensable.

But most of all, I wish to express my gratitude to you, the conference participants and attendees, who put aside your reluctance to travel during this most stressful time in the nation’s history. I realize that you most likely have undergone inconvenience and some hardship to be here. The ISECON team and I salute you.

Stuart A. Varden, Ed.D.  
Pace University  
ISECON 2001 Conference Chair

# ISECON 2001 Cincinnati

## *WELCOME TO ISECON 2001* The Eighteenth Annual Conference for Information Systems Educators

**Dear Colleagues:**

As I write this welcome six weeks before we meet in the Queen City of Cincinnati, I am still very close to the horrific events of September 11. All of us have been touched by the events of that day. I am convinced that it is through the kind of interactions that we can have at meetings such as ISECON where we learn about the strengths of our diversity that we can, in some small way, make the world a better and safer place for all.

With that said, welcome to ISECON. The theme of this year's annual conference is "Information Systems Education, Technology in the 21<sup>st</sup> Century: Where Innovation and Information Converge." For the eighteenth time we as information systems educators are gathered together to share ideas to help make our teaching better. As you look through the *Proceedings* you will see a superb set of thoughtful contributions to this year's conference. Your greatest challenge will be figuring out which sessions to attend. The general sessions have outstanding speakers who I am sure will stimulate much discussion. Possibly more important is the opportunity to network with other IS educators during the breaks and social functions.

EDSIG is pleased to co-sponsor this event with the AITP's Education Foundation. EDSIG continues to grow and add activities and services. The past few years saw many accomplishments. In addition to ISECON, our journal, *Journal of Information Systems Education (JISE)* provides a stimulating forum for the publication and exchange of ideas of the community of IS educators. Plans for continued expansion are underway. Contact the editor, Al Harris (harrisal@appstate.edu), for more information.

As part of ISECON EDSIG has the distinct privilege of recognizing an outstanding IS educator each year and awarding that individual the Educator of the Year citation. The list of recipients reads like a "Who's Who" in IS education. I take particular pleasure this year since the recipient is an individual I have worked closely with for over two decades. Herbert E. Longenecker, Jr. (Bart) certainly is a worthy addition to this highly respected group.

Plans are already being made for the conference in 2002 when we will return to San Antonio. Dave Zolzer (dzolzer@nsula.edu) will chair and I am sure he will be looking for volunteers and contributors. For those of you who were there a few years ago and remember the floods, we have a guarantee that the weather will be sunny and clear.

EDSIG is a volunteer organization. Our strength is in our membership and our volunteers. I encourage all of you to become more acquainted with our organization and help further IS education. Visit our website at [www.aitp-edsig.org](http://www.aitp-edsig.org) to learn more about us.

**David L. Feinstein**  
President, EDSIG



## **Foundation for Information Technology Education**

**315 South Northwest Highway, Suite 200  
Park Ridge, IL 60068-4278  
www.edfoundation.org**

Dear Colleague:

The Information Systems Education Conference, better known as ISECON, is unique among the many conferences that a faculty member interested in information technology can attend, because of its long history, its compelling sessions, and the powerful camaraderie shared by those who attend. Each year, we are given the chance to come together and learn from each other.

This week, thanks to Stuart Varden's capable leadership, we are able to gather together once again to explore the frontiers of information systems education. We are grateful to the large team of folks who have worked so hard to bring this event into being. In particular, we deeply appreciate the efforts of the many authors, reviewers, presenters, panelists, workshop instructors, keynote speakers and the ever-faithful members of the ISECON Committee. We are especially indebted to those who have worked to handle local arrangements, logistics, registration, the ISECON website, and the myriad assortment of other activities needed to make this national conference function so smoothly.

Anyone who has ever worked on the proceedings of a conference of this magnitude can offer powerful testimony regarding the sheer scale of the effort. I would like to offer a special note of thanks to Bill Tastle, Susan Feather, Michael Payne and Don Colton for their willingness to do the hard work needed to attract the scholarly works to be presented at ISECON 2001 and to assemble them into a superb conference and *Proceedings*.

The Foundation for Information Technology Education exists to advance the state of education and practice in the Information Technology profession. We are fortunate to have the Education Special Interest Group (EDSIG) of the Association of Information Technology Professionals (AITP) as our partner in developing the ISECON meeting each year. Through this meeting, we hope to offer a forum in which information technology educators can come together, learn, and return home to the classroom to shape the skills, knowledge and character of tomorrow's information technology professionals.

On behalf of the Board of Regents of the Foundation for Information Technology Education, I would like to offer our profound gratitude to those who have participated in our efforts to build on the unique partnership that draws on the combined strengths of EF, EDSIG, and AITP. In particular, a note of thanks goes to EDSIG President David Feinstein, AITP President Nita Adams, AITP Executive Vice President Kevin Jetton, and our fellow EF Regents who worked with the ISECON 2001 team, William Reaugh and William Lackey.

We hope that you find ISECON 2001 to be a valuable networking and professional development experience! We also hope that you will join us in the future at ISECON 2002 and beyond.

Sincerely,

Brian J. Reithel, Ph.D., CDP  
President  
Foundation for Information Technology Education

## **Friday Afternoon Keynote Speaker**

### ***Don Gotterbarn***

***Professor  
Computer and Information Sciences  
East Tennessee State University***

***Director  
Software Engineering Ethics Research Institute***

***“Next Generation Project Management: A New Process for Avoiding Project Failure”***

Educated at the University of Rochester, Dr. Gotterbarn taught for several years at such schools as the University of Southern California and Dickinson College. He also worked as a computer consultant. Among the software projects he was responsible for several database systems for the U.S. Navy and for the Saudi Arabian Navy, and an interactive crime-reporting database. He has also worked on the certification of software for vote counting machines and missile defense systems.

He is currently at East Tennessee State University where he is the director of the Software Engineering Ethics Research Institute and teaches computer ethics, software engineering and software project management. He is also a visiting professor in England at the Centre for Computing and Social Responsibility and during the summer of 1999 was a visiting research fellow in Australia.

He lectures internationally on the impacts of software engineering and related technologies on society. He visits colleges around the United States as an ACM Distinguished National Lecturer. His research has appeared in more than a dozen professional journals and he has written several encyclopedia articles. His technical work includes funded research on performance prediction for a distributed Ada closure, object-oriented testing, software engineering education and computer ethics.

He is the Chair of the ACM Committee on Professional Ethics, was Vice Chair of the ACM Special Interest Group on Computers and Society, chair of the International Advisory Board of the Australian Computer Ethics Institute, chaired the joint IEEE/ACM committee Software Engineering Ethics and Professional Practice, chaired the Software Engineering Ethics Project, is a member of the Australian Computer Society Ethics Task Force and a member of the executive committee of the International Society on Ethics of Information Technology.



# Saturday Awards Luncheon Speaker

## *John A. N. (JAN) Lee*

*Professor of Computer Science, Virginia Polytechnic  
Member, Center for the Study of Science in Society*

### *“The Great Myths of Computer History”*

John A. N. (JAN) Lee has had two major careers - in Civil Engineering and in Computer Science. In the 1950's and 60's he was a practicing, professional civil engineer, serving on the teams which created the designs for the Medway Bridge, just outside London, England, which (still) holds the record for the longest concrete span, the Firth of Forth Road Bridge, which was the first bridge in the world to span a clear mile, and the now well-known Sydney Opera House in Australia. Based in these experiences which involved the use of computers, he initiated computer center and computer classes at Queen's University in Kingston Ontario, and, in cooperation with colleagues from the University of Toronto and Dupont, developed first highly efficient FORTRAN compiling system for IBM 1620 (KINGSTRAN), a system which eventually was modified for the IBM System/360 and named WATFOR. Moving to the USA in 1964 at the University of Massachusetts, he initiated the Computer Science program, was the first department head, and in the meantime developed compiler software for first time-sharing system for CDC machines (BASIC, FORTRAN, APL). He wrote the first US textbook on compiler development - *The Anatomy of a Compiler* (1967) and first textbook on formal languages *Computer Semantics* (1971). He moved to Virginia Tech in 1974 to assist in the development of graduate program, and extend the undergraduate program. He has served as the chairman of the Undergraduate Program for many years, and has developed many new courses including “Professionalism in Computing”, the WWW site for which is shared by many institutions.

Throughout these academic appointments he represented the Association for Computing Machinery (ACM) on American National Standards Committee X3 for 20 years, leading the development of Numeric Representation and BASIC standards; he participated in the standardization of PL/I, and oversaw standardization of Ada for the Department of Defense. He received a Certificate of Appreciation from the Computer and Business Equipment Manufacturers Association in October 1971, and a Certificate of Distinguished Service, from the US Department of Defense in October 1983 for his work on the standardization of the programming language Ada. He was designated a “Pioneer of Information Processing Standards”, at the 25th Anniversary Meeting of the Accredited Standards Committee X3, in 1986.

Within ACM he served as the Chair or member of the standards committee for over 20 years, was elected as an ACM Council member, and Vice President. He received the ACM Outstanding Contribution Award in 1981, and Certificates of Recognition of Service in 1980, 1985, 1986, and 1989. In 1993 he was named as the recipient of the Distinguished Service Award by the Association for Computing Machinery for his service to ACM and the computer community through his innovative contributions to computing standards, the history of computing, and the development of professionalism. He was named as a Fellow of the Association for Computing Machinery in 1993.

Always interested in history, he served on the organizing committee for the 1978 History of Programming Languages Conference, and, with support from IBM, organized the 1982 25th Anniversary of the programming language FORTRAN. From its inception Dr. Lee served as an Editor and eventually as the Editor-in-Chief of the *Annals of the History of Computing*, and was General Chairman of the 1993 Second History of Programming Languages Conference. Taking over as the Editor-in-Chief of the *Annals of the History of Computing* in 1987 he turned a near bankrupt activity into a strong on-going project, which is very much akin to a distributed Research Center rather than just a journal. The journal was taken over by the IEEE Computer Society in 1992 and he completed two terms as IEEE Editor-in-Chief in 1996. In 1992 he was appointed as the chair of the International Federation for Information Processing Working Group on the History of Information Processing (WG 9.7) and was the chairman of the IEEE Computer Society History Committee (1992-94). He was the US (FOCUS) Representative to, and secretary of, IFIP Technical Committee 9 (Social Impact of Computers) for six years, and subsequently represented the IEEE Computer Society. He served as chair of the Computer Society Pioneer Award Subcommittee (1992-1999), was a member of the Board of Governors (1995-1997) and was the IEEE Computer Society Vice President for Membership (1995-1996). He is currently the IEEE Computer Society Representative to the IFIP General Assembly.

## Saturday Afternoon Special Speaker

### *Paul Gray*

*Professor and Founding Chair of Information Science  
Claremont Graduate University*

#### *“Teaching the Data Warehousing Course”*

Paul Gray is Professor and Founding Chair of Information Science at Claremont Graduate University. Paul was instrumental in bringing one of the thirteen IBM \$2 million grants to Claremont in 1986, which established Claremont as one of the leading academic institutions in information systems.

Starting in 1983, Paul Gray created, developed and built one of the largest PhD producing Information Systems programs in the world. Claremont graduated its first PhD in 1991. Since then, the school has produced 44 PhDs. During the 1990s, Claremont was the largest producer of PhDs in IS in the world, far exceeding the production of both the University of Minnesota and the University of Arizona. The size of the PhD program allows Claremont to offer five required doctoral-only courses in IS each year, which makes the program a true PhD program in IS rather than offering additional masters or MBA courses. At the masters level, Claremont offers one-year and two-year MS in IS degrees as well as an MS in Electronic Commerce. Currently, the Information Science program has 130 graduate students majoring in Information Systems, of whom approximately 50 are PhD students.

By keeping Information Science separate from the Drucker Management Center (Claremont’s Business School) he was able to create a School that concentrates only in IS, and is able to offer specialized courses that reflect current trends. For example, this year, courses in ERP, Knowledge Management, Data Warehousing, and Business Intelligence are being offered.

Professor Paul Gray has made outstanding national-level contributions to the field of Information Systems. Paul was co-chair of the joint ACM-AIS Committee on the MSIS degree. The work of this committee, which was published in January 2000, provided the first revision in eighteen years of the standards for the MS degree in IS. It makes the MS program relevant to the 21st century. He is the first editor of the Communications of AIS and a fellow of the Association for Information Systems. He was president of the Institute of Management Sciences (now INFORMS) for 1992-93, and was formerly president-elect, vice president and secretary of the Institute.

He specializes in decision support systems, knowledge management, electronic commerce and data warehousing. He is on the editorial board of several journals. He is the author of over 115 journal articles and author or editor of 12 books, most recently Decision Support in the Data Warehouse with H.J. Watson.

Professor Gray has both industrial and educational experience. He worked for 18 years in research and development organizations, including nine years at SRI International. He is living proof that you can complete a PhD at Stanford while working full time. Since he completed his PhD in 1968, he has been a professor at a number of Universities including Stanford University, Georgia Institute of Technology, University of Southern California, Southern Methodist University, and, for the last 17 years at Claremont. He served as Department Chair at USC, at SMU, and at Claremont.

# Educator of the Year 2001

## Bart Longenecker



Dr. Herbert (Bart) Longenecker, a Professor of Information Systems at the University of South Alabama, has for many years been instrumental in the development and dissemination of Information Systems Model Curricula. His tireless efforts have had a board and lasting positive impact on the quality and direction of Information Systems Education throughout the nation and world. It is with pleasure that we are finally able to honor him as the 2002 Information Systems Educator of the Year.

---

Year	Educator of the Year
1985	Philip Gensler
1986	Joyce Currie Little
1987	Jerry Wagner
1993	Gordon Davis
1994	Dan Cougar
1995	Andy Whinston
1996	Milt Jenkins
1997	Jay Nunamaker
1998	Herman "Hoppy" Hoplin
1999	John T. Gorgone
2000	Paul Gray
2001	Bart Longenecker

# Best Paper 2001

Paper: 06a, Track: Women, Minorities

## Gender and Information Technology: Implications of Definitions

### Wendy Cukier

School of Information Technology Management  
Ryerson University  
Toronto, Ontario, M5B 2K3, Canada

### Denise Shortt

School of Information Technology Management  
Ryerson University  
Toronto, Ontario, M5B 2K3, Canada

### Irene Devine

School of Information Technology Management  
Ryerson University  
Toronto, Ontario, M5B 2K3, Canada

### Abstract

In this paper, we examine implications of definitions of information technology to women's participation in the industry and in academe. This paper is exploratory only, based on a review of selected government and industry reports and data related to IT education and the profession. However, we argue that there is evidence to suggest that the discourse related to information technology has the effect of excluding women and multi-disciplinary perspectives. On the one hand, we argue that there is considerable evidence that the IT industry and skills it demands are multi-disciplinary and that many people working in the industry, particularly women, come from a variety of disciplines. On the other hand, despite the evidence of the multi-dimensional nature of IT, the impact of convergence, the importance of matching IT solutions to user needs and so on, a very narrow definition of IT dominates the discourse. This definition equates IT and IT professionals with computer science and engineering disciplines, which are predominantly male. The result, then, of this narrow definition is to marginalize women and their contributions. This is a pattern that has been observed with the development of other disciplines, such as medicine. Not only does the narrowing of the definition of Information Technology tend to exclude and devalue the contribution of women, but it also results in the marginalization of other disciplines, which would bring more neutral or critical perspectives to bear on technology. Thus, the exclusion of multiple disciplines and women may contribute to poor technology decision making at the societal and organizational level.

## **Paper: 01a**

**Track: Industry/College**

### **Title: Industry and the University: Partners in Technology Transfer**

**Author: David C. Gibbs**

Mathematics and Computing  
University of Wisconsin-Stevens Point  
Stevens Point, WI 54481, USA  
dgibbs@uwsp.edu

**Author: Daniel V. Goulet**

Mathematics and Computing  
University of Wisconsin-Stevens Point  
Stevens Point, WI 54481, USA  
dgoulet@uwsp.edu

#### **Abstract**

Linking a university's information systems resources with local businesses provides a win-win scenario for improving the technological life of both. Partners in Technology Transfer, residing at the intersection of several traditional roles of the university, establishes this connection using the ideas of virtual workgroups, workshops/courses, and projects to bring the parties together. The result is an environment for outreach education in technology, professional certification for workers in technology, and information systems consulting to the business community.

## **Paper: 01b**

**Track: Two Year/CC**

### **Title: Program Issues Facing the Two-Year and Community College**

**Author: Kristy Clark**

Department of Information Technology  
Crafton Hills College  
Yucaipa, CA 92399, USA  
kjclark6@hotmail.com

#### **Abstract**

The two-year and community college information technology department faces an environment that is different from the typical four-year school. Our students come to us with widely differing goals and starting skills than do the four-year students who are working towards a bachelor's degree and have relatively close skill levels due to entrance requirements. Furthermore, we often work with lower levels of funding, and various government sponsored economic development and workforce-training programs that limit what we can do. Most current educational

literature approaches curriculum and program development from a four-year frame of reference. This session will address some of the issues facing two-year schools, as well as possible approaches that can be taken.

## **Paper: 02a**

**Track: Human Factors**

### **Title: Interface Design: A Focus on Cognitive Science**

**Author: Antonio Drommi**

College of Business Administration  
University of Detroit Mercy  
Detroit, MI 48219, USA

**Author: Gregory W. Ulferts**

College of Business Administration  
University of Detroit Mercy  
Detroit, MI 48219, USA

**Author: Dan Shoemaker**

College of Business Administration  
University of Detroit Mercy  
Detroit, MI 48219, USA

#### **Abstract**

This paper studies the issue of cognitive load theory and its implications to teaching interface design principles in a GUI or Interface Design course. The quality of interface design will increase effectiveness of human performance if working memory is emphasized. Cognitive science research in cognitive load raises interesting questions of an individual's memory load and its relevance to computer based models. It describes structures of information processing from long term memory, which stores knowledge and skills to using working memory that enable the individual to perform tasks that are embedded in a computer interface. This review focuses on the concept of cognitive load theory based on research by John Sweller and others in the field that brought this theory to the forefront. The issues of split attention and redundancy effects from information, spatial learning in real life situations versus computer simulation and exploration space control in reference to computer based systems is reviewed for enriching the interface design curriculum. This paper will review the issues of cognitive load theory and its relevance for developing computer based interface systems and models.

