

Bits & Bytes

The newsletter of Information Systems & Decision Sciences

Summer 2010

Chair's Message, Kaushal Chari



While other universities across the Southeast have eliminated or significantly cut MIS programs, USF has continued to focus on producing graduates who have both business savvy and practical information systems knowledge.

We haven't rested during this economic downturn. We continue to review and revise curriculum, with input from our advisory boards. We've added more hands-on learning experiences, such as those found in the ISDS Practice Center. We've bolstered our summer study abroad program to help students better understand what it is like to work in teams that might span the globe, making them more competitive in the job market (see the teaser about the Summer IT School at Infosys in India on page 5).

Our emphasis on student success is reflected in our increasing enrollment numbers. We anticipate 40+ new students will begin coursework for the MS in MIS this fall; our PhD program is growing as well. Evidenced by the increasing number of graduating students who are accepting job offers, it seems that we are finally beginning to see the light at the end of a long tunnel of recession.

Among those graduating: three MS/MIS students who placed second in a national contest to develop a Blackberry application, besting teams from universities such as Carnegie Mellon University and Texas A&M University. Learn more about their app and the competition on page 4.

Three additional MS/MIS students were finalists in the Second International Case Competition on the Strategic Value of IT Management that was held at CA World

2010 in Las Vegas. Kudos to Rakesh Rao, Kateryna Okhrymovych and Patrick Mawyer.

In other news:

- The MIS Society joined forces with us to organize the spring *Panel of Senior IT Executives* (sponsored by ConnectWise), giving students valuable insight into industry trends

and tips for breaking into the field.

Thank you to panelists Paul Demirdjian (CEO, Jagged Peak), Julia Lawson (vice president, Acclaris), Tom Pankey (managing director, KPMG LLP), and James Trentadue (IT Testing & QA, Gerdau Ameristeel).

- USF's MIS research has been ranked #7 in the world for publication in premier journals (*Management Information Systems Quarterly* and *Information Systems Research*) during 2007-2009 (<http://www.vvenkatesh.com/ISranking/>). A glimpse of such research can be found on page 5, which provides insight into agile software development methods.

- Wolfgang Jank, a leading scholar in statistics and business intelligence, will soon join our faculty. Read about him, as well as awards received by other faculty and staff, on page 5.

Don't forget to read the spotlights, which feature Barbara Warner (a mentor for undergraduate students), honor student Nicole Stamm, and alumna Phara McLachlan.

K Chari

Kaushal Chari
Professor & Chair, ISDS



From left: Julia Lawson, Tom Pankey, Paul Demirdjian, and James Trentadue.

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MIS Case Competition

Students from an MIS course recently participated in a case competition that provided opportunities that students across the campus likely envied: they tackled a live business case study, examined problems, and presented solutions to the firm's founder. In addition, they were able to present their solutions to leaders from some of the industry's best firms and compete for cash prizes. *continued on page 6*

Faculty Focus



Barb Warner
Instructor

Barbara Warner primarily teaches the MIS class in the business core curriculum. She began her career at USF when she joined USF Lakeland (now USF Polytechnic) as an adjunct professor in 2001. Warner has served as an ISDS instructor on the Tampa campus since 2004, where she also serves as an undergraduate student mentor. Here, she describes her experiences teaching that class and with USF in general.

Tell us about some of the courses you've taught at USF.

I joined USF Lakeland to teach ISM 3011, which is a core management information systems course and a required class for all business majors. In 2001, I began teaching electronic commerce, which I taught regularly until 2004; since then I have taken responsibility for ISM 3011 in Tampa (which was previously taught by late Prof. A.J. Waltz). I have been teaching that course without a break since then, but, occasionally, I also teach the electronic commerce class. For some time now, I've also been teaching one section of ISM 3011 at USF Sarasota. Recently, I added an online section for the class, which has proven to be extremely popular.

When I started teaching ISM 3011, it drew about 700 students every semester. Now there are approximately 900 students per semester; I am the person introducing MIS to all College of Business undergraduate students.

It's my challenge to make the class interesting and relevant to all majors. It is also my challenge to introduce undecided majors to the field and perhaps help them determine if MIS might be a good choice for their major or minor. Given these challenges, when thinking of a potential topic to cover in class, I begin by asking myself, "how will this be useful to a finance major or, say, a marketing student?"

One way I accomplish this is by making the class as hands-on as possible so that students can add skills to their professional toolbox. For instance, students create a web page in HTML, complete three spreadsheet exercises using MS Excel, and three database projects using MS Access. When introducing the HTML project, I tell students that though they may never write a web page in HTML, they might edit an advertisement they place

on Craigslist. A little knowledge of HTML can help them make the advertisement more interesting, hopefully increasing the marketability of their product.