**Paper: 02b**  
**Track: Human Factors**

**Title: Using Surveillance Software as an HCI Tool**

**Author: Blaise W. Liffick**  
Department of Computer Science  
Millersville University  
Millersville, PA 17551, USA

**Author: Laura K. Yohe**  
Department of Computer Science  
Millersville University  
Millersville, PA 17551, USA

**Abstract**

Laboratory equipment (both hardware and software) for conducting experiments, usability studies, and field studies in the area of human-computer interaction (HCI) is typically complex, bulky, expensive, and intrusive. Recent strides in the development of surveillance software offer the prospect of a non-invasive, inexpensive, and largely automatic way of capturing data from user activities that could be useful to HCI professionals, researchers, and educators. This project investigates this possibility.

**Paper: 03a (Panel)**  
**Track: Human Factors**

**Title: History of Information Systems**

**Panelist: John Impagliazzo**  
Department of Computer Science  
Hofstra University  
Hempstead, New York 11549-1030, USA  
cscjzi@Hofstra.edu

**Panelist: Elias Awad**  
University of Virginia  
Virginia, USA

**Panelist: John A. N. Lee**  
Virginia Tech  
Virginia, USA

**Panelist: Joyce Currie Little**  
Towson University

**Panelist: George Kasper**  
University of Richmond

**Panelist: Janice Sipior**  
Villanova University

**Panelist: Jerry Wagner**  
California State Polytechnic at San Bernadino  
San Bernadino, California, USA

**Abstract**

Computing history has enjoyed a new resurgence over the past decade. Several organizations such as the Virtual Museum of Computing at Oxford University, the Computer Museum History Center in California, and the History Center and the Annals of the History of Computing of the Institute of Electrical and Electronic Engineers (IEEE) have raised the importance of computing history. Of particular note, the joint task group (TC3 and WG9.7) of the International Federation for Information Processing (IFIP) has developed the work "History in the Computing Curriculum," which was published in the Annals 1999 January. There is a need for greater awareness of computing history. In an academic setting, history adds new dimensions to courses, encourages students to reflect on past events, and generates enthusiasm among computing scholars. In an industrial setting, practitioners can benefit from the study of computing history by being aware of past mistakes, misconceptions, and successes. From a cultural standpoint, history broadens one's perspective on the field and allows individuals explore the inner thinking of people and the results they produced. From a practical standpoint, history enables individuals and enterprises to learn from the events of the past and to improve on experiences. These views are necessary to create a well-informed computing professional. This proposal is to present a 90-minute panel on the historical dynamics that have shaped information systems. The panel at will feature known computing professionals who can bring to light some of the highlights of information systems and some who have been part of that history. Panelists will make presentations on the computing history of their respective areas. Audience participation and interaction are most welcome.

**Paper: 04a**  
**Track: Issues & Trends**

**Title: Different Approaches in the Teaching of Information Systems Security**

**Author: William Yurcik**  
Department of Applied Computer Science  
Illinois State University  
Normal, IL 61790, USA

**Author: David Doss**

Department of Applied Computer Science  
Illinois State University  
Normal, IL 61790, USA

**Abstract**

We describe innovative new approaches to teaching information systems security that may be used individually or in combination. Information system security is a difficult course to teach and these approaches provide resources to both novice and experienced educators to enhance their courses. We conclude that more educational development work needs to be done to uniformly improve information systems security education to counterbalance pressures for technical training over fundamental concepts and this paper provides a start by synthesizing the current state-of-the-art.

**Paper: 04b****Track: Issues & Trends****Title: The Beginning of a New Discipline: Undergraduate Telecommunications Programs in the USA****Author: William Yurcik**

Department of Applied Computer Science  
Illinois State University  
Normal, IL 61790, USA

**Author: David Doss**

Department of Applied Computer Science  
Illinois State University  
Normal, IL 61790, USA

**Abstract**

A new academic discipline is evolving from within Information Systems Programs. In this paper we present a description and comparison of fledgling undergraduate Telecommunications degree programs in the United States. We conclude that such programs have common characteristics and that this may eventually lead to official accreditation as is currently being studied by ABET.

**Paper: 05a****Track: Student/Faculty****Title: A Study of the Proliferation of Computer Crimes****Author: Lauren Smith**

Computer Information Systems  
Southern University at New Orleans  
New Orleans, LA 70126, USA

**Author: Kai S. Koong**

Computer Information Systems  
Southern University at New Orleans  
New Orleans, LA 70126, USA

**Author: Lai C. Liu**

Computer Information Systems  
Southern University at New Orleans  
New Orleans, LA 70126, USA

**Author: Robert Rottman**

Kentucky State University  
Frankfort, KY 40601, USA

**Abstract**

The proliferation of computer crimes is a critical management issue for companies and organizations around the globe. This study examines the monetary losses of 13 categories of computer crimes for the period 1997 through 2000 as reported by the Computer Security Institute (CSI) and the Federal Bureau of Investigation (FBI). Specifically, this research examines the trend, magnitude, and direction for each of the different categories of computer crime. In addition, the total cost of computer crime over a four-year period was analyzed. The outcomes of this research should be most helpful to information systems administrators who are responsible for formulating information systems control strategies. Network and security administrators, Webmasters, and law enforcement officers of federal and state agencies such as the Federal Bureau of Investigation (FBI), the Central Intelligence Agency (CIA), and the Telecommunications Commission of the various states will find the analysis contained in this report insightful. Individuals involved with analyzing and securing corporate information resources such as computer consultants, systems analysts, systems developers, software engineers, and security experts will find the results meaningful. Educators and security scholars will find the outcomes reported in this study useful for the development of instructional material as well as the formulation of training strategies.

**Paper: 05b****Track: Student/Faculty****Title: A Longitudinal Study Of Gender And Wage Differences Among Computer Technology Professionals****Author: Tonya Antoine**

Computer Information Systems  
Southern University at New Orleans  
New Orleans, LA 70126, USA

**Author: Melanie Gordon**

Computer Information Systems  
Southern University at New Orleans  
New Orleans, LA 70126, USA

**Author: Ulrike Lang**

Computer Information Systems  
Southern University at New Orleans  
New Orleans, LA 70126, USA

**Author: Kai S. Koong**

Computer Information Systems  
Southern University at New Orleans  
New Orleans, LA 70126, USA

**Author: Lai C. Liu**

Computer Information Systems  
Southern University at New Orleans  
New Orleans, LA 70126, USA

**Abstract**

In the second half of the 1990s, the U.S. economy experienced unprecedented growth. With the shortage of qualified workers in the field of computing technology, most of the professionals in this sector were able to obtain substantially higher than average salaries and compensation packages. However, several studies have indicated that despite the unparalleled demand for information technology workers and a rise in the number of women entering the computer field, male professionals in this sector are still receiving higher salaries, bonuses, and raises than their female counterparts. This study examines the effect of gender on the salary earnings of men and women in the information technology sector. Data for this study were obtained from the United States Bureau of Labor Statistics and they cover the period 1991 through 2000. Specifically, this study should be of interest to all categories of information technology professionals, human resource managers, labor attorneys, federal and state policy makers, equity experts, and gender researchers. Educators, placement counselors, and students selecting a program of study or entering the workforce will find this study to be particularly valuable.

**Paper: 06a**

**Track: Women & Minorities**

**Title: Gender and Information Technology:  
Implications of Definitions**

**Author: Wendy Cukier**

School of Information Technology Management  
Ryerson University  
Toronto, Ontario, M5B 2K3, Canada

**Author: Denise Shortt**

School of Information Technology Management  
Ryerson University  
Toronto, Ontario, M5B 2K3, Canada

**Author: Irene Devine**

School of Information Technology Management  
Ryerson University  
Toronto, Ontario, M5B 2K3, Canada

**Abstract**

In this paper, we examine implications of definitions of information technology to women's participation in the industry and in academe. This paper is exploratory only, based on a review of selected government and industry reports and data related to IT education and the profession. However, we argue that there is evidence to suggest that the discourse related to information technology has the effect of excluding women and multi-disciplinary perspectives. On the one hand, we argue that there is considerable evidence that the IT industry and skills it demands are multi-disciplinary and that many people working in the industry, particularly women, come from a variety of disciplines. On the other hand, despite the evidence of the multi-dimensional nature of IT, the impact of convergence, the importance of matching IT solutions to user needs and so on, a very narrow definition of IT dominates the discourse. This definition equates IT and IT professionals with computer science and engineering disciplines, which are predominately male. The result, then, of this narrow definition is to marginalize women and their contributions. This is a pattern that has been observed with the development of other disciplines, such as medicine. Not only does the narrowing of the definition of Information Technology tend to exclude and devalue the contribution of women, but it also results in the marginalization of other disciplines, which would bring more neutral or critical perspectives to bear on technology. Thus, the exclusion of multiple disciplines and women may contribute to poor technology decision making at the societal and organizational level.

**Paper: 06b**

**Track: Women & Minorities**

**Title: Encouraging Undergraduate Women In  
Computing: A Preliminary Study**

**Author: Saralyn Grenga Mathis**

Computer Science & Information Systems  
The Richard Stockton College of New Jersey  
Pomona, NJ, 08240-0195, USA

**Abstract**

This paper reports the results of a preliminary study that

introduced a first-year general studies seminar designed to encourage interested women to rise above the obstacles to a computing major. The literature informed the design of the course's structure and content. The literature suggests that women need a more realistic perception of computing as an area of study and work. Women need more experience to develop their interest in computing and to enhance their computer skill confidence. Women would benefit from a collaborative learning environment. While the students in this course did not change, significantly, their computer attitudes, they improved their perceptions of their computer skill proficiency in several areas.

### **Paper: 06c**

**Track: Women & Minorities**

**Title: The Invisible Society of Women in Technology: Young Women's Reluctance to Enter the Technology Field**

**Author: Barbara J. Nicolai**

Information Systems & Computer Programming  
Purdue University Calumet  
Hammond, IN 46323, USA  
bnicolai@calumet.purdue.edu

#### **Abstract**

In April of 2000 the American Association of University Women (AAUW) published a startling report about how our young women are not only falling through the cracks of the information superhighway, but are not even interested in the technology field. The worry has been that our girls are computer-phobic. What the Commission on Technology, Gender, and Teacher Education discovered is that girls are computer reticent. The Executive Summary of TECH-SAVVY-Educating Girls in the New Computer Age focused on key themes to investigate and offered suggestions for creating mentorship programs and educational curricula that would address these issues. With the creation of programs that offer different strategies to attract more females to the technology field, the issue of our young women falling through the cracks of the information superhighway will at least be addressed. We need cooperation between academic institutions, middle, high school and university, and our corporate world. Mentorship programs, leadership workshops, and committed leaders need to take action now to stop the trend that's not only lowering the glass ceiling, but also once again creating an invisible society of women.

### **Paper: 07a**

**Track: Issues & Trends**

**Title: Computer Literacy**

**Author: Neelima Bhatnagar**

Department of Management  
University of Pittsburgh at Johnstown  
Johnstown, PA 15904, USA  
bhatnagr@pitt.edu

**Author: Lee E. Weyant**

College of Business  
Eastern New Mexico University  
Portales, NM 81302, USA  
Lee.weyant@enmu.edu

#### **Abstract**

Computer literacy continues to be an issue that very much affects Information Systems education. This paper serves as an exploratory study that tries to answer the question as to whether or not business schools, including those with AACSB accreditation, must continue to offer computer literacy courses. Specifically, the paper addresses the question by considering the existence of a comprehensive definition for computer literacy and the relationship between students' perceptions of their computer skills and demonstrated performance. Finally, the paper sets the stage for future research concerning the curriculum design of an undergraduate introductory course in Information Systems.

### **Paper: 07b**

**Track: Issues & Trends**

**Title: Critical Success Factors for Studio-based Teaching**

**Author: Christabel Gonsalvez**

School of Information Management and Systems  
Monash University  
Melbourne, Australia

**Author: Martin Atchison**

School of Information Management and Systems  
Monash University  
Melbourne, Australia

#### **Abstract**

This paper summarizes recent experiences with the use of studio-based teaching in two IT-based courses. We review key aspects of our experience of implementing studios and highlight five areas, which we have found to be crucial to the success of the studio program. For each of these areas we identify the main objectives, which we hoped to achieve and briefly describe the lessons we have learned to date.

### **Paper: 07c**

**Track: Issues & Trends**



## **Title: What's Wrong with Napster? A Study of Student Attitudes on Downloading Music and Pirating Software**

**Author: Robert M. Siegfried**

Department of Mathematics and Computer Science  
Adelphi University  
Garden City, NY 11530, USA  
siegfrir@panther.adelphi.edu

### **Abstract**

Software piracy is older than the PC and has been the subject of several studies, which have found it to be a widespread phenomenon in general, and among university students in particular. The author replicates an earlier study done by Cohen and Cornwell a decade ago, adding questions about downloading music from the Internet. The survey includes responses from 224 students in entry-level courses at two schools, a nondenominational suburban university and a Catholic urban college with similar student profiles. The study found that students generally felt that copying commercial software and downloading music from the Internet was acceptable and that there was no significant correlation between student attitudes and their school's religious affiliation or lack thereof. Finally, the reasons for these attitudes are discussed as well as what colleges can do to correct the situation.

### **Paper: 08a**

**Track: IS Curriculum**

## **Title: A Web-based Quiz Generation Tool Using Active Server Pages**

**Author: Gerald F. Braun**

Department of Information Systems  
Xavier University  
Cincinnati, OH 45207, USA  
braun@xu.edu

**Author: Debbie B. Tesch**

Department of Information Systems  
Xavier University  
Cincinnati, OH 45207, USA  
tesch@xu.edu

**Author: Brian Depinet**

Xavier University  
Cincinnati, OH 45207, USA

### **Abstract**

With the growing popularity of the virtual classroom and student access to computers in the classroom, electronic

testing is becoming more common. This paper describes a custom-developed Web-based quiz generation tool that uses Active Server Pages to create multiple-choice exams. The quiz generation tool is proposed as an alternative to assessment products offered with textbook adoptions or as available components of major Web course software. Students take exams using a standard browser. Faculty administer exams and generate reports through a Web browser. The paper describes objectives and procedures for installing and administering the quiz generator.

### **Paper: 08b**

**Track: IS Curriculum**

## **Title: Teaching Data Communications Using Cisco Networking Academy's Curriculum**

**Author: J. Art Gowan**

Department of Information Systems and Operations Mgt  
University of North Carolina at Wilmington  
Wilmington, NC 28403-5611, USA

### **Abstract**

A program that should be considered closely when looking at curriculum for teaching a course in data communications is Cisco's Networking Academy Program. The curriculum is entirely online, web-based, with substantial online support features for both faculty and students. The content of the first semester is basic data communications theory. The content of the subsequent semesters is more Cisco specific. A major strength of the curriculum is the numerous hands-on labs that bring the theory to life through application. It also provides the foundation for students who may wish to continue the Cisco-based training and become a Cisco Certified Network Administrator (CCNA). The curriculum can be effectively used to teach data communications at the university level. A general description of how it is used in an undergraduate, information systems program is provided.

### **Paper: 08c**

**Track: IS Curriculum**

## **Title: Web Development in a Server-Centric Environment Using Java Server Pages (JSP)**

**Author: John D. Haney**

College of Business Administration  
Northern Arizona University  
Flagstaff, AZ 86011, USA

**Author: Craig A. VanLengen**

College of Business Administration  
Northern Arizona University  
Flagstaff, AZ 86011, USA

## **Abstract**

The development of interactive Web page applications, where data is extracted from a database or a database is updated, can be a tedious process. Several options are available. The preference for this study is Java Server Pages (JSP). The fundamental processes for interactive Web page development are - querying from a database, adding a row to a database table, changing the fields within a row, or deleting a row from a database table. These processes form the foundation for any type of database interaction. The scripting language used for Java Server Pages is Java and the interaction with the database is done with Structured Query Language (SQL) against an Oracle database. In each of these processes a connection must be made to the database. A Java Database Connectivity (JDBC) connection to Open Database Connectivity (ODBC) connection is used since the Jakarta Java Web Server is used which runs on Internet Information Server (IIS) and NT. In the case of the query, where information is extracted from the database and placed into a table on the web page, only one Web page is required. For adding a record, changing a record, or deleting a record two Web pages are required. The first page contains a form with objects, which are posted to the second JSP page. The second JSP page then, by using SQL, inserts a record, modifies a record or deletes a record.

## **Paper: 09a**

### **Track: Leading Edge**

### **Title: Towards a Learning Organization Model for Knowledge Synthesis: An IS Perspective**

#### **Author: Kam Hou Vat**

Faculty of Science & Technology  
University of Macau  
Macau  
fstkhv@umac.mo

## **Abstract**

This paper investigates the idea of knowledge synthesis appropriate to the context of a learning organization (LO) from an information system (IS) perspective. Specifically, we discuss the process for IS architectures and requirements analysis, applicable in the area of knowledge development and transfer within an organization. We conceive the core of a learning organization as composed of numerous information systems for different functionality, collectively known as the learning organization information system (LOIS). The particular LOIS subsystem supporting specific knowledge resources is constituted by organizational activities characterized through their respective knowledge work. To enable an organization to leverage on the intellectual assets behind those activities, we consider the idea of organizational memory as an important constituent of an organization's

knowledge infrastructure. We then trace our conception of IS architectures according to the specific requirements from these learning activities. In particular, we will investigate the case of a university as a learning organization together with its various requirements for knowledge synthesis. The paper concludes by outlining our LOIS organizational components for investigation as an expression of our blueprints for knowledge solutions.

## **Paper: 10a**

### **Track: Internet Delivery**

### **Title: Online Teaching: A Faculty Perspective**

#### **Author: Samuel Abraham**

Computer Information Systems Department  
Siena Heights University  
Adrian, MI 49221, USA  
sam@sienahts.edu

## **Abstract**

In recent years Internet/Web based online teaching/learning has grown substantially. Institutions of higher learning are eager to offer online classes and are often asking on-ground faculty members to teach online classes even without any proper training. Many faculty members who have never taught online classes are very apprehensive about the possibility of teaching online classes and are sometimes questioning the validity, and the appropriateness of such classes. If a course is well designed and carefully implemented, online instruction can provide an effective educational environment and can be an enjoyable experience for both students and instructor, particularly if the students are motivated and self-disciplined and the instructor maintains continuous interaction with them (Cooper 1999). The author has been teaching online classes for the last three years in various institutions (national, regional, and local) using web-based tools. This paper addresses some of the lessons learned during this period of time and then provides some suggestions to improve online teaching. A web-based online class will be used to discuss the class structure, course delivery, course management, and student assessment.

## **Paper: 10b**

### **Track: Internet Delivery**

### **Title: Combining Modalities in a Single Distance Education Course**

#### **Author: Cindy Crowder**

Industrial Technology Education, School of Technology  
Indiana State University  
Terre Haute, IN 47809, USA  
tchcrowd@isugw.indstate.edu

**Abstract**

Participants will learn how: to direct instruction around the different learning styles of students; to increase interaction between the instructor and the students; to increase interaction between the students; to maintain the quality of course content in each modality; to navigate a course website in WebCT.

**Paper: 11a****Track: e-Commerce****Title: E-Commerce as a Capstone in Information Technology****Author: Jon A. Preston**

Department of Information Technology  
Clayton College and State University  
Morrow, GA 30260, USA

**Author: Scott Taylor**

Department of Information Technology  
Clayton College and State University  
Morrow, GA 30260, USA

**Abstract**

Universities interested in keeping pace with the rapidly changing field of Information Technology (IT) are often pulled in many directions. Because Information Technology is such a popular field of study and work, educators must manage rising enrollments in an era where the ubiquity of information technology demands an ever-increasing number of specializations. As a result, industry and students expect a wider range of courses and specializations in their upper division coursework. E-commerce, one of the most promising of these maturing Information Technology specializations, affords an excellent opportunity to draw together the fundamentals of the field into a capstone series of courses. E-commerce fulfills a present demand from industry, provides a wonderful project and group-based "studio-style" learning environment, and is quite popular with students. This paper discusses our e-commerce degree specialization as a capstone to undergraduate Information Technology coursework. We also discuss the motivation for, design and execution of, and results from our courses.

**Paper: 11b****Track: e-Commerce****Title: An Introductory Course in an Undergraduate E-commerce Technology Degree Program****Author: Amber Settle**

School of Comp Sci, Telecom, and Information Systems  
DePaul University  
Chicago, IL 60604, USA  
asettle@cs.depaul.edu

**Abstract**

Despite great demand, undergraduate degrees in electronic commerce technology are just beginning to emerge. In this paper we describe an introductory course in an e-commerce technology bachelor's degree program at DePaul University. "Survey of e-commerce technology" (ECT 250) provides undergraduate e-commerce technology students with an overview of their degree program while it prepares them for the client-side Web application development course that follows. To meet these dual purposes, ECT 250 takes a balanced approach between breadth and depth in its subject matter.

**Paper: 11c****Track: e-Commerce****Title: A Study of Undergraduate E-Commerce Syllabi****Author: Liang Chee Wee**

Economics and Business Department  
Luther College  
Decorah, IA 52101, USA  
weeliang@luther.edu

**Abstract**

This paper reports on a study of 100 syllabi of undergraduate, introductory-level e-commerce courses offered by different four-year institutions in the United States. The syllabi were collected through a search using Google.com. The data analyses show when the courses were taught, the textbooks and other course materials used, the departments most likely to offer an e-commerce course, the key areas of emphasis across the courses offered, the comparison of course emphasis across the departments, and the key course assignments and requirements expected of the students.

**Paper: 11d****Track: e-Commerce****Title: The Challenges of Team-Teaching Electronic Commerce****Author: C. Edward Heath**

Marketing Department  
Xavier University  
Cincinnati, OH 45208-3214, USA  
heathc@xu.edu

**Author: Mark P. Sena**

Information Systems Department  
Xavier University  
Cincinnati, OH 45208-5161, USA  
sena@xu.edu

**Abstract**

Many business schools have developed courses in Electronic Commerce (EC). Because of the nature of the topic, EC courses may include content from various business disciplines. As a result, selected courses may benefit from the use of a collaborative, team-teaching approach. This paper discusses the challenges of developing an EC course that will be team-taught by faculty members from the Information Systems and Marketing areas.

**Paper: 12a****Track: IT Education****Title: A Methodology for Incorporating Programming Management Concepts Into a COBOL Course****Author: Earl Chrysler**

CIS Department  
Quinnipiac University  
Hamden, CT 06518, USA

**Abstract**

A student in the first course in COBOL is typically taught the syntax of the language and basic processing logic, e.g., creating and updating files with file maintenance data and transactions and printing accounting and/or management reports. This paper presents a methodology for introducing the student to programming management procedures such as establishing program naming conventions, utilizing source statement library procedures for file definitions, and designing, performing and documenting thorough program tests. These techniques will not only assist students in developing valuable habits and recognizing the value of such programming management techniques, but make them aware that these techniques should be in place in the IS area in which they program or manage programmers. That is, the first COBOL course can be one of those courses that contains concepts of value not only in their entry-level position but in IS positions they hold later in their careers. The specific programming management procedures as they relate to COBOL programs are presented and examples are discussed.

**Paper: 12b****Track: IT Education****Title: The Challenge of Plagiarism in Programming Classes****Author: Catherine Dwyer**

Information Systems  
Pace University  
New York, NY 10038, USA  
cdwyer@pace.edu

**Author: Dennis Anderson**

Technology Systems  
Pace University  
New York, NY 10038, USA

**Author: Pauline Mosley**

Computer Science  
Pace University  
New York, NY 10038, USA

**Author: Bruce White**

Computer Information Systems  
Quinnipiac University  
Hamden, CT 06518, USA

**Abstract**

While plagiarism is a challenge in all subjects, it is an especially stubborn problem with programming classes. Programming assignments quickly frustrate students. They are often tempted to take the easy way out by copying a file. This panel discussion will focus on the following topics: Why plagiarism is a problem, How to recognize plagiarism, Can you limit plagiarism, Official school policies on plagiarism. The panelists will discuss these issues based on personal experience grappling with this most difficult issue. Discussion and questions from the audience will be encouraged to solicit ideas on how instructors and schools can manage this problem.

**Paper: 12c****Track: IT Education****Title: Using LMC Simulator Assembly Language to Illustrate Major Programming Concepts****Author: William Yurcik**

Department of Applied Computer Science  
Illinois State University  
Normal, IL 61790, USA

**Author: Larry Brumbaugh**

Department of Applied Computer Science  
Illinois State University  
Normal, IL 61790, USA

**Abstract**

Examples are given that describe how the Little Man Computer (LMC) Model and its associated assembly language code can be used to illustrate a wide variety of core programming topics including a loader program, relocatable and impure code, array processing, function calls, and multitasking. We share this experience as an example "best practice" for incorporating core programming concepts within a computer engineering course.

**Paper: 13a****Track: Student/Faculty****Title: A Survey of Assessment Mechanisms for Continuous Process Improvement of IT Curriculums****Author: William Todd Smoak**

Dept. of Computer Information Systems and Technology  
Purdue University  
West Lafayette, IN, 47907-1421, USA

**Author: Kevin C. Dittman**

Dept. of Computer Information Systems and Technology  
Purdue University  
West Lafayette, IN, 47907-1421, USA

**Abstract**

A repeating trend within the Information Technology (IT) community is that every year a new technology approach or technique comes to the forefront. That may be a new programming language or a new method for developing information systems. At any rate, it is becoming increasingly more difficult to stay abreast of these technologies and approaches as they emerge in the workplace. An even more difficult challenge is to find and retain qualified people to teach these new state-of-the-art concepts and technologies. The foundation skills required for IT professionals have and will probably be the same for many years. These include skills such as math, problem solving, logic and interpersonal communications, but within IT there is also another skill set that is more dynamic. These are the demanded technology skills that seem to change every few years. Because of this phenomenon, it is important that the topics being taught by IT instructors be flexible and adaptable to current as well as future needs. Institutions of Higher Learning need to consistently re-evaluate their curriculum and assess whether the material being taught is in the best interest of the

students as well as the IT industry. In other words they should resist preparing students to use specific technologies and instead prepare them to use any technology, which may assist the students in solving IT related problems. Institutions must be careful not to be swayed by the market demands of providing "training", rather prepare the students for a "lifetime of learning" and continuous career growth through education. This paper outlines in detail possible approaches and methods for tracking course relevancy information.

**Paper: 13b****Track: Student/Faculty****Title: A Comparative Study of the Attributes of Two Popular Internet Recruiting Providers****Author: DeLease Williams**

Computer Information Systems  
Southern University at New Orleans  
New Orleans, LA 70126, USA

**Author: Lai C. Liu**

Computer Information Systems  
Southern University at New Orleans  
New Orleans, LA 70126, USA

**Author: Kai S. Koong**

Computer Information Systems  
Southern University at New Orleans  
New Orleans, LA 70126, USA

**Abstract**

The Internet has become a very convenient and effective means to access information. Many job seekers are now using the Internet to help them with their job search. Likewise, recruiters are also using the Internet to communicate job openings to prospective candidates around the globe. However, there are hundreds of Internet recruiting providers in the e-recruiting sector. Each Internet recruiting provider has common as well as unique resources and attributes. This study examines the resources and attributes that are provided to job seekers and recruiters of the Internet job databases. In particular, this research investigates how these resources and attributes in the two most popular Internet job databases, Monster.com and HotJobs.com, are meeting the needs of job seekers and recruiters. New graduates looking for jobs, persons interested in advancement opportunities, faculty advisors, and career counselors will find this study useful. Human resource managers, corporate recruiters, software engineers, systems designers, scholars interested in online research, and Internet Service Providers of online services will find the outcomes reported interesting.

**Paper: 14a**  
**Track: IS Curriculum**

**Title: The Model IS Curriculum: Holy Grail or Mirage?**

**Author: Martin Atchison**  
School of Information Management and Systems  
Monash University  
Melbourne, Australia

**Author: Christabel Gonsalvez**  
School of Information Management and Systems  
Monash University  
Melbourne, Australia

**Abstract**  
This paper critically analyses the relevance and usefulness of model IS curriculum such as IS'97. It argues that the evolution of IS as a discipline has now rendered model curricula of this type obsolete, and suggests the basis for a new approach to model curriculum development, which is more in keeping with the needs of the discipline.

**Paper: 14b**  
**Track: IS Curriculum**

**Title: The Graduate Capstone Software Project Management Class: A Review and Critique of Selected Designs and Delivery Modalities**

**Author: Carl Clavadetscher**  
Information Resources Management College  
National Defense University  
Ft. McNair, Washington, DC, 20319, USA  
clavadetscher@ndu.edu

**Abstract**  
Three Masters level courses in Information Technology (IT) Program/Project Management taught on two sister campuses in both classroom and Distance Education (DE) format to two very different student bodies are explained, compared and evaluated for possible application elsewhere. Course foci are: (1) software engineering project management issues, (2) IT program management issues, and (3) Chief Information Officer (CIO) IT resource management issues. Conclusions are: (1) any of these three courses is appropriate for a suitable program, and with tailoring, (2) all three could be in the same program for complementary completion by graduate students. Consideration of the expected placement options of graduates should be para-

mount in determining which of the three is/are present, required, or an available elective option. Distance education (DE) tailoring is discussed in general and specifically.

**Paper: 14c**  
**Track: IS Curriculum**

**Title: The Value of Research Projects in Undergraduate Information Systems Degrees**

**Author: Brian W Hollocks**  
The Business School  
Bournemouth University  
Poole, Dorset BH12 5BB, UK

**Abstract**  
The final year research project is often seen as a significant element in the "honors worthiness" of undergraduate degrees and a key indicator of individual student performance. However, from the institution viewpoint, such a project is relatively costly in terms of academic resources and hence, with student numbers increasing, may come into question. The paper discusses the value of the research project to student learning (with the Information Systems domain particularly in view), based on reflection by supervisors and students engaged in IS degrees at Bournemouth University Business School. Some distinctive outcomes are identified and it is noted that the inclusion of final-year research projects is supported by both students and academic staff.

**Paper: 15a**  
**Track: Human Factors**

**Title: Multimodal Slide Shows as Asynchronous Presentation Reviews**

**Author: Roger J. Chapman**  
Computer Science Department  
University of Hawaii at Hilo  
Hilo, HI 96720, USA  
roger.chapman@acm.org

**Abstract**  
This paper describes the design of, and initial results from using, a software application for recording multimodal slide show presentations that was used to create pre-examination reviews of course material in a traditional computer programming class. The results suggest these students found the reviews and software to be useful, and particularly valued well-synchronized speech and pointing when it helped focus attention, but they also found unnecessary pointing to be distracting. More generally, the results

suggest that with appropriately designed software, faculty, often already in the habit of duplicating presented material for students, can recreate a more natural, significant part of the classroom experience, without having to spend a lot of time working with relatively complicated authoring systems.

## **Paper: 15b**

**Track: Human Factors**

### **Title: Technological Adoption to Combat Burnout**

#### **Author: Hy Sockel**

Williamson College of Business Administration  
Youngstown State University  
Youngstown, OH 44555, USA  
hysockel@cc.ysu.edu

#### **Author: Kuanchin Chen**

Haworth College of Business  
Western Michigan University  
Kalamazoo, MI 49008, USA  
kc.chen@wmich.edu

#### **Author: James W. Kroeger**

Nance College of Business  
Cleveland State University  
Cleveland, OH 44114, USA

#### **Abstract**

This study examines issues relating to retention of Information Systems and Technology (IS&T) employees. A survey of over 250 Information Systems and Technology professionals indicates that "loyalty issues" have a higher impact on employee retention than do the traditional constructs of job satisfaction and organizational commitment. Path Analysis was used to investigate the role of job satisfaction, employee commitment, organizational loyalty and job burnout as it impacts employee retention.

## **Paper: 15c**

**Track: Leading Edge**

### **Title: Multiple Applications With a Single Protocol Smart Card**

#### **Author: D T Shaw**

Department of Computer Science  
Edith Cowan University  
Mt Lawley, Perth, Western Australia  
dtshaw@echidna.stu.cowan.edu.au

#### **Author: S P Maj**

Department of Computer Science  
Edith Cowan University  
Mt Lawley, Perth, Western Australia  
S.Maj@cowan.edu.au

#### **Abstract**

Unambiguous identification is essential to any form of transaction in e-commerce. However, credit card transactions rely on the manual identification of parties to the transaction and are inherently insecure. The use of biometrics to improve security is problematic. Smart cards can be used as credit cards with the additional advantages of increased security. The trend is to have multiple heterogeneous applications (access and transit control, electronic purse etc) on Smart cards. However the total number of applications is limited due to both international standards for Smart cards and current fabrication techniques. It is possible to link the different applications on a Smart card however this can be without the explicit knowledge of the user. In order to address these concerns a single protocol smart card is proposed. This result is a Smart card that can support a wide range of applications without the current disadvantages. The protocol has been simulated and tested. The results to date strongly suggest the feasibility of the design. Further testing is needed but along with research into other related issues such as user acceptability, cost etc.

## **Paper: 16a**

**Track: IS Curriculum**

### **Title: At the Crossroads of Traditional Computing and Applied Computing**

#### **Author: Adrienne Critcher**

Computer Science Department  
Louisiana State University in Shreveport  
Shreveport, LA 71115, USA  
acritche@pilot.lsus.edu

#### **Author: Krishna Agarwal**

Computer Science Department  
Louisiana State University in Shreveport  
Shreveport, LA 71115, USA  
kagarwal@pilot.lsus.edu

#### **Author: John Sigle**

Computer Science Department  
Louisiana State University in Shreveport  
Shreveport, LA 71115, USA  
jsigle@pilot.lsus.edu

**Author: Dave Foley**

Computer Science Department  
Louisiana State University in Shreveport  
Shreveport, LA 71115, USA  
dfoley@pilot.lsus.edu

**Abstract**

For the last two decades the Computer Science Department at Louisiana State University in Shreveport has offered a traditional undergraduate program, producing hundreds of highly qualified graduates who have achieved successful professional careers in the field of computing. During this time, the field of computing has been evolving at a frantic pace. The demand for instruction and training, at several levels in our field, presents an enormous opportunity for universities. Our current programs meet some of this demand, but leave a large part of it unserved. In short, much of the expertise in demand today in the computing field is of a technical and applied nature in such areas as networking and Web-based e-commerce. Our current traditional Computer Science degree, which is focused on the theory and foundations of algorithms and programming, is of a somewhat different nature. We would like to add a new applied computing degree and retain our traditional accredited degree. However, we simply do not have the faculty, or the university resources to obtain needed faculty, to support both programs. In the face of declining state support of public education, we are struggling with our subsequent decision and proposal to our administration to discontinue our current traditional program in favor of a more applied program. We suspect that we are not alone among Computer Science Departments in trying to resolve similar curriculum issues.

**Paper: 16b****Track: IS Curriculum****Title: Server-Side Java: A New Direction for Teaching Computer Programming****Author: Robert Stumpf**

Computer Information Systems Department  
California State Polytechnic University  
Pomona, CA 91768, USA  
rvstumpf@csupomona.edu

**Author: Steven Curl**

Computer Information Systems Department  
California State Polytechnic University  
Pomona, CA 91768, USA  
scurl@csupomona.edu

**Abstract**

The current direction in software development clearly

favors server-side programming - often using the Java language. Still, many courses today may not yet be updated to keep pace with this trend. This paper explores the design of a new course, Server-Side Java Programming, which we will be offering at our university. The course will be the third in a three-course sequence that we intend to pilot test during spring 2002 with full implementation beginning in that fall. We believe this paper will be of interest to educators, who, much like ourselves, are only now beginning to appreciate this new direction in application software development.

**Paper: 16c****Track: IS Curriculum****Title: The Impact of New Programming Languages on University Curriculum****Author: Katie L. Emigh**

Computer Applications Department  
Grand Rapids Community College  
Grand Rapids, MI 49503, USA

**Abstract**

This paper covers the impact that the seemingly continuous introduction of new programming languages has on the computer information systems curriculum in a university. Computer information systems departments are currently implementing changes based on the newest languages, Java and C#. The relationship between universities and the corporations behind these languages, greatly affects how companies interact with these institutions. Before implementing the latest languages, universities must address if they should continue to offer traditional languages such as COBOL. This report provides conclusions and recommendations on the transformation a curriculum must undergo to maintain high levels of enrollment and also demonstrates why it is a challenge for universities to keep an up-to-date language program.