To engage students with the developments in the technology world, we talk about operations management, supply chain management, business intelligence, and other topics from all 16 functional areas of IT to pique student interest¹.

It's a big class and I have been fortunate to always have wonderful graduate assistants to help manage such a large class and grade between 70 - 100 projects each week. As a team, the GAs and I spend numerous student hours offering support and extra assistance so that all students can successfully complete the class.

What are some of your observations about the programs and faculty here?

I have been to a number of schools as both a teacher and a student. The students at USF are the busiest students that I have ever encountered in my life. Most of them juggle college between work, family, parenting, and driving. I can't help but think that for many of my students, when they come to class, it is probably the first time during the day when they have had the opportunity to actually sit down on a chair for longer than five minutes at a stretch. I take personal responsibility for managing class time. I want to make sure that I do not waste a moment of my students' time.



I am always extremely impressed at the faculty meetings in the ISDS Department because every member of this department is focused on making classes relevant, and in placing students in rewarding careers. Classes that do not accomplish this goal are dropped and new ones are added in their place. We have a remarkable breadth of offerings. By suitably choosing electives, students can choose to specialize in application development or database development. The department looks carefully at other majors who might consider an MIS minor, too, as evidenced by our web page, where we list suggested classes for them (<http://www.coba.usf.edu/departments/isds/programs/Minor.html>).

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¹ Paige Baltzan, Amy Phillips, Business Driven Information Systems, McGraw-Hill/ Irwin; 2 edition (September 5, 2008), ISBN-10: 0073376736

**Faculty are focused on research, teaching, and service at USF.
Tell us a little bit about your service roles.**

Apart from my teaching responsibilities, I also serve as a mentor for all undergraduate information systems majors. I act as a sounding board for students who are looking for someone they can talk to about a suitable course mix to match their job interests and the skills that employers are seeking. This is, of course, different from the formal academic advising services offered by USF as a whole and the College of Business in particular.

I also serve as the MSDNAA coordinator for the department. MSDNAA is the academic alliance of the

Microsoft developer network, which makes almost all the software from Microsoft available to registered students of the ISDS department.

"I think that if you use all the resources available at USF, including the student clubs and the library, you can get a really good education at USF."

Tell us a little bit about your life outside of USF.

I am originally from Maryland and have lived in Alaska, Washington, Arizona, California, and, of course, Florida. I began my teaching career in Fairbanks, Alaska in 1982. More than 15 years ago, everyone in our family moved to Florida so when the opportunities came, we moved to

Florida to be near them. I have two kids who are USF alumni and two more who are currently students at USF. In my spare time, I create and maintain web sites for non-profit organizations in the Tampa Bay community. \$

Questions and Answers

Student Profile: Nicole Stamm

Nicole Stamm, an honors student who will join AT&T in July, talks to Professor Rick Will about her experiences at USF.

Tell us about yourself.

I was born in Germany and spent my first three years there. My dad was in the military and we traveled a lot. Computers have been in our house forever. We always had access to computer hardware and software.



I love anything having to do with the water. I like the pool, the beach, fishing, and want to do more scuba diving. There are some nice places around Tampa to be in, at, or near the water. I am not especially fond of cleaning or yard work!

I especially like working with people. I like helping people solve business problems using computer technology. I plan to continue my education here at USF by getting a master's in MIS. I feel like I can explore my passion in this field.

Why did you choose the MIS program?

I spent the last several years living in a relatively small town in northwest Florida and was fortunate to get offers from schools such as the University of Florida, Jacksonville University and the University of Tampa. The appeal of the big city (in the "real" Florida) was actually what attracted me to USF. I had never visited USF, but felt like it might be possible to complete college and then continue my career in Tampa.

My journey at USF started in computer science as I had not heard of the MIS major. After determining that I did not want to build computers, write operating systems, or build database management systems, I started looking a major that was a better fit. The idea of helping people solve real world problems by building and using information systems seemed much more appealing to me.

My dad was not thrilled about the change in majors. He was not as familiar with MIS either, though. It is much better now as he also began to see some of the benefits of being an MIS student. In fact, we still joke about it today

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Honor Student, *continued*

because my brother, Eric, is now planning to major in MIS here at USF, too. Dad is now on board!

What are some of your favorite USF experiences?



I am immersed in the Honors Program at USF, but, wanting to meet more people, I joined Kappa Delta sorority in my freshman year. It was a great way to develop people skills and get involved within the university.