**Paper: 17a****Track: Leading Edge****Title: The Effect of Technology Integration on Critical Thinking Skills in a Graduate Introductory Information Systems Course****Author: Jean F. Coppola**

Information Technology  
Pace University  
Briarcliff, NY 10510, USA  
coppola@pace.edu



**Author: Barbara A. Thomas**

Lienhard School of Nursing  
Pleasantville, NY 10570, USA  
bthomas@pace.edu

**Author: Jennifer D.E. Thomas**

School of Computer Science and Information Systems  
Pace University  
New York, NY 10038, USA  
jthomas@pace.edu

**Abstract**

This investigation was to determine whether, and to what extent, various hardware technologies (specially designed electronic classrooms) and software (Blackboard, Healthlite, Ginormous) support the acquisition of critical thinking skills. One instructor taught three different sections of the same graduate introductory information systems course during a single 14-week semester in this study. The preliminary results obtained from a validated critical thinking tool, the California Critical Thinking Skills Test (CCTST), indicate that technology integration had a positive effect on students' acquisition of these skills. There were noted differences, however, on other higher-order learning skills, problem-solving, research skills, and creative idea generation.

**Paper: 17b****Track: Leading Edge****Title: The Doctor of Professional Studies in Computing: An Innovative Professional Doctoral Program****Author: Susan M. Merritt**

School of Computer Science & Information Systems  
Pace University  
White Plains, NY 10606, USA  
smerritt@pace.edu

**Author: Fred Grossman**

School of Computer Science & Information Systems  
Pace University  
White Plains, NY 10606, USA  
grossman@pace.edu

**Author: Charles Tappert**

School of Computer Science & Information Systems  
Pace University  
White Plains, NY 10606, USA  
ctappert@pace.edu

**Author: Joseph Bergin**

School of Computer Science & Information Systems  
Pace University  
White Plains, NY 10606, USA  
berginf@pace.edu

**Author: Howard Blum**

School of Computer Science & Information Systems  
Pace University  
White Plains, NY 10606, USA  
hblum@pace.edu

**Author: Ronald I. Frank**

School of Computer Science & Information Systems  
Pace University  
White Plains, NY 10606, USA  
rfrank@pace.edu

**Author: David Sachs**

School of Computer Science & Information Systems  
Pace University  
White Plains, NY 10606, USA  
dsachs@pace.edu

**Author: Allen Stix**

School of Computer Science & Information Systems  
Pace University  
White Plains, NY 10606, USA  
astix@pace.edu

**Author: Stuart Varden**

School of Computer Science & Information Systems  
Pace University  
White Plains, NY 10606, USA  
svarden@pace.edu

**Abstract**

This innovative degree program addresses the inflexibility of traditional doctoral programs for working professionals. Unlike traditional doctoral programs that are often narrowly focused, this program emphasizes integrated study among the computing disciplines as well as applied research in one or more of them. The Doctor of Professional Studies in Computing (D.P.S.), while advanced in content and rigorous in demands, can be distinguished from the Doctor of Philosophy (Ph.D.) in that its focus is the advancement of the practice of computing through applied research and development. The Doctor of Professional Studies is a professional doctorate that integrates academic and professional cultures. The program enables computing and information technology professionals to earn a doctorate in three years through part-time study while continuing in their professional career. The program uses a team approach to both teaching and learning, and combines monthly face-to-face weekend meetings with asynchronous distance learning via the Internet.

**Paper: 17c**  
**Track: Leading Edge**

**Title: From Demand to Supply: Teaching the Net Generation**

**Author: Donna Hiestand Tupper**  
dtupper@ccbc.cc.md.us

**Author: Andrew Beiderman**  
Math, CS, Internet and Multimedia Tech Department  
CC Baltimore County, Essex  
Baltimore, MD 21237, USA  
abeiderman@ccbc.cc.md.us

**Abstract**  
What began as a means to offer a course on a new technology has expanded to several courses, a certificate program, an associate's degree program and more options to come. This paper discusses how the expanding Internet Technology field has created a new direction for computer science and computer information systems at CCBC Essex.

**Paper: 18a**  
**Track: e-Commerce**

**Title: The PeopleSoft On Campus Program Implementation Into An Information Systems Curriculum**

**Author: Tom Farrell**  
College of Business and Information Systems  
Dakota State University  
Madison, SD 57042, USA  
tom.farrell@dsu.edu

**Abstract**  
This paper presents an overview and the ongoing process of the implementation of PeopleSoft and ERP courses into the Information Systems curriculum at Dakota State University. The paper discusses how Dakota State was able to partner with Mutual of Omaha and PeopleSoft to implement PeopleSoft into the Information Systems curriculum with a first year addition of two courses. The objectives and topical outlines for two courses are presented, as is a look into the future implementation plans.

**Paper: 18b**  
**Track: e-Commerce**

**Title: An Advanced Web Java Class's Hardware and Software Needs**

**Author: Michael J. Payne**  
Computer Information Systems & Technology  
Purdue University  
West Lafayette, IN 47907-1421, USA  
mjpayne@tech.purdue.edu

**Abstract**  
After offering a new Web Java course during the Spring 2001 semester, I now realize that this actually needed more thought. This paper will discuss both the hardware and software needs for such a course. It is based on actual experiences and some additional outside research. In addition, I will give some details as to what is available in the marketplace to support such a course.

**Paper: 18c**  
**Track: e-Commerce**

**Title: The Two- and Four-Year Internet/Web Programs at Purdue University Calumet**

**Author: Charles R. Winer**  
Information Systems & Computer Programming  
Purdue University Calumet  
Hammond, IN 46323, USA

**Author: John Maniotes**  
Information Systems & Computer Programming  
Purdue University Calumet  
Hammond, IN 46323, USA

**Abstract**  
The advent of the Internet has had a profound impact on the traditional two and four year programs in Computer Information Systems (CIS). Purdue University Calumet has recognized this impact and implemented an innovative Internet/Web program and related courses. The program was developed with input from the University's local business/industry advisory committee members. This paper presents new two and four year Internet/Web programs, which give students a strong foundation in basic concepts and a high degree of employability.

**Paper: 19a**  
**Track: Student/Faculty**

**Title: An Empirical Study of Computer Anxiety among College Students: Differences between Academic Disciplines**

**Author: Travis Broome**

Department of Decision Sciences and MIS  
Miami University  
Oxford, OH 45056, USA

**Author: Douglas Havelka**

Department of Decision Sciences and MIS  
Miami University  
Oxford, OH 45056, USA

**Abstract**

The ability to interact with computer interfaces requires not only a basic understanding of computer concepts but also a basic familiarity with the most current hardware and software. Taking these factors into consideration, it's no wonder that a significant number of individuals find themselves anxious at the thought of having to operate a computer and effectively use its software. This computer-related nervousness has become so widespread and, in some cases, acute that it has developed into an impairment commonly known as computer anxiety. With the Internet and e-mail being the most influential factor in booming PC sales, the continued growth of the World Wide Web will only serve to bolster the demand for computers in almost every home in America. Not since television has a medium promised so much change in the way we learn, work, and play. While it may come as no surprise that some of the elder members of our society have failed to receive proper education in computing technologies, the substantial number of individuals from the current generation who fail to stay in tune with the swift pace of PC development certainly does call for alarm and the need to understand the factors that lead to the development of anxiety toward technology, specifically computing.

**Paper: 19b****Track: Student/Faculty****Title: Impact and Effectiveness of End-User Developed Information Systems in a Process Control Environment: A Case Study****Author: William Thomas Gaillard**

School of Computer and Information Sciences  
University of South Alabama  
Mobile, AL 36688, USA

**Author: Herbert E. Longenecker**

School of Computer and Information Sciences  
University of South Alabama  
Mobile, AL 36688, USA  
bart@cis.usouthal.edu

**Author: Roy J. Daigle**

School of Computer and Information Sciences  
University of South Alabama  
Mobile, AL 36688, USA  
daigle@cis.usouthal.edu

**Abstract**

Can end-users in a process-oriented organization develop effective information systems? In anticipation of a positive response, management at a major pulp and paper-manufacturing company recently invested in an end-user-centered system at one of its plants. The system consists of a data warehouse and an end-user application development environment to access data for process-oriented decision-making. Over time, user-developed systems were in use throughout the plant. In this paper we discuss a synergistic management-developed approach in assessing the effectiveness of the use of the end-user development environment and the implications for use in any organization. Consistently, these end-user developed systems enjoyed a high degree of perceived satisfaction and produced an excellent return on investment.

**Paper: 19c****Track: Student/Faculty****Title: Raising the Intellectual Climate in MIS Courses****Author: Travis Broome**

Department of Decision Sciences and MIS  
Miami University  
Oxford, OH 45056, USA

**Author: Douglas Havelka**

Department of Decision Sciences and MIS  
Miami University  
Oxford, OH 45056, USA

**Abstract**

Many universities are attempting to address problems related to academic standards and the appropriate level of rigor for courses. Related to a university-wide effort to raise the intellectual climate in the classroom, a study was performed to identify the most significant factors for doing so in management information systems (MIS) courses. MIS and other computer-related areas, and technical areas in general, have unique challenges relating to currency of content and relevancy. And these courses have historically been evaluated by students as being "not well taught" or "too boring." This study attempts to identify specific problems and suggests solutions to improve the intellectual climate in MIS courses.

**Paper: 20a****Track: Issues & Trends****Title: Effect of Reward Expectation on Computer Rapid Application Development Tool Performance in Systems Analysis and Design****Author: William H. Gwinn**

Cameron School of Business  
University of North Carolina Wilmington  
Wilmington, NC 28403-5611, USA  
gwinnw@uncwil.edu

**Abstract**

An earlier study investigated the use of a computer tool in Systems Analysis versus manual analysis techniques. Expected improvement in user performance through the use of the tool versus manual techniques was not realized. Research in multi-tasking environments seems to indicate that the reward or expected reward for the tool user may have more influence on the project outcome than the properties of the development tool. This paper analyzes the results of an experiment that measured the change in skill level in junior and senior level college students in the Systems Analysis and Design classes during the spring 2001 semester. Each student was tested on the use of the tool, provided with instruction on advanced features and given practice exercises to perform.

**Paper: 20c****Track: Issues & Trends****Title: Wireless LANs in Higher Education****Author: Harold Palmer**

Computer Information Systems  
Ferris State University  
Big Rapids, MI 49307, USA

**Abstract**

This paper gives an overview of the development of wireless technology and identifies a number of higher education institutions that have used, or are in the process of developing wireless LANs. Some suggestions are offered as to how to address the problems and challenges that exist for the implementation of wireless LANs on campus. Most institutions of higher education are not considered leading-edge telecommunication organizations due to their lack of funding, especially when compared to their commercial counterparts. True, there are some major universities that are research oriented and are blessed with adequate funding for research from grants and substantial endowments, but most campuses are just now becoming completely wired

and have started to fully use applications like e-mail, distance learning, and Web-based classroom management. The idea of taking these newly established wired networks and replacing them with wireless capability makes no sense. However, the idea of extending wireless capability to classrooms and labs that have not been previously connected has a great deal of merit.

**Paper: 21a (Panel)****Track: Issues & Trends****Title: Individual Certification: A Complement to Program Accreditation****Panelist: Lynn J. McKell**

Marriott School  
Brigham Young University  
Provo, UT 84604, USA

**Panelist: John Schoonover**

Nivo International  
American Fork, UT 84003, USA

**Panelist: Kewal Dhariwal**

Northern Alberta Institute of Technology  
Edmonton, Alberta, Canada

**Panelist: Herbert E. Longenecker**

School of Computer and Information Sciences  
University of South Alabama  
Mobile, AL 36688, USA

**Abstract**

Recent years have seen an active dialog about the merits of accreditation of IS/IT academic programs. Curriculum committees have produced guidelines for courses and programs; and other committees have been formed to create an accrediting body and to set standards for a recognized and accepted standard of IS/IT program accreditation. This panel will explore the case for Individual Certification as a complement to program accreditation. Program Accreditation focuses on measuring and validating the institution, the faculty and the curriculum which constitute the academic topical content and the pedagogical delivery process; whereas, certification focuses on measuring the output: namely, the competency and skills of the students and graduates. There is a roll for both approaches in satisfying the needs of the IS/IT industry.

**Paper: 22b****Track: IS Curriculum****Title: Teaching Programming with Lego RCX Robots**

**Author: Ka-Wing Wong**

Eastern Kentucky University  
Richmond, KY 40475, USA

**Abstract**

A common practice in most programming curricular is for students to learn computer programming in an Integrated Development Environment (IDE). Even though IDEs provide good program development support, very often, what students learn is limited to what an IDE provides. The limitation can be overcome by using additional learning activities in class. LEGO RCX robots can be used to provide additional learning activities that IDEs do not provide. We used the LEGO RCX robots in our programming classes at three different programming skill levels (introductory, intermediate, and advanced) and found that they are very useful in enhancing our curriculum.

**Paper: 23a****Track: Internet Delivery****Title: Integrating a Web-Based Intelligent System into an Accounting Information System Course to Teach the Technique of Internal Control Evaluation****Author: Chuleeporn Changchit**

Department of Finance, Economics, & Decision Sciences  
Texas A&M University  
Corpus Christi, TX 78412, USA  
cchangchit@cob.tamucc.edu

**Abstract**

The issue of how to increase teaching effectiveness is a major concern to most educators. Understanding how to encourage a student to learn instead of memorize the presented material is one of the greatest problems faced in teaching. The nature of the topic taught contributes to this difficulty where a need for deep understanding may conflict with the need to understand the breadth of the topic. Evaluation of internal controls<sup>2</sup> is part of an accounting course. For each accounting cycle in an organization, over 100 identifiable weaknesses may occur. Students may feel overwhelmed by this and try to memorize rather than understand the weaknesses and this affects their ability to effectively grasp the topic. This is a major issue in teaching internal control evaluation. This research identifies issues in using a Web-based intelligent system to teach students how to detect weaknesses in an internal control system. Such a system might prove to be highly beneficial to both students and educators.

**Paper: 23b****Track: Internet Delivery****Title: The Use of Internet-based Tools to Support the Delivery of an eBusiness Course****Author: Kenneth A. Grant**

School of Information Technology Management  
Ryerson University  
Toronto, Ontario, M5B 2K3, Canada

**Author: Wendy Cukier**

School of Information Technology Management  
Ryerson University  
Toronto, Ontario, M5B 2K3, Canada

**Author: Franklyn Prescod**

School of Information Technology Management  
Ryerson University  
Toronto, Ontario, M5B 2K3, Canada

**Abstract**

In recent years considerable attention has been focused on the growing importance of the global Internet to business. Many business schools in Canada, the US and Europe have begun to offer curriculum in various aspects of eBusiness. However, experienced faculty and resources available to design and deliver globally "eBusiness" courses are scarce and many institutions are exploring new modes of delivering eBusiness and other high demand business and IT curriculum. This paper reviews the results of a pilot project using Internet-based materials to deliver an undergraduate elective course in eBusiness.

**Paper: 23c****Track: Internet Delivery****Title: A Three-Track Approach to Teaching Web Development****Author: Kurt Jordan**

Information Systems and Computer Programming  
Purdue University Calumet  
Hammond, IN 46304, USA

**Author: Kevin Miller**

Information Systems and Computer Programming  
Purdue University Calumet  
Hammond, IN 46304, USA

**Abstract**

This paper describes a series of Web development courses that address what our research identified as three groups of

students, each with a need for a different set of Web development skills. The identifying characteristics of each set of needs are described. The course or courses that provide skills that address the corresponding set of needs are presented. This three-track approach to Web development training offers choices to students with needs for various levels of Web development skills.

## **Paper: 23d**

### **Track: Internet Delivery**

#### **Title: Issues in Internet Based Education**

#### **Author: Sushil K. Sharma**

Department of Management  
Ball State University  
Muncie, IN 47306, USA  
ssharma@bsu.edu

#### **Author: Jatinder N.D. Gupta**

Department of Management  
Ball State University  
Muncie, IN 47306, USA  
jgupta@bsu.edu

#### **Abstract**

With technology advancements and the use of the Internet, many opportunities exist to enhance the way education is delivered. This paper addresses the issues that an institution will face considering the Internet as an educational delivery method. Our discussion includes the pedagogical issues, student resource concerns, technical hurdles, and political obstacles. We also make suggestions overcoming some of these issues in order to implement and succeed in Internet based education.

## **Paper: 24a (Panel)**

### **Track: IT Education**

#### **Title: Innovative Ways to Teach Software Skills**

#### **Panelist: Laura McManamon**

MIS Department  
University of Dayton  
Dayton, OH 45424, USA

#### **Panelist: Barbara Miller**

Kelley School of Business  
Indiana University  
Columbus, IN 47448, USA

#### **Panelist: Roger Carlsen**

Department of Educational Leadership  
Wright State University  
Fairborn, OH 45324, USA

#### **Abstract**

Panelists will each discuss a variety of creative ways to teach software skills. The audience will then be asked to share their experiences and comments about software skills learning. Topics include: delivering skills courses to groups in a large state university setting, student teaching involvement with peer tutors, teaching assistants, and MBA Associate Instructors. The Associate Instructor training and the lab files that are tools for learning will also be discussed. Teaching techniques based on personalized project grouping and support teams based on individualized self-determined selection procedures will be explained. Online session strategies, including front-loaded, face-to-face sessions, and post learning curve virtual sessions will be examined. Delivering skills courses to students in a private university setting is the focus of this discussion. Successes and failures for the following learning activities will be highlighted: using students as teachers for Visual Basic 6 and Microsoft Office, using independent study with computer-based training or text only and using computer testing for Microsoft Office software.

## **Paper: 24b**

### **Track: IT Education**

#### **Title: Teaching Goal-Directed Design as a User Design Tool**

#### **Author: Gary B. Randolph**

Computer Information Technology  
Purdue University  
Anderson, IN, 46012, USA

#### **Abstract**

Few generally accepted techniques exist for approaching the unstructured problem of user interface design. This lack of tools complicates the teaching of this skill to beginning students. This paper briefly describes one such technique, Goal-Directed Design, (Cooper, 1999) and recounts the experiences and insights gained from using this technique in teaching user design concepts and techniques in an introductory systems analysis and design course.

## **Paper: 24c**

### **Track: IT Education**

#### **Title: A Hands-On Lab Component to Supplement the First IS Computer Networking Course**

**Author: Marcos P. Sivitanides**

Department of Computer Information Systems  
 Southwest Texas State University  
 San Marcos, TX 78666, USA

**Author: Sharon A. Dunn**

McCombs School of Business  
 The University of Texas  
 Austin, TX 78712, USA

**Abstract**

A few years ago it was rare to find a required Computer Networking course in the Information Systems (IS) curriculum. Some departments had an elective course in the area at best or the topic was covered in a general MIS class and the details and implementation left to Computer Science and Computer Engineering courses. Today it seems that the opposite is true. It is rare to find an IS curriculum without a required Computer Networking course. Typically it is a sophomore or junior level course, has general IS introductory classes as prerequisites and it is a required course. The typical approach in this course is to review recent and current Networking technologies and fundamentals of Data Communications at some length and depth and emphasize the use of Networks as one of the major components of Analyzing, Designing and Developing Information Systems applications. The students get a very good understanding of how to include Network design in the overall Business computer application system development process.

**Paper: 24d****Track: IT Education****Title: The Campus as Learning Laboratory for Systems Analysis and Design****Author: Bruce M. Saulnier**

Computer Information Systems  
 Quinnipiac University  
 Hamden, CT 06518, USA  
 bruce.saulnier@quinnipiac.edu

**Abstract**

This essay makes the case for using the campus as a teaching/learning laboratory for the Systems Analysis & Design course. The nature of the field of Computer Information Systems is discussed, and the role of the Systems Analysis and Design course is introduced. Resources to support the teaching of the course are noted and the limitations of existing resources are discussed. It is suggested that moving beyond the typical resources to provide for an effective student learning experience should be done in a manner consistent with what we know about good practice in undergraduate education vis-à-vis student

learning. The Seven Principles for Good Practice in Undergraduate Education are introduced as guidelines for developing an effective learning environment. Techniques for using the campus as a teaching laboratory are discussed, and it is demonstrated that the use of such a method is consistent with research on effective student learning. In conclusion, this paper suggests that by using such an approach students are provided the opportunity to do analysis and design and effective student learning occurs.

**Paper: 25a****Track: Student/ Faculty****Title: A Mapping and Ranking of Selected Database Application to DBMS Models****Author: Sili Li**

Graduate Studies in Computer Information Systems  
 Southern University at New Orleans  
 New Orleans, LA 70126, USA

**Author: Ghasem S. Alijani**

Graduate Studies in Computer Information Systems  
 Southern University at New Orleans  
 New Orleans, LA 70126, USA

**Author: Kai S. Koong**

Graduate Studies in Computer Information Systems  
 Southern University at New Orleans  
 New Orleans, LA 70126, USA

**Abstract**

Database Management Systems (DBMS) have changed significantly during the last four decades. There are currently six different database models: file processing systems, hierarchical, network, relational, object-oriented, and the object-relational DBMS. Even though all these models share common features, each model can be identified for its unique characteristics. Furthermore, implementation of the common and the unique features can produce a wide variety of database applications. Such a variety calls for a systematic approach for evaluating and selecting a database application. Based upon the six database models, a total of 33 features were identified from the literature. The findings indicate that the database features and the attributes of 28 popular database applications could be mapped into a schematic model and a three-tier logical structure accordingly. One the strengths of this study is inherent in methodology applied, because the technique uses a robust approach for identifying, mapping, and ranking decisions that is replicable. Database vendors, buyers, project managers, systems analysts, software developers, data administrators, and research scholars specializing in data modeling and applications should find this study useful.

**Paper: 25b****Track: Student/ Faculty****Title: Developing Embedded Visual Basic 3.0 Applications for Win CE 3.0 and the Pocket PC****Author: Jonathan C. Mull**

Computer (Information Systems) Technology Department  
Purdue University  
West Lafayette, IN 47907, USA  
mulljc@hotmail.com

**Author: Kyle Lutes**

Computer (Information Systems) Technology Department  
Purdue University  
West Lafayette, IN 47907, USA  
kdlutes@tech.purdue.edu

**Abstract**

With the explosive proliferation of mobile computers, an education in modern computer programming languages and techniques should include exposure to application development for them. This paper's authors chose to do an independent study on eMbedded Visual Basic, a programming language being used with the WinCE operating system. One element of the study was participation in a Pocket PC programming contest sponsored by Microsoft, which concluded April 8, 2001. This paper discusses our experiences researching mobile computing platforms, learning eMbedded Visual Basic, and developing and submitting an application for the contest.

**Paper: 25c****Track: Student/ Faculty****Title: A Comparison of Using CBT and Teaching Assistants to Teach Microsoft Office 2000****Author: Peter Simis**

The Sid Craig School of Business  
California State University, Fresno  
Fresno, CA 93740, USA  
peters@cvip.net

**Author: Ivan Hoong**

The Sid Craig School of Business  
California State University, Fresno  
Fresno, CA 93740, USA

**Abstract**

An experiment was conducted during the spring 2001 semester to determine the effectiveness of using a computer-

based training (CBT) package to cover the basic concepts of Microsoft Office 2000. Two sections were conducted using CBT and 14 sections were conducted using a traditional lecture/lab format. The students in both groups were given the same tests using an on-line assessment package. No significant differences were found between the two delivery methods.

**Paper: 26a (Panel)****Track: Student/ Faculty****Title: Encouraging Girls to Consider Computing Careers****Panelist: Gayla Jo Slauson**

Accounting and IT Dept  
Mesa State College  
Grand Junction, CO 81501, USA

**Panelist: Denise R. McGinnis**

Mesa State College  
Grand Junction, CO 81501, USA

**Panelist: Shirley Fedorovich**

Embry-Riddle Aeronautical Univ  
Florida, USA

**Panelist: Jeanine Meyer**

Pace Univ & Purchase College, SUNY

**Panelist: Connie Wells**

Roosevelt University

**Abstract**

This panel discussion will concentrate on ways to encourage girls to consider careers in computing and information technology (IT). The following topics will be discussed: How can we encourage girls to pursue IT careers? How important is it that women in IT serve as role models for girls? As faculty, what can we do to encourage young women to pursue these careers? Where do girls learn about the stereotypes and barriers that prevent them from aiming for non-traditional careers? How can we influence girls and young women to give them the confidence they need to follow successful role models and to break through the "glass ceilings"? How do we influence boys and young men, so they don't continue to learn or teach the stereotypes? Panelists will respond to these questions from a variety of backgrounds and positions. The topic remains an important one. Only twenty-five percent of the Canadian IT workers are female. Other indications appear to show this percentage, and the percentages of female IT workers in the United States and other parts of the world are shrinking. With high salaries, the IT field should attract females. Various studies



over the years have emphasized that women are making up a smaller percentage of computer science graduates. "Women are mysteriously absenting themselves from computer science courses in high school and college."

### **Paper: 27a**

**Track: IS Curriculum**

**Title: Teaching A Database Systems Design**

**Course: Is It Theory Or Practice?**

**Author: Amjad A. Abdullat**

Computer Information Systems Department  
West Texas A&M University  
Canyon, TX 79016, USA

#### **Abstract**

Faculty who teach courses in database systems design are constantly challenged to identify and find the proper mix of theory and practice to be presented in such a course. There is a widespread recognition among information technology educators and industry practitioners that a course in database systems design is considered to be an essential component to any academic curricula in both Information Systems and Computer Science. This paper describes the challenges of identifying and selecting the proper mix of theory and application materials of a database systems design course.

### **Paper: 27b**

**Track: IS Curriculum**

**Title: It's Broke - Now What Do I Do?**

**Author: John F. Schrage**

Computer Management and Information Systems  
Southern Illinois University at Edwardsville  
Edwardsville, IL 62026, USA  
jschrag@siue.edu

**Author: Susan E. Yager**

Computer Management and Information Systems  
Southern Illinois University at Edwardsville  
Edwardsville, IL 62026, USA  
syager@siue.edu

#### **Abstract**

This paper will focus on the technical computer support specialist in relationship to tasks associated with the faculty member teaching that content. The technical specialist is contrasted with the help desk person and statistics are given for the support field. Elementary computer troubleshooting concepts at a basic level will be described. References to

software and manuals to help in the repair of system devices will be noted for faculty examination. A set of steps for problem solving and troubleshooting will be discussed and interspersed with experiences in covering broken devices.

### **Paper: 27c**

**Track: IS Curriculum**

**Title: Views - The 'other' database object**

**Author: Erick D. Slazinski**

Department of Computer Technology  
Purdue University  
West Lafayette, IN 47907, USA

#### **Abstract**

Database views are a powerful and versatile construct that, if used creatively, can solve several commonly occurring business problems. These problems include integration issues and backwards compatibility, location transparency, managing overly complex Structured Query Language (SQL) queries and overcoming some limitations of the SQL language. This paper documents some tips and techniques that the author has found in his many years (12+) in industry. Database (DB) views are basic objects defined in the ANSI SQL-92 standard. As an integral part of the SQL language, which builds upon the select statement, views are easy to teach and generally well understood by students. With the ease of development of views coupled with the expressive power that is contained in the select statement, it is the author's recommendation that views should be included in any intermediate to advanced database course.

### **Paper: 28a**

**Track: IS Curriculum**

**Title: The Crypto-Word Game For Learning Number Systems**

**Author: Ronald I. Frank**

CS & IS Departments  
Pace University  
White Plains, NY 10606, USA  
rfrank@pace.edu

#### **Abstract**

This paper introduces a game which provides a fun way to practice number system manipulations. The game gives practice in using number systems other than base 10, which helps motivate learning the conversion algorithms that appear in many introductory texts and which are given below for reference. The competitive format of a "game" makes the practice more interesting so that the students will

spend more time on task and more time thinking about and using other number systems. The game also gives an example of an encryption / decryption algorithm pair.

## **Paper: 28b**

**Track: Internet Delivery**

### **Title: Student Preparation: A Key to Learning and Teaching**

**Author: Ron Goodnight**

Organizational Leadership & Supervision  
Purdue University  
Anderson, IN 46012, USA

#### **Abstract**

Eighteen students were equally divided: Group A had textbooks while Group B did not have textbooks. "A" learned the course material via the text and lectures. "B" accessed instructor notes, lecture slides, and future probable test items via the instructors' Intranet program called "Blackboard." Prior to each examination, the instructor presented key words that had been thoroughly discussed. The students had to explain each item in one sentence demonstrating understanding. The midterm examination had sixty-two items valued at three points apiece, totaling 186. The average score for Group A was 132 while Group B averaged 164. On the seventy-item, 210-point final examination, Group A averaged 156 while Group B averaged 188 points. Hence, using different approaches for student learning does make a difference. Providing student access via an Intranet to the instructor's material and allowing pre-lecture knowledge of probable examination items significantly improves examination results and student learning.

## **Paper: 28c**

**Track: Internet Delivery**

### **Title: Effect of learning styles on the navigational needs of Computer-Based Training module learners**

**Author: Jens O. Liegle**

Computer Information Systems Department  
Georgia State University  
Atlanta, GA 30302, USA  
jliegle@gsu.edu

**Author: Thomas N. Janicki**

Information Systems Dept  
University of North Carolina Wilmington  
Wilmington, NC 28403, USA  
janickit@uncwil.edu

#### **Abstract**

Web-based training with all its potential benefits is growing at a tremendous rate; however, nearly all-current systems provide a "one-size-fits-all" approach to the delivery of the material. Two approaches that try to improve end-user training have emerged in the area of software training research: adaptation of the training material content and adaptation of the training material presentation mode. Here, two modes have been discussed in the literature: learner control vs. system control. So far, no clear answer to the question which presentation mode should be used - and for whom - has been found. However, if the amount of learning is indeed dependent on the training material presentation mode and the learning style of the users, then more effective systems that adapt to this relationship could be developed. This paper analyzes the results of an experiment completed by 58 subjects that first measured their learning style preferences (using the Kolb Learning Style Inventory Tool) and compared it to their actual usage of linked web-pages. The study found that learners classified as "Explorers" tended to "jump" more create their own path of learning, while subjects classified as "Observers" tended to follow the suggested path by clicking on the "Next" button. In addition, test scores for explorers who did jump were higher than explorers who did not jump, while conversely observers who did not jump scored higher than observers who did jump.

## **Paper: 29a**

**Track: IT Education**

### **Title: Crafting a Hybrid Discipline: Design and Development of a Master of Science Program In Computer Information Technology**

**Author: Joan M. Calvert**

Department of Computer Science  
Central Connecticut State University  
New Britain, CT 06053, USA  
calvert@ccsu.edu

#### **Abstract**

This paper guides the reader through the nascent stages of design, development, and implementation of an inter-school, multi-disciplinary Master of Science program in Computer Information Technology. In an effort to provide the academy with an informative resource for those currently planning or contemplating the offering of similar IT programs, it discusses the origins of the program, describes its conceptual framework and curriculum design, and presents challenges encountered in the process of implementation.

**Paper: 29b**  
**Track: IT Education**

**Title: Launching an Innovative Hybrid Business and Information Technology Program at Ryerson University-A Case Study**

**Author: Kenneth A. Grant**  
School of Information Technology Management  
Ryerson University  
Toronto, Ontario, M5B 2K3, Canada  
kagrnt@ryerson.ca

**Author: Wendy Cukier**  
School of Information Technology Management  
Ryerson University  
Toronto, Ontario, M5B 2K3, Canada  
wcukier@ryerson.ca

**Abstract**

The School of Information Technology Management at Ryerson University in Toronto, Canada, founded in 1999, has created an innovative program that combines Information and Communications Technology (ICT) with a solid business education. In this case study, the authors describe the planning and execution of the launch of the School and its first programs in a very short-time scale. Issues in curricular planning and development as well as operational challenges are discussed and lessons learned are summarized.

**Paper: 29c**  
**Track: IT Education**

**Title: An Information Technology Program for a Small Liberal Arts College: An Interdisciplinary Approach**

**Author: Loren K. Rhodes**  
Information Technology Department  
Juniata College  
Huntingdon, PA 16652, USA  
rhodes@juniata.edu

**Author: Michael L. Frandsen**  
Accounting, Business and Economics Department  
Juniata College  
Huntingdon, PA 16652, USA  
frandsen@juniata.edu

**Author: Dennis L. Johnson**  
Environmental Science Department  
Juniata College  
Huntingdon, PA 16652, USA  
johnson@juniata.edu

**Author: Donna S. Weimer**  
Communication Department  
Juniata College  
Huntingdon, PA 16652, USA  
weimer@juniata.edu

**Author: David J. Fusco**  
Campus Network Services  
Juniata College  
Huntingdon, PA 16652, USA  
fusco@juniata.edu

**Abstract**

Juniata College, a small liberal arts college, has recently developed an Information Technology program in an interdisciplinary manner. The college encourages students to customize a unique program of study across multiple disciplines called a "Program of Emphasis". The design of the IT program retains this concept by combining existing courses from cooperating programs. This collaborative approach relies on the support and coordination of three long-standing programs in computer science, business administration and communication, along with ancillary disciplines such as environmental science, biology and criminal justice. The cornerstone component of the program is a three-semester team-based local industry project experience. The result is a program that is attractive to a wide range of student interests.

**Paper: 30a**  
**Track: Student/Faculty**

**Title: Generation of Website Templates Based on UML Modeling**

**Author: Wesley Harris**  
Department of English  
Loyola University  
New Orleans, LA, 70118, USA

**Author: Bogdan D. Czejdo**  
Department of Mathematics and Computer Science  
Loyola University  
New Orleans, LA, 70118, USA

**Abstract**

Typically, the Unified Modeling Language (UML) is used for visualizing, specifying, constructing, and documenting

the artifacts of software-intensive systems. However, there have been many projects showing the usefulness of UML modeling of systems in other areas. In this paper we discuss how to model English composition in UML and how to convert its models into well-structured educational websites. First, we examine the kinds of UML models that can be built for the presentation subject of English composition. Once the UML models are built, they can be converted into website templates. We demonstrate this conversion with the example of English composition.

**Paper: 30b**

**Track: Student/Faculty**

**Title: Data Communications Concepts-Layer by Layer**

**Author: Dana E. Madison**

Computer Information Science Department  
Clarion University of Pennsylvania  
Clarion, PA 16214, USA

**Author: Aaron D. Sanders**

Computer Information Science Department  
Clarion University of Pennsylvania  
Clarion, PA 16214, USA

**Abstract**

This paper presents an approach to hands-on data communications exercises using the layers of the Open Systems Interconnect model as the organizing mechanism. A greater understanding of the physical, data-link, and network layers of the Open Systems Interconnect model is possible for students as a result of this approach.

**Paper: 30c**

**Track: Student/Faculty**

**Title: Client/Server Web Application Development**

**Author: Mehdi Raoufi**

Dept of Information Systems and Computer Programming  
Purdue University Calumet  
Hammond, IN 46323, USA  
raoufi@calumet.purdue.edu

**Author: Kimberly Spoa**

Dept of Information Systems and Computer Programming  
Purdue University Calumet  
Hammond, IN 46323, USA

**Author: Zachary Wiggins**

Dept of Information Systems and Computer Programming  
Purdue University Calumet  
Hammond, IN 46323, USA

**Abstract**

Client Side Web Application Development refers to coding in HTML and/or scripting languages. When a user opens a web page, which is stored in a server, the file is transferred from the server computer to the client computer and viewed in the client computer. If it consists of scripts, execution of these programs is done in the client computer. In Server Side Web Application Development, when a program stored in a server is accessed (usually written in some scripting language and/or Java along with HTML code), the program is executed in the server computer; HTML code is generated, which is then transferred to the client computer to be viewed. This tutorial starts with a review of HTML and how scripting languages as JavaScript/ VBScript can be used together with HTML code to add interactivity to web pages as Client Side Programming. Server Side Programming is then presented using Microsoft's dynamic document technology, ASP (Active Server Pages). The paper ends with an e-commerce application; Internet shopping center. The objective of the paper is to present client/server web application development not any scripting language, the reader is assumed to have some familiarity with HTML and a modern programming language.

**Paper: 31a**

**Track: Work-in-progress**

**Title: Where Are the Models for Students in IS Programs to Learn About the Future?**

**Author: Mary Anne R. Brady**

Information Systems Management Program  
University of San Francisco  
San Francisco, CA 94117, USA  
mabrady@aol.com

**Author: H. Leonard Fisher**

Information Systems Management Program  
University of San Francisco  
San Ramon, CA 94583, USA

**Abstract**

Research is being conducted on an appropriate model for students to learn about future planning in a Management of Information Systems or a Telecommunications Management program. This paper describes and contrasts various models, such as scenario planning, creating a competitive advantage, and the link between business strategy and technology strategy. In addition to the search for a relevant

model or combination of models, the authors analyzed current curriculums for the appropriate positioning of such a course in a degree program—an introductory course, an IT strategic planning course, or as the underpinning for an integrated future-oriented capstone course.

### **Paper: 31b**

**Track: Work-in-progress**

#### **Title: Redesigning an Undergraduate ISM Curriculum to Better Meet the Professional Needs of Working Adults**

**Author: H. Leonard Fisher**

Information Systems Management  
University of San Francisco  
San Francisco, CA 94117, USA  
fisher@usfca.edu

**Author: William A. Bollinger**

Information Systems Management  
University of San Francisco  
San Francisco, CA 94117, USA  
profbill@usa.net

#### **Abstract**

At ISECON 2000 and Educause 1999, Fisher and Bollinger discussed the Information Systems Management (ISM) Curriculum currently being offered at the College of Professional Studies at the University of San Francisco. As a result of feedback gathered at these two conferences plus that garnered through a continuing dialogue with current students, alumni, and the adjunct faculty who teach 90 percent of the courses in the undergraduate program, it was decided to make several significant changes in the overall curriculum. The major purpose of these changes is to: 1. Strengthen the information technology knowledge base of students throughout the program, especially in the areas of personal productivity technology. 2. Bring the overall program objectives into closer compliance with AITP/ACM/AIS Curriculum Model Guidelines. In addition, precepts, such as incorporating opportunities for community service and support into the program and the exploration of social and ethical issues involved in modern information systems management, needs to be maintained. When all of these factors were combined, a decision was made to both replace 25 percent of the required courses in the program and significantly re-sequence the order in which courses were taught during the final curriculum year. This presentation presents a detailed discussion of the course changes to be made in the curriculum for students entering the program in September of 2001 and subsequent terms and how they will benefit working adults, both personally and professionally.

### **Paper: 32a**

**Track: IT Education**

#### **Title: Reinforcing Networking Concepts-A Modular Approach**

**Author: Dana E. Madison**

Computer Information Science Department  
Clarion University of Pennsylvania  
Clarion, PA 16232, USA  
madison@clarion.edu

#### **Abstract**

The cost of providing hands-on environments for reinforcing specialized computer concepts forces many educational institutions to prioritize the courses and topics that get computer lab support and specialized topics tend to be at the bottom of the list. A modular solution to this problem provides a dynamic environment that can be used for reinforcing networking concepts and evolves over time, as funding is made available.

### **Paper: 32b**

**Track: IT Education**

#### **Title: Implementing a Wiring Closet Simulator For a Laboratory Based Local Area Network Course**

**Author: Dennis O. Owen**

Department of Computer Technology  
Purdue University  
Anderson, IN, 46012, USA

#### **Abstract**

Local area networking is currently found throughout business and industry. Many careers require some understanding of the techniques and technology used in computer networking. This is no longer the private realm of the computer professional. If universities are to properly prepare students for these positions, they must provide education in this area to a wide range of graduates. This instruction can and should involve more than students' listening and writing skills. Students learn quicker and retain more if they actively participate. Laboratory courses are one means of actively engaging students in the topic. In order to present a local area networking laboratory environment that parallels that found in industry, it is necessary to develop apparatus that will present the technology as it appears in industry. Such an apparatus has been created in the Computer Information Systems program at Purdue University's Anderson campus. The design process, layout considerations, and construction of this apparatus will be

explored. The rationale for use of hands-on teaching methodologies is presented to establish the validity of the device as an instructional tool. A discussion of the integration of the simulator into an existing laboratory course and examples of its use are also presented.

**Paper: 32c**

**Track: IT Education**

**Title: Following a Technology Training Workshop: Effects of a Web-based Support System**

**Author: Jane G. Watkins**

Department of Physics and Computer Science  
Presbyterian College  
Clinton, SC 29325, USA

**Abstract**

What are the effects on classroom technology integration when teachers who have received formal technology training are further supported with a web-based after-training support system? This ethnographic study explores this question by taking a look at some of the teachers who participated in an institution's teaching and technology workshop. Data were collected through interviews and informal conversations with the teachers. The teachers were interviewed twice: once before they were introduced to the support system and again, toward the end of the study, after they had the opportunity to use the support system, in order to determine what effects, if any, the after-training support system had on the teachers' levels of classroom technology integration. Additional data collection methods consisted of the following: observations of the teachers as they taught in their classrooms and document analysis of teaching materials and students' work. Findings suggest that teachers who use an after-training support system increase their instances of high-level classroom technology integration. Further supported by this investigation is that assistance from school administration is critical to the success of classroom technology integration.

**Paper: 33a**

**Track: IS Curriculum**

**Title: An Information System Course Model That Emphasizes Non-Technical Skills**

**Author: Denise R. McGinnis**

Information Technology  
Mesa State College  
Grand Junction, CO 81501, USA

**Author: Gayla Jo Slauson**

Information Technology  
Mesa State College  
Grand Junction, CO 81501, USA

**Abstract**

"Change is like the weather: everyone talks about it but there is nothing one can do about it." The only thing constant about Information Technology (IT) is change. Many of the technical skills that IT students learn become obsolete by graduation. This paper will discuss those skills that actually do remain constant, and will present two ways to encourage students to improve these skills in an information systems course. Information systems courses are often taught as lecture courses, with some hands-on exercises. Such courses generally precede a Systems Analysis and Design course, and may be taught at the sophomore level (Fundamentals of Information Systems), or at a junior level (Information Systems Theory and Practice or Management Information Systems). Specifically, in this paper we will stress the use of debates and open-ended hands-on projects as a means of emphasizing these unchanging skills.

**Paper: 33b**

**Track: IS Curriculum**

**Title: The Constant Evolution of an Introductory Computer Course: A Course in Flux**

**Author: Ronald J. Kizior**

ISOM Dept  
Loyola University Chicago  
Chicago, IL 60611, USA

**Abstract**

The content of material in the basic computer concepts course in many schools has changed over the years for many reasons. One of the predominant things that has been occurring is the shifting of topics from the university level down to high school and even grade school level. What then should be covered on the university level? What is appropriate? We have found that many of our students have some spreadsheet and data base skills already, but they are lacking some basic knowledge concerning the concept of what is a business process. We have changed the "focus" of the course, and have introduced lectures and software in order to cover this important concept. This article will explain what was done, the models used, and the software used to exemplify what students should know about "the business process."

**Paper: 33c**

**Track: IS Curriculum**

## **Title: True Computer Literacy and Core Concepts for Non-majors**

**Author: Kurt F. Lauckner**

Department of Computer Science  
Eastern Michigan University  
Ypsilanti, Michigan 48197, USA  
csc\_lauckner@online.emich.edu

### **Abstract**

Teaching only the tools of computing (i.e. word processing, spreadsheets; databases and Internet topics) and calling it computer literacy is unacceptable. For our students to truly be prepared for the future world of computers they need more than just the tools of today, many of which may not even exist tomorrow. They should understand what data and information consist of and how computers work. It is also important that the student be familiar with the general applications of computers: visual communication, audio communication, network communications, information systems, simulation, artificial intelligence & evolutionary computation and education & training. In other words, students in today's world must be fluent in information systems and computer science. One way this fluency can be acquired is by introducing concepts in an order that allows concepts introduced earlier to be used as a basis for later conceptual ideas. This paper shows one possible path through a comprehensive set of concepts used in information systems and computer science.

## **Paper: 34a**

**Track: IT Education**

## **Title: An Innovative Approach for Developing Multimedia Learning Modules**

**Author: Joseph Defazio**

Dept of Computer Technology / Department of New Media  
Indiana University / Purdue University Indianapolis  
Indianapolis, IN 46202, USA

### **Abstract**

This paper presents an innovative approach for developing multimedia-learning modules. Using a constructivist approach, this innovative multimedia design model will demonstrate that purposeful content and supplemental instructional materials or Multimedia Learning Modules can be developed within the context of formative evaluation. In addition, I have included a case study that demonstrates that having students develop learning modules builds on previous knowledge and adds to the learning experience. The goal of multimedia in education is to immerse students in a multi-sensory environment. Multimedia has the ability to capture the attention of the learner using visual and

auditory stimulus, through sound, text, video, colors, animation and graphics. The goal of developing Multimedia Learning Modules is to engage the designer (and student) in the learning process through entertaining and participative learning. This enables and promotes the transfer and infusion of knowledge while promoting considerable opportunities toward the efficiency and effectiveness of learning.

## **Paper: 34b**

**Track: IT Education**

## **Title: Growing Testers: Incorporating Testing Concepts Throughout the CS Curriculum**

**Author: Ronald Finkbine**

Department of Computer Science  
Indiana University Southeast  
New Albany, IN 47250, USA  
rfinkbin@ius.edu

**Author: Peter Macpherson**

Department of Applied Technology  
Rogers State University  
Claremore, OK 74017, USA  
macphersonp@acm.org

### **Abstract**

Traditionally, software testing is introduced to students in Introduction to Programming, and then not treated in depth until an upper level course in Software Engineering. Software testing is often taught as a standalone subject instead of intertwined with all areas of software development. This treatment indicates to students that testing occupies a minor role in the field. This paper proposes an alternative approach of integrating testing methods progressively through the CS curriculum. As students master new CS materials, they will be exposed to the appropriate methods for testing their programs. In addition, this paper makes the claim that appropriate testing should be a distinct component in the grading of assignments.

## **Paper: 34c**

**Track: IT Education**

## **Title: An Information Technology Capstone Course: An Assessment Implementation**

**Author: William N. Owen**

School of Computer and Information Sciences  
University of South Alabama  
Mobile, AL 36688, USA  
owen@cis.usouthal.edu

## **Abstract**

Many curricula require and implement a capstone experience for graduating students. This course is designed to allow for a final assessment of curriculum learning objectives. Students complete a project as a tangible demonstration of their mastery of the objectives. Our Information Technology program has outlined several additional objectives that are assessed through an Information Technology capstone course.

## **Paper: 35a**

**Track: IS Curriculum**

### **Title: An Examination of the Relationship between Active Participation in Test Development (APTD), Student Performance and Student Attitudes**

#### **Author: Robert B. Sweeney**

School of Computer and Information Sciences  
University of South Alabama  
Mobile, AL 36688, USA  
sweeney@cis.usouthal.edu

#### **Author: Kelly Mosteller**

School of Computer and Information Sciences  
University of South Alabama  
Mobile, AL 36688, USA

#### **Author: Roy J. Daigle**

School of Computer and Information Sciences  
University of South Alabama  
Mobile, AL 36688, USA  
daigle@cis.usouthal.edu

## **Abstract**

Many advanced courses in computing curricula seek to combine theory and skills through complex projects. Courses of this type may include applications development, database programming, systems analysis and design, senior project, and applied software engineering. These courses present challenges to both student and instructor for maintaining a global view the project while working at the detail level and for developing a higher level of understanding of the project. Previously, one of the authors used an approach called Active Participation in Test Development (APTD) as an attempt to address these challenges. The basic belief underlying APTD is that by providing students with the opportunity to participate in the examination generation process, they are given the chance to reflect on the meaning of in academic terms, to discover a standard by which their understanding might be measured, and to apply that standard in self-assessment. The objective of this paper is to report the results of a study of the influence of the

approach on student attitudes and performance in the course.

## **Paper: 35b**

**Track: IS Curriculum**

### **Title: A Syllabus in Data Warehousing**

#### **Author: Edward A. Boyno**

Montclair State University  
boyne@mail.montclair.edu

## **Abstract**

Many texts dealing with database management or data mining include one or two short chapters on data warehousing. I believe that the subject is worthy of more thorough attention and have devised a syllabus for a course in data warehousing intended for students who already have a basic knowledge of traditional database functionality. The course includes a laboratory component that allows students to encounter first hand, and solve, some of the problems associated with building and using the warehouse.

## **Paper: 35c**

**Track: IS Curriculum**

### **Title: Teaching Effective Methodologies to Design a Data Warehouse**

#### **Author: Behrooz Seyed-Abbassi**

Department of Computer and Information Sciences  
University of North Florida  
Jacksonville, FL 32224, USA

## **Abstract**

An important component for the students in the advanced database class at the University of North Florida involves the development of a data warehouse that is efficiently designed and effectively optimized for data retrieval and statistical analysis for Decision Support Systems (DSS) and Executive Information Systems (EIS). This paper describes the methods utilized to help students understand the considerations in the design process of a data warehouse. The methodologies involve the commonly used star schema and the snowflake schema as well as other alternative techniques to teach students about the essential factors to consider when designing a data warehouse.

## **Paper: 36a**

**Track: Work-in-progress**



**Title: Developing an Information Security Curriculum for Educational Institutions: An Analysis of Goals, Objectives, and Competencies for the 21st Century**

**Author: Albert Fundaburk**

Business Education and Office Information Systems  
Bloomsburg University  
Bloomsburg, PA 17815, USA  
afundabr@bloomsburg.edu

**Author: James Cannady**

Computer & Information Science  
Nova Southeastern University  
Ft Lauderdale, FL 33314, USA  
cannady@nova.edu

**Abstract**

In recent years, a dramatic shift has occurred in the way computers are used. The advances in computer security have not kept pace with the phenomenal advances in computers and networking. This rapidly evolving information systems environment requires up-to-date information security curriculum. The speed in which the information systems environment changes in regard to security makes it extremely difficult for a university curriculum to prepare students for working in the world of information security. Current engineering and computer science curriculum does not provide students with an understanding of the foundational concepts of information security. Existing undergraduate computer science curriculum focuses on the physical aspect of information security. The goal for developing a comprehensive information security curriculum is to teach the theoretical concepts of information security, and provide a means of applying the concepts to practical applications. This project focuses on rigorous research to define information security and the meaning of a security professional. From this definition, specific knowledge and skill attributes will be determined and a specific curriculum will be developed. This research will consist of three phases: Phase I - Identify Requirements; Phase II - Develop Curriculum Model; and Phase III - Model Implementation, Evaluation, and Review.

**Paper: 36b**

**Track: Work-in-progress**

**Title: Intrusion Detection Systems**

**Author: Bel G. Raggad**

Information Systems Department  
Pace University  
Pleasantville, NY 10570, USA  
braggad@pace.edu

**Abstract**

Depending upon who you ask, the IDS may be a simple audit trail process, or a filter process using a traffic control system, like screening routers, packet filters, firewalls, etc. Some people use IDS to mean a logging utility. Others refer to IDS when they use a router-based access list, or an operating system monitor. For example, the file systems in your network environment contain a variety of software and data files. Unexpected changes in directories and files, especially those to which access is normally restricted, may be an indication that an intrusion has occurred. Changes may include modifying, creating, or deleting directories and files. What makes such changes unexpected may depend on who changed them and where, when, and how the changes were made. An intrusion detection system is a computer-based information system designed to collect information about malicious activities in a set of targeted IT resources, analyze the information, and respond according to a predefined security policy.

**Paper: 37a**

**Track: IS Curriculum**

**Title: IS'2001: Progress Report on Updating IS'97**

**Author: Herbert E. Longenecker**

School of Computer and Information Sciences  
University of South Alabama  
Mobile, AL 36688, USA

**Author: David L. Feinstein**

School of Computer and Information Sciences  
University of South Alabama  
Mobile, AL 36688, USA

**Author: Gordon B. Davis**

University of Minnesota  
Minneapolis, MN, USA

**Author: John T. Gorgone**

Bentley College  
Boston, MA, USA

**Author: Joe Valacich**

University of Washington  
Seattle, WA, USA

**Abstract**

We discuss the updating process for the IS'97 IS curriculum guidelines and accreditation, the first pilot visit to occur this fall. Course descriptions for the proposed IS'2001 curriculum are provided with a description of scope and a high-level set of topics for each course. Lastly, the primary

conclusions of a research survey based on IS'97 is presented. It is noteworthy that IS faculty primarily train IS analysts who have demonstrated expertise in database applications, their skill set matches the expectations of the computing industry, the skill areas of IT programs match the expectation of IS faculty, and model courses P0, 1 and 2 could be revised.

**Paper: 37b**

**Track: IS Curriculum**

**Title: General Knowledge Needed by Information Systems Educators in 2001**

**Author: Randall McCoy**

Information Systems Department  
Morehead State University  
Morehead, KY 40351, USA

**Abstract**

The problem that this study dealt with was the lack of research conducted to determine the computer competencies needed by information systems educators in the year 2001. This study used a Delphi instrument to determine the general needs for the preparation of computer technology competencies of information systems educators for the 21st century. Twenty-three experts nominated by the National Association for Business Teacher Education (NABTE) contributed to the data. The study consisted of three rounds of a Delphi instrument transmitted over the Internet telecommunications network. An instrument was developed from the responses generated by the first round, the second round involved rating the statements, and the third round was used to determine consensus on items. The findings of this study present a list of competencies consensus of experts in business teacher education who identified needs for the year 2001. Findings and conclusions of the study include statements about computer competencies that may be included in business teacher education curriculum related to information systems. This paper presents one part of the findings of the study, particularly those dealing with the "general knowledge" about computers. Of the twenty-three competencies identified, nine received scores indicating that the panel judged that these items were very important; eleven items were rated as important; and one item was rated as being moderately important.

**Paper: 37c**

**Track: IS Curriculum**

**Title: Information Systems Draft Accreditation Criteria and Model Curricula**

**Author: Anthony Scime**

Computer Science Department  
State University of New York College at Brockport  
Brockport, NY 14420, USA  
ascime@brockport.edu

**Abstract**

Information systems is a discipline that covers both the technical and managerial aspects of computing. As a discipline matures it becomes necessary to define it through the accreditation of undergraduate programs. There are a number of model curriculums that have been developed for information systems. This paper is a look at the proposed curriculum accreditation criteria and the match of these criteria to existing curriculum models. Recommendations for modifications to the models are made to assure conformance to accreditation requirements.

**Paper: 38a**

**Track: IT Education**

**Title: A Projection Model of IT and Computer Personnel Requirements in Thailand**

**Author: Noppadon Kannika**

Graduate School of Computer and Engineering Mgt  
Assumption University  
Huamark, Bangkok, Bangkok, 10240, Thailand  
noppadon@ksc.au.ac.th

**Author: Srisakdi Charmonman**

Information Technology  
Assumption University  
Huamark, Bangkok, Bangkok, 10240, Thailand  
charm@ksc.au.edu

**Abstract**

The introduction of technologies to process and transport data and information has proceeded at exceptional rates for many decades in the globalization and information technology era. This trend relates to the rapid diffusion of IT and computerization in Thailand. The research findings in this study revealed that the problem associated with a shortage of IT and computer professionals would probably occur in the year 2010. Hence, the increasing trend of IT and computerization should concern the proper planning of related human resource requirements.

**Paper: 38b**

**Track: Work-in-progress**

**Title: Learning from Students: A Study Into The Use of Class Web Sites in a Liberal Arts College Environment**

**Author: Kathleen M. Kelm**

Edgewood College  
Madison, WI 53711, USA

**Abstract**

In today's liberal arts college environment, one can observe a proliferation of web sites associated with faculty members of the various academic departments and their current course offerings. These Class Web Sites, as they are known, are not necessarily tied to what is referred to as a distance education or a computer-mediated class. As a vehicle for delivery of course content, several questions can be raised: Are Class Web Sites useful to the students? How often do the students access their Class Web Site? Do the Class Web Sites serve merely as an alternative information delivery mechanism or can they be used to enhance and enrich student oriented learning processes? It is to the later question that I conducted an inquiry research project. During the spring, 2000 semester, I created and managed four different Class Web Sites. This paper provides a description of the four Class Web Sites, their purpose and slight variations in uses, some empirical data on the development and maintenance aspects from a faculty perspective and the findings of the student responses. Several conclusions are presented concerning the effectiveness of Class Web Sites for extending student learning beyond the classroom.

**Paper: 38c****Track: IT Education****Title: Teaching IT: A Survey of Terminal Degrees, Hiring and Promotion for Information Technology Professors****Author: Elsa M. Lankford**

Applied Information Technology (AIT)  
University of Baltimore  
Baltimore, MD 21201, USA  
elankford@ubmail.ubalt.edu

**Abstract**

Information Technology (IT) is a fairly new field, both in academia as well as in the "real world." Both its newness and its unique relationship with industry allow for a variant on the traditional academic terminal degree, which is typically a doctoral degree. Whereas traditional academic fields benefit greatly from the study and research resulting in a Ph.D. degree, the fast-paced field of IT needs to put a higher value on the actual work experience of the professors that are hired and retained with tenure. This is particularly important due to the ever-widening gap between the increasing number of new computer faculty positions and the decreasing number of new computer and technology

Ph.Ds. I have conducted an online survey of IT professors to find out current policy standards regarding terminal degrees and work experience, as well as other information pertaining to hiring and promoting information technology professors.

**Paper: 39a****Track: IS Curriculum****Title: A Curriculum Development For Information Security Manager Using DACUM****Author: Ki-Yoon Kim**

Department of Business Administration  
Kwangwoon University  
Seoul, Korea  
min1203@daisy.kwangwoon.ac.kr

**Author: Ken Surendran**

Computer Science Department  
Southeast Missouri State University  
Cape Girardeau, MO 63701, USA  
ksurendran@semovm.semo.edu

**Abstract**

Generally, the Information Security Manager (ISM) is responsible for an organization's information security policy and program support and for the selection and maintenance of specific safeguards/controls for the organization's computer and communications network and application software. In this paper, the authors present, based on a systematic job analysis, the definition, flowchart and description of ISM's job for developing an ISM education and training program for consideration in Korea. The result of this study reveals that there are 4 tasks and 13 works in the job of Information Security Manager, and 18 education contents and 7 education courses in the ISM curriculum.

**Paper: 39b****Track: IS Curriculum****Title: Problem Analysis and Program Design: Using Subsystems and Strategies****Author: Robert F. Zant**

Department of Applied Computer Science  
Illinois State University  
Normal, IL 61790, USA  
rfzant@ilstu.edu

**Abstract**

Although there has been a substantial amount of research on methods for developing computer programs, students new to

the art of programming continue to find it difficult to transform a problem statement into a functional program. This paper reviews the difference between the novice's and the expert's approach to programming, and presents two techniques--the IPO Diagram and Composition Strategies that novices can use to gain a better understanding of problem analysis and its impact on program design.

## **Workshop 1**

### **Title: Delivering Introductory Programming Courses Online**

**Author: Ashok Kumar**

Kentucky State University

## **Workshop 2**

### **Title: Developing Web Applications**

**Author: Joan Brady Lumpkin**

Management Information Systems

Wright State University

Dayton, OH 45435, USA

#### **Abstract**

The software development cycle has been used for years as a systematic way to develop application software. The same organized techniques can be used to develop effective web applications. Begin by interfacing with the user and an analysis of the requirements and the site mission. Once major requirements are determined, design the web site including page layout and navigation. Using web development tools, implement the site including usability testing. Finally, after the site is up and running, determine maintenance requirements. An actual case study based on a fictitious company is used to demonstrate the guidelines to follow for this web development.

## **Workshop 3**

### **Title: Implementing Cisco Networking in the Four-Year College**

**Author: James A. Sena**

College of Business

California Polytechnic State University

San Luis Obispo, CA 93407, USA

jsena@calpoly.edu

#### **Abstract**

The Cisco Networking Academy Program is designed to be a comprehensive "8-semester/560-hour course" that trains students and in-transition workers to design, build, and maintain computer networks. Students are also prepared for industry standard certifications including the Cisco Certified Network Associate (CCNA) and the Cisco Certified Network Professional (CCNP). The training provides students valuable Internet technology skills, including networking, Unix, Web design and other IT essentials. The Academy Curriculum covers a broad range of topics from

basics on how to build a network to how to build a website and more complex IT concepts such as applying advanced troubleshooting tools. Cisco is also now partnering with Sun and Adobe to offer additional courses in Unix Fundamentals and Web Design.

## **Workshop 4**

### **Title: Incorporating Creative Activities into Your Classes-An Active Workshop**

#### **Author: Bruce White**

Computer Information Systems  
Quinnipiac University  
Hamden, CT 06517, USA

#### **Abstract**

This workshop will be an active workshop with the following topics/concepts-with activities and discussion relating to the topic: Creative problem solving and its benefits; Problem solving techniques; Teaching problem solving; Team building, total quality management, and problem solving; Methods to incorporate short problem solving situations into the classroom.

## **Workshop 5**

### **Title: INFOSEC Made Easy-Incorporating Information Assurance Standards into Undergraduate Courses**

#### **Author: Dwight A. Haworth**

Information Systems  
University of Nebraska at Omaha  
Omaha, NE 68182, USA  
haworth@mail.unomaha.edu

#### **Author: Leah R. Pietron**

Information Systems  
University of Nebraska at Omaha  
Omaha, NE 68182, USA  
lpietron@mail.unomaha.edu

#### **Abstract**

The purpose of this workshop is to facilitate the inclusion of NSTISSIC (National Security Telecommunications and Information Systems Security) recommendations into the course content of undergraduate information security courses. This particular workshop will illustrate the process of analyzing one course that will be primarily an INFOSEC course. The standard that will be employed to assess the course content and design is NSTISSIC No. 4011-National Training Standard for Information Systems Security

(INFOSEC) Professionals. The participants will address the problems of translating a government-specific training standard into guidance for collegiate education. Workshop participants will simulate the process of mapping the NSTISSIC behavioral outcomes to Bloom's Taxonomy. The varied NSTISSIC behavioral outcomes will be evaluated to establish a correspondence to Bloom's levels (knowledge, comprehension, application, analysis, synthesis, and evaluation) and the resulting list will be used for other activities in the workshop. Other activities include evaluating textbook contents for coverage of checklist items, determining gaps in the coverage, and developing appropriate supplementary materials. Included in the workshop presentation will be supplementary materials for the Comprehensive INFOSEC Model, OPSEC as related to private sector firms, and TEMPEST requirements. Other topics, such as evaluation materials, references, and student activities, will be covered as time permits.

# Keyword Index of Papers

academia: 38c  
academic disciplines: 19a  
accreditation: 21a 37c  
active participation in test development: 35a  
active server pages: 30c  
adaptation to the classroom: ws4  
analysis: 39b ws2  
andragogy: 32b  
application design: 20a  
application development: 20a  
applications of info technology and computerization: 38a  
applied computing: 16a  
applied networking: 24c  
architecture: 16b  
ASP: 08a 30c  
assembly language: 12c  
assessment: 10a 12b  
asynchronous learning: 15a 17b  
attitudes: 06b  
authentication: 15c  
authoring: 28c

blackboard: 28b  
brain gain: 01a  
burnout: 15b  
business process model: 33b  
Business University Partnerships: 18a

CAI: 28c  
capstone course: 34c  
capstone project: 11a  
career skills: 12a  
CBT: 25c 28c  
CCNA: ws3  
CCNP: ws3  
certificate and associate degree programs: 17c  
certification: 01a 21a  
CIO: 14b  
Cisco: 08b  
Cisco networking: ws3  
class web sites: 38b  
classroom technology: 38b  
client-side programming: 30c  
COBOL: 16c  
COBOL standards: 12a  
cognitive load: 02a  
collaboration: 29c  
communication: 20c 33a  
community college programs: 01b  
competencies: 37b  
competency: 21a  
complexity: 35a  
composition strategies: 39b

computer anxiety: 19a  
computer attitudes: 19a  
computer crimes: 05a  
computer education: 37b  
computer engineering: 12c  
computer ethics: 07c  
computer information systems: 16c  
computer lab: 30b  
computer labs: 32a  
computer literacy: 07a  
computer reticent: 06c  
computer science: 06b 16a  
computer security: 05a  
computer stress: 19a  
computer-assisted instruction: 28c  
computer-based training: 25c 28c  
computer-related graduate program: 29a  
computing: 06b 06c 17b  
computing career: 26a  
constructivist: 34a  
content: 19c  
continuous improvement: 13a  
core concepts: 33c  
course authoring tools: 28c  
course content: 13a  
course development: 11d  
course management systems: 38b  
course management tools: 10a  
courseware: 15a  
creativity: ws4  
critical thinking: 17a  
cryptography: 28a  
CS curriculum: 34b  
CSAB accreditation: 16a  
curriculum: 01b 08b 14a 16c 18a 22b 31b 33b 34c ws5  
curriculum design: 07a 14c 29a 29c  
curriculum development: 27a 36a 39a  
curriculum issues: 16a  
curriculum quality assessment: 13a

DACUM: 39a  
data communications: 08b 30b  
data mining: 35b  
data warehousing: 35b 35c  
database applications development: 27a  
database connectivity: 08c  
database design: 35c  
database interaction: 08c  
database systems design: 27a  
databases: 35b  
debates: 33a  
decryption: 28a  
deictic gesturing: 15a  
Delphi: 37b  
depth of knowledge: 35a  
design: 39b ws2

develop: ws2  
discussion forums: 10a  
dynamic document technology: 30c

e-business: 11b 18c  
e-commerce: 11a 11b 11c 11d 15c 18c 23c  
e-commerce technology: 11b  
e-learning: 23d  
e-recruiting providers: 13b  
education: 12c  
educational software: 15a  
effective learning: 24d  
electronic classroom: 17a  
electronic commerce: 11d 15c  
electronic testing: 08a  
eMbedded Visual Basic: 25b  
encryption: 28a  
end-user application development: 19b  
ERP: 18a  
evaluation: 31b  
evaluation techniques: 13a  
experiential learning: 07b  
expert system: 23a

faculty: 19c  
feedback: 10a  
fluency: 33c  
games: 28a  
gender: 06a  
gender and wage differences: 05b  
general knowledge: 37b  
girls in computing: 26a  
glass ceiling: 06c  
hands-on networking: 24c  
hands-on projects: 33a  
hardware/software content: 27b  
high-level technology integration: 32c  
high-order intellectual skills: 32c  
higher education: 20c  
higher-order learning: 17a  
hiring and promotion of professors: 38c  
HTML: 30c  
human resources: 06a  
human-computer interaction: 02b 15a

IDE: 18b  
identification: 15c  
IDS: 36b  
IDS engine: 36b  
implement: ws2  
incubation center: 01a  
information assurance: ws5  
information processing: 36b  
information security: 04a ws5  
information security certification: 36a  
information security curriculum mode: 36a

information security manager: 39a  
information systems: 14c 37a  
information systems courses: 37c  
information systems curriculum: 14a 18c  
information systems education: 04b 07b 14a 37b  
information systems employee: 15b  
information systems management: 31b  
information systems security: 05a 36a  
information technology: 06a 11a 29a 29c 38a  
information technology careers: 26a  
information technology degree program: 38c  
information technology personnel salary: 05b  
institutional theory: 06a  
instructional design: 34a  
intellectual climate: 19c  
intellectual skills: 32c  
intelligent system: 23a  
interdisciplinary: 29c  
interdisciplinary education: 11d  
interdisciplinary program: 29a  
interface design: 02a  
internal control evaluation: 23a  
Internet: 04b 23c  
Internet education: 23d  
Internet job board attributes: 13b  
Internet recruiting providers: 13b  
Internet technology: 17c  
Internet/web programs: 18c  
intranet: 28b  
intro course: 33b  
introductory-level: 11c  
intrusion detection systems: 36b  
IPO diagrams: 39b  
IS curriculum: 31a  
IS education: 37a 37b  
IS strategy: 31a  
IS'97: 14a 37a  
IT: 14b 16a  
IT and computer personnel: 38a  
IT education: 34c  
IT personnel salary: 05b  
IT programs: 01b

Java: 08c 16b 18b  
Java Beans: 18b  
Java Server Pages: 08c  
JavaScript: 30c  
job analysis: 39a  
job databases: 13b  
job satisfaction: 15b  
JSP: 18b

key measures: 19b  
knowledge management: 09a  
knowledge transfer: 23a

LAN: 32b  
 learning and teaching: 14c  
 learning laboratory: 24d  
 learning modules: 34a  
 learning organization information system: 09a  
 learning skills: 17a  
 Lego: 22b  
 literacy: 33c  
 logging utility: 36b  
 low-level technology integration: 32c  
 loyalty: 15b  
  
 mapping and ranking database applications: 25a  
 mentorship programs: 06c  
 Microsoft Office 2000: 25c  
 MIS: 33a  
 MIS courses: 19c  
 model curriculum: 14a 37a 37c  
 modular lab configuration: 32a  
 MS Access: 20a  
 multimedia: 34a  
 multimodal interaction: 15a  
 music downloading: 07c  
  
 networking: 04b 08b 32a ws3  
 networking lab: 24c  
 new media: 34a  
 non-majors: 33c  
 non-technical skills: 33a  
 NSF-ATE: 17c  
 number systems: 28a  
  
 object-oriented languages: 16c  
 OLAP: 35b  
 online distance learning programs: 23d  
 online education: 23d  
 online job databases: 13b  
 online session strategies: 24a  
 online teaching: 10a  
 online testing: 08a  
 operating systems: 12c  
 organizational memory: 09a  
 OSI model: 30b  
  
 part-time doctoral study: 17b  
 partnership: 01a  
 pedagogical limitations: 24d  
 pedagogy: 32b  
 peer tutors: 24a  
 PeopleSoft: 18a  
 performance: 02a  
 personas: 24b  
 plagiarism: 12b  
 Pocket PC: 25b  
 presentation systems: 15a  
 problem solving: 17a  
  
 problem-solving skills: ws4  
 professional doctorate: 17b  
 professional societies: 37c  
 professional work experience: 38c  
 program management: 14b  
 program testing: 12a  
 programming: 12b 16b 22b 39b  
 programming contests: 25b  
 programming languages: 16c  
 programming management: 12a  
 project course: 34c  
 project management: 14b  
 projection model: 38a  
  
 quiz generation: 08a  
  
 RAD: 20a 27c  
 rapid application development: 20a  
 RCX: 22b  
 RDBMS: 27c  
 recruiting: 13b  
 redundancy: 02a  
 robot: 22b  
  
 salaries: 05b  
 scenario modeling: 31a  
 schematic model: 25a  
 security: 39a  
 security education: 04a  
 server: 16b  
 server-side programming: 30c  
 server-side scripting: 17c  
 servlet: 18b  
 simulation: 12c  
 simulator: 32b  
 skills: 21a  
 skills courses: 24a  
 smart card: 15c  
 smart e-classroom: 17a  
 snowflake schema: 35c  
 software development: 23c  
 software engineering: 14b  
 software piracy: 07c  
 software skills learning: 24a  
 software testing: 34b  
 split attention: 02a  
 SQL: 27c 35c  
 standards: ws5  
 star schema: 35c  
 structured query language: 08c  
 student affairs: 12b  
 student attitudes: 07c 35a  
 student learning: 28b 38b  
 student managed learning: 14c  
 student motivation: 10a  
 student participation: 10a



student performance: 35a  
studio-based teaching: 07b  
studio-style learning: 11a  
studios: 07b  
study teams: 10a  
support teams: 24a  
surveillance: 02b  
syllabi: 11c  
system troubleshooting: 27b  
systems analysis: 24b  
systems analysis and design: 20a 24d

teaching approaches: 28b  
teaching methods: 35c  
teaching tips for IT courses: 33a  
team building skills: ws4  
team teaching: 11d  
technical concepts: 27b  
techniques: ws4  
technology: 06c  
technology integration: 17a 32c  
technology transfer: 01a  
telecommunications curriculum: 04b  
telecommunications management: 31a  
tenure: 38c  
terminal degree: 38c  
test development: 35a  
three-tier structure: 25a  
turnover: 15b  
two-year college programs: 01b

undergraduate: 06b 11b 11c  
Unified Modeling Language (UML): 30a  
usability study: 02b  
user interaction design: 24b  
user satisfaction: 19b  
user support: 27b  
using students as teachers: 24a

validating competency and skills: 21a  
VBScript: 30c  
Views: 27c  
VLA: 20c

wages: 05b  
web application server: 18b  
web applications: ws2  
web development: 23c  
web-based application: 23a  
web-based education: 23d  
web-based training: 28c  
Windows CE: 25b  
wireless LANs: 20c  
women: 06b 06c  
women in computing: 26a  
women in IT: 26a

women-education: 06b  
working adults: 31b  
working memory: 02a  
World Wide Web: 23c

# Alphabetical List of Papers by Title

18b: Advanced Web Java Class's Hardware and Software Needs, An  
16a: At the Crossroads of Traditional Computing and Applied Computing  
04b: Beginning of a New Discipline: Undergraduate Telecommunications Programs in the USA, The  
24d: Campus as Learning Laboratory for Systems Analysis and Design, The  
12b: Challenge of Plagiarism in Programming Classes, The  
11d: Challenges of Team-Teaching Electronic Commerce, The  
30c: Client/Server Web Application Development  
10b: Combining Modalities in a Single Distance Education Course  
13b: Comparative Study of the Attributes of Two Popular Internet Recruiting Providers, A  
25c: Comparison of Using CBT and Teaching Assistants to Teach Microsoft Office 2000, A  
07a: Computer Literacy  
33b: Constant Evolution of an Introductory Computer Course: A Course in Flux, The  
29a: Crafting a Hybrid Discipline: Design and Development of a Master of Science Program In Comp Info Technology  
07b: Critical Success Factors for Studio-based Teaching  
28a: Crypto-Word Game For Learning Number Systems, The  
39a: Curriculum Development For Information Security Manager Using DACUM, A  
30b: Data Communications Concepts-Layer by Layer  
ws1: Delivering Introductory Programming Courses Online  
25b: Developing Embedded Visual Basic 3.0 Applications for Win CE 3.0 and the Pocket PC  
ws2: Developing Web Applications  
36a: Developing an Information Security Curriculum for Educational Institutions: An Analysis of Goals, Objectives, ...  
04a: Different Approaches in the Teaching of Information Systems Security  
17b: Doctor of Professional Studies in Computing: An Innovative Professional Doctoral Program, The  
11a: E-Commerce as a Capstone in Information Technology  
20a: Effect of Reward Expectation on Computer Rapid Application Development Tool Performance in Systems Analysis ...  
17a: Effect of Technology Integration on Critical Thinking Skills in a Graduate Introductory Information Systems Course  
28c: Effect of learning styles on the navigational needs of Computer-Based Training module learners  
19a: Empirical Study of Computer Anxiety among College Students: Differences between Academic Disciplines, An  
26a: Encouraging Girls to Consider Computing Careers  
06b: Encouraging Undergraduate Women In Computing: A Preliminary Study  
35a: Examination of the Relationship between Active Participation in Test Development (APTD), Student Performance...  
32c: Following a Technology Training Workshop: Effects of a Web-based Support System  
17c: From Demand to Supply: Teaching the Net Generation  
06a: Gender and Information Technology: Implications of Definitions  
37b: General Knowledge Needed by Information Systems Educators in 2001  
30a: Generation of Website Templates Based on UML Modeling  
14b: Graduate Capstone Software Project Management Class: A Review and Critique of Selected Designs and Delivery ...  
34b: Growing Testers: Incorporating Testing Concepts Throughout the CS Curriculum  
24c: Hands-On Lab Component to Supplement the First IS Computer Networking Course, A  
03a: History of Information Systems  
ws5: INFOSEC Made Easy-Incorporating Information Assurance Standards into Undergraduate Courses  
37a: IS'2001: Progress Report on Updating IS'97  
19b: Impact and Effectiveness of End-User Developed Information Systems in a Process Control Environment: A Case Study  
16c: Impact of New Programming Languages on University Curriculum, The  
ws3: Implementing Cisco Networking in the Four-Year College  
32b: Implementing a Wiring Closet Simulator For a Laboratory Based Local Area Network Course  
ws4: Incorporating Creative Activities into Your Classes-An Active Workshop  
21a: Individual Certification: A Complement to Program Accreditation  
01a: Industry and the University: Partners in Technology Transfer  
33a: Information System Course Model That Emphasizes Non-Technical Skills, An  
37c: Information Systems Draft Accreditation Criteria and Model Curricula  
34c: Information Technology Capstone Course: An Assessment Implementation, An  
29c: Information Technology Program for a Small Liberal Arts College: An Interdisciplinary Approach, An

34a: Innovative Approach for Developing Multimedia Learning Modules, An  
 24a: Innovative Ways to Teach Software Skills  
 23a: Integrating a Web-Based Intelligent System into an Accounting Information System Course to Teach the Technique ...  
 02a: Interface Design: A Focus on Cognitive Science  
 11b: Introductory Course in an Undergraduate E-commerce Technology Degree Program, An  
 36b: Intrusion Detection Systems  
 06c: Invisible Society of Women in Technology: Young Women's Reluctance to Enter the Technology Field, The  
 23d: Issues in Internet Based Education  
 27b: It's Broke - Now What Do I Do?  
 29b: Launching an Innovative Hybrid Business and Information Technology Program at Ryerson University-A Case Study  
 38b: Learning from Students: A Study Into The Use of Class Web Sites in a Liberal Arts College Environment  
 05b: Longitudinal Study Of Gender And Wage Differences Among Computer Technology Professionals, A  
 25a: Mapping and Ranking of Selected Database Application to DBMS Models, A  
 12a: Methodology for Incorporating Programming Management Concepts Into a COBOL Course, A  
 14a: Model IS Curriculum: Holy Grail or Mirage?, The  
 15a: Multimodal Slide Shows as Asynchronous Presentation Reviews  
 15c: Multiple Applications With a Single Protocol Smart Card  
 10a: Online Teaching: A Faculty Perspective  
 18a: PeopleSoft On Campus Program Implementation Into An Information Systems Curriculum, The  
 39b: Problem Analysis and Program Design: Using Subsystems and Strategies  
 01b: Program Issues Facing the Two-Year and Community College  
 38a: Projection Model of IT and Computer Personnel Requirements in Thailand, A  
 19c: Raising the Intellectual Climate in MIS Courses  
 31b: Redesigning an Undergraduate ISM Curriculum to Better Meet the Professional Needs of Working Adults  
 32a: Reinforcing Networking Concepts-A Modular Approach  
 16b: Server-Side Java: A New Direction for Teaching Computer Programming  
 28b: Student Preparation: A Key to Learning and Teaching  
 11c: Study of Undergraduate E-Commerce Syllabi, A  
 05a: Study of the Proliferation of Computer Crimes, A  
 13a: Survey of Assessment Mechanisms for Continuous Process Improvement of IT Curriculums, A  
 35b: Syllabus in Data Warehousing, A  
 27a: Teaching A Database Systems Design Course: Is It Theory Or Practice?  
 08b: Teaching Data Communications Using Cisco Networking Academy's Curriculum  
 35c: Teaching Effective Methodologies to Design a Data Warehouse  
 24b: Teaching Goal-Directed Design as a User Design Tool  
 38c: Teaching IT: A Survey of Terminal Degrees, Hiring and Promotion for Information Technology Professors  
 22b: Teaching Programming with Lego RCX Robots  
 15b: Technological Adoption to Combat Burnout  
 23c: Three-Track Approach to Teaching Web Development, A  
 09a: Towards a Learning Organization Model for Knowledge Synthesis: An IS Perspective  
 33c: True Computer Literacy and Core Concepts for Non-majors  
 18c: Two- and Four-Year Internet/Web Programs at Purdue University Calumet, The  
 23b: Use of Internet-based Tools to Support the Delivery of an eBusiness Course, The  
 12c: Using LMC Simulator Assembly Language to Illustrate Major Programming Concepts  
 02b: Using Surveillance Software as an HCI Tool  
 14c: Value of Research Projects in Undergraduate Information Systems Degrees, The  
 27c: Views - The 'other' database object  
 08c: Web Development in a Server-Centric Environment Using Java Server Pages (JSP)  
 08a: Web-based Quiz Generation Tool Using Active Server Pages, A  
 07c: What's Wrong with Napster? A Study of Student Attitudes on Downloading Music and Pirating Software  
 31a: Where Are the Models for Students in IS Programs to Learn About the Future?  
 20c: Wireless LANs in Higher Education

# Papers by School

Adelphi U: 07c  
Assumption U: 38a

Ball St U: 23d  
Bentley C: 37a  
Bloomsburg U: 36a  
Bournemouth U: 14c  
Brigham Young U: 21a

CC Baltimore Co Essex: 17c  
Cal Poly St U: ws3  
Cal St Poly San Bernadino: 03a  
Cal St Poly U: 16b  
Cal St U Fresno: 25c  
Cent Connecticut St U: 29a  
Clarion U Penn: 30b 32a  
Clayton C and St U: 11a  
Cleveland St U: 15b  
Crafton Hills C: 01b

Dakota St U: 18a  
DePaul U: 11b

E Kentucky U: 22b  
E Michigan U: 33c  
E New Mexico U: 07a  
Edgewood C: 38b  
Edith Cowan U: 15c  
Embry-Riddle Aero U: 26a  
Ferris St U: 20c

Georgia St U: 28c  
Grand Rapids CC: 16c  
Hofstra U: 03a

Ill St U: 04a 04b 12c 39b  
Ind St U: 10b  
Ind U: 24a  
Ind U / Purdue U Indianapolis: 34a  
Ind U SE: 34b  
Juniata C: 29c

Kentucky St U: 05a ws1  
Kwangwoon U: 39a

Louisiana St U Shreveport: 16a  
Loyola U: 30a  
Loyola U Chicago: 33b  
Luther C: 11c

Mesa St C: 26a 33a  
Miami U: 19a 19c  
Millersville U: 02b

Monash U: 07b 14a  
Montclair St U: 35b  
Morehead St U: 37b

N Alberta Inst Tech: 21a  
N Arizona U: 08c  
National Defense U: 14b  
Nova SE U: 36a

Pace U: 12b 17a 17b 28a 36b  
Pace U Purchase C SUNY: 26a  
Presbyterian C: 32c  
Purdue U: 13a 18b 24b 25b 27c 28b 32b  
Purdue U Calumet: 06c 18c 23c 30c  
Quinnipiac U: 12a 12b 24d ws4

Richard Stockton C of NJ: 06b  
Rogers St U: 34b  
Roosevelt U: 26a  
Ryerson U: 06a 23b 29b

S III U Edwardsville: 27b  
S U New Orleans: 05a 05b 13b 25a  
SE Missouri St U: 39a  
SUNY C Brockport: 37c  
SW Texas St U: 24c  
Siena Heights U: 10a

Texas AU: 23a  
Towson U: 03a

U Baltimore: 38c  
U Dayton: 24a  
U Detroit Mercy: 02a  
U Hawaii Hilo: 15a  
U Macau: 09a  
U Minnesota: 37a  
U N Florida: 35c  
U NC Wilmington: 08b 20a 28c  
U Neb Omaha: ws5  
U Pitt Johnstown: 07a  
U Richmond: 03a  
U San Francisco: 31a 31b  
U South Alabama: 19b 21a 34c 35a 37a  
U Texas: 24c  
U Virginia: 03a  
U Washington: 37a  
U Wisc-Stevens Pt: 01a

Villanova U: 03a  
Virginia Tech: 03a  
W Michigan U: 15b  
W Texas AU: 27a  
Wright St U: 24a ws2  
Xavier U: 08a 11d  
Youngstown St U: 15b

## Papers by Author

Abdullat, Amjad A.: 27a  
Abraham, Samuel: 10a  
Agarwal, Krishna: 16a  
Alijani, Ghasem S.: 25a  
Anderson, Dennis: 12b  
Antoine, Tonya: 05b  
Atchison, Martin: 07b 14a  
Awad, Elias: 03a

Beiderman, Andrew: 17c  
Bergin, Joseph: 17b  
Bhatnagar, Neelima: 07a  
Blum, Howard: 17b  
Bollinger, William A.: 31b  
Boyno, Edward A.: 35b  
Brady, Mary Anne R.: 31a  
Braun, Gerald F.: 08a  
Broome, Travis: 19a 19c  
Brumbaugh, Larry: 12c

Calvert, Joan M.: 29a  
Cannady, James: 36a  
Carlsen, Roger: 24a  
Changchit, Chuleeporn: 23a  
Chapman, Roger J.: 15a  
Charmonman, Srisakdi: 38a  
Chen, Kuanchin: 15b  
Chrysler, Earl: 12a  
Clark, Kristy: 01b  
Clavadetscher, Carl: 14b  
Coppola, Jean F.: 17a  
Critchler, Adrienne: 16a  
Crowder, Cindy: 10b  
Cukier, Wendy: 06a 23b 29b  
Curl, Steven: 16b  
Czejdo, Bogdan D.: 30a

Daigle, Roy J.: 19b 35a  
Davis, Gordon B.: 37a  
Defazio, Joseph: 34a  
Depinet, Brian: 08a  
Devine, Irene: 06a  
Dhariwal, Kewal: 21a  
Dittman, Kevin C.: 13a  
Doss, David: 04a 04b  
Drommi, Antonio: 02a  
Dunn, Sharon A.: 24c  
Dwyer, Catherine: 12b

Emigh, Katie L.: 16c

Farrell, Tom: 18a  
Fedorovich, Shirley: 26a  
Feinstein, David L.: 37a

Finkbine, Ronald: 34b  
Fisher, H. Leonard: 31a 31b  
Foley, Dave: 16a  
Frandsen, Michael L.: 29c  
Frank, Ronald I.: 17b 28a  
Fundaburk, Albert: 36a  
Fusco, David J.: 29c

Gaillard, William Thomas: 19b  
Gibbs, David C.: 01a  
Gonsalvez, Christabel: 07b 14a  
Goodnight, Ron: 28b  
Gordon, Melanie: 05b  
Gorgone, John T.: 37a  
Goulet, Daniel V.: 01a  
Gowan, J. Art, Jr.: 08b  
Grant, Kenneth A.: 23b 29b  
Grossman, Fred: 17b  
Gupta, Jatinder N.D.: 23d  
Gwinn, William H.: 20a

Haney, John D.: 08c  
Harris, Wesley: 30a  
Havelka, Douglas: 19a 19c  
Haworth, Dwight A.: ws5  
Heath, C. Edward: 11d  
Hollocks, Brian W: 14c  
Hoong, Ivan: 25c

Impagliazzo, John: 03a

Janicki, Thomas N.: 28c  
Johnson, Dennis L.: 29c  
Jordan, Kurt: 23c

Kannika, Noppadon: 38a  
Kasper, George: 03a  
Kelm, Kathleen M.: 38b  
Kim, Ki-Yoon: 39a  
Kizior, Ronald J.: 33b  
Koong, Kai S.: 05a 05b 13b 25a  
Kroeger, James W.: 15b  
Kumar, Ashok: ws1

Lang, Ulrike: 05b  
Lankford, Elsa M.: 38c  
Lauckner, Kurt F.: 33c  
Lee, John A. N.: 03a  
Li, Sili: 25a  
Liegle, Jens O.: 28c  
Liffick, Blaise W.: 02b  
Little, Joyce Currie: 03a  
Liu, Lai C.: 05a 05b 13b  
Longenecker, Herbert E., Jr.: 19b 21a 37a  
Lumpkin, Joan Brady: ws2  
Lutes, Kyle: 25b

Macpherson, Peter: 34b  
 Madison, Dana E.: 30b 32a  
 Maj, S P: 15c  
 Maniotes, John: 18c  
 Mathis, Saralyn Grenga: 06b  
 McCoy, Randall: 37b  
 McGinnis, Denise R.: 26a 33a  
 McKell, Lynn J.: 21a  
 McManamon, Laura: 24a  
 Merritt, Susan M.: 17b  
 Meyer, Jeanine: 26a  
 Miller, Barbara: 24a  
 Miller, Kevin: 23c  
 Mosley, Pauline: 12b  
 Mosteller, Kelly: 35a  
 Mull, Jonathan C.: 25b  
  
 Nicolai, Barbara J.: 06c  
  
 Owen, Dennis O.: 32b  
 Owen, William N.: 34c  
  
 Palmer, Harold: 20c  
 Payne, Michael J.: 18b  
 Pietron, Leah R.: ws5  
 Prescod, Franklyn: 23b  
 Preston, Jon A.: 11a  
  
 Raggad, Bel G.: 36b  
 Randolph, Gary B.: 24b  
 Raoufi, Mehdi: 30c  
 Rhodes, Loren K.: 29c  
 Rottman, Robert: 05a  
  
 Sachs, David: 17b  
 Sanders, Aaron D.: 30b  
 Saulnier, Bruce M.: 24d  
 Schoonover, John: 21a  
 Schrage, John F.: 27b  
 Scime, Anthony: 37c  
 Sena, James A.: ws3  
 Sena, Mark P.: 11d  
 Settle, Amber: 11b  
 Seyed-Abbassi, Behrooz: 35c  
 Sharma, Sushil K.: 23d  
 Shaw, D T: 15c  
 Shoemaker, Dan: 02a  
 Shortt, Denise: 06a  
 Siegfried, Robert M.: 07c  
 Sigle, John: 16a  
 Simis, Peter: 25c  
 Sipior, Janice: 03a  
 Sivitanides, Marcos P.: 24c  
 Slauson, Gayla Jo: 26a 33a  
 Slazinski, Erick D.: 27c  
 Smith, Lauren: 05a  
  
 Smoak, William Todd: 13a  
 Sockel, Hy: 15b  
 Spoa, Kimberly: 30c  
 Stix, Allen: 17b  
 Stumpf, Robert: 16b  
 Surendran, Ken: 39a  
 Sweeney, Robert B., Jr.: 35a  
  
 Tappert, Charles: 17b  
 Taylor, Scott: 11a  
 Tesch, Debbie B.: 08a  
 Thomas, Barbara A.: 17a  
 Thomas, Jennifer D.E.: 17a  
 Tupper, Donna Hiestand: 17c  
  
 Ulferts, Gregory W.: 02a  
  
 Valacich, Joe: 37a  
 VanLengen, Craig A.: 08c  
 Varden, Stuart: 17b  
 Vat, Kam Hou: 09a  
  
 Wagner, Jerry: 03a  
 Watkins, Jane G.: 32c  
 Wee, Liang Chee: 11c  
 Weimer, Donna S.: 29c  
 Wells, Connie: 26a  
 Weyant, Lee E.: 07a  
 White, Bruce: 12b ws4  
 Wiggins, Zachary: 30c  
 Williams, DeLease: 13b  
 Winer, Charles R.: 18c  
 Wong, Ka-Wing: 22b  
  
 Yager, Susan E.: 27b  
 Yohe, Laura K.: 02b  
 Yurcik, William: 04a 04b 12c  
  
 Zant, Robert F.: 39b

**See y'all at**  
**ISECON 2002**  
**Oct 31 -- Nov 3**  
**Adams Mark Hotel**  
**San Antonio**