I was lucky to begin my time at USF working with the Pan-Hellenic Council as their webmaster/historian

cabinet member. In my sorority, I was the academic excellence chair as well as the webmaster where I updated and maintained the web site for our sorority. I have participated in MIS Society, Fishing Club, and SCUBA club.

Right now, I am participating in the ISDS Department's Practice Center. I am working at the Department of Veterans Affairs (VA) Hospital with three other MIS students. We are designing and developing various SharePoint applications for different units at the VA. We are applying some of the things we learned in our courses such as Systems Analysis and Design when interviewing and building system requirements. It is proving to be a very enjoyable experience. §

News: Students Place Second in CA Smartphone Challenge

A team of MS/MIS students placed second in a nationwide competition to create an app for the Blackberry® Storm. Dubbing their application the “CA Quickshot,” the students’ prototype allows business operations managers to quickly capture and harvest data, summarizing key performance metrics on a digital screen with a simple red, yellow, and green alert system.



Sohail Bhola demonstrates the student-created Quickshot app.

USF's team, which included students Sohail Bhola, Jeremy Fisher, and Naresh Kumar Kalla, bested teams from prestigious universities such as Carnegie-Mellon, McMaster University, Queen's University, Texas A&M, University of Victoria, and University of Waterloo. The State

University of New York – Stony

Brook won the competition.

“We created a program to help operations managers monitor their systems and have real-time metrics even when away from their workstation,” said Sohail Bhola, describing the Blackberry® app his team created. “Finding and responding to potential problems, like response rates, errors per interval, and delays for deposit and other transactions could result in huge savings for their employers” in the banking industry.

The students used Java to create the application. Noting that the project was much more involved than simply dropping code into an established program, students submitted their code and working documentation online and demonstrated their product to judges via web conference. “We knew we were facing some impressive competition,” said Bhola, pointing out the number of highly-regarded universities that participated in the invitation-only contest.

Gary Weiss, senior vice president of strategic business development for CA, Inc., the company sponsoring the inaugural College Smartphone Application competition, lauded the students’ work.

“Congratulations to University of South Florida on a second place finish in the inaugural College Smartphone Application Contest,” said Weiss. “Competition was fierce with innovative applications designed and submitted by talented teams from top-level universities across North America. The work of these creative students gives us a glimpse of the future of IT innovation.”

USF College of Business Dean Bob Forsythe isn't surprised the team kept such good company, given the number of hands-on, applied learning projects that are part of the MIS curriculum. “This is yet another indicator that USF students can compete against the best students from the best universities in the world,” he said. §

Newsletter Editorial Team: Manish Agrawal and Lorie Briggs

News: Faculty & Staff

ISDS Researchers Win 2009 Design Science Award



Former doctoral student **Johan Perols** and ISDS faculty members **Kaushal Chari** and **Manish Agrawal** were winners of the 2009

Design Science Award sponsored by the INFORMS Information System Society for their project titled: "Information Market Based Decision Fusion." In this research project, they developed an

innovative approach based on information markets to combine classifier decisions. They won the award in the small team category. The award for the large team category went to a team from New York University.

Statistics/Business Intelligence Scholar to Join ISDS Faculty

Wolfgang Jank, an associate professor for the Department of Decision, Operations & Information Technologies at the Robert H. Smith School of Business



at the University of Maryland, will join the department beginning Spring 2011. Jank's appointment will further strengthen statistics and business intelligence areas in the college. Welcome!

ISDS Office Manager Recognized

ISDS Office Manager **Nadia Khouri's** contributions to ISDS and the College of Business were recognized when the College's Staff Council awarded her the *Creative Over-the-top Bulls* award. Congratulations for a job well done!



Students to Study in India at Infosys

Department Chair **Kaushal Chari** will lead a group of students to study abroad on the Infosys campus in Mysore, India this summer. Nearly thirty students will join him. They will enjoy numerous opportunities to network with the international company's executives as well as earn several credits toward a USF degree. Watch for photos and stories in our next issue.

Research Feature: Agile Software Development Methods

Michael Harris (PhD '08), an assistant professor at Indiana University Southeast and a former ISDS doctoral student, coauthored a paper on agile software development methods that was recently published in Information Systems Research, one of the premier academic journals in the MIS field. The journal recently devoted a special issue to flexible and distributed ISDS development, which featured research from Harris and coauthored with scholars Rosann Collins (USF ISDS associate professor) and Alan Hevner (USF ISDS professor). Their in-depth study evaluated the use of controls in flexible software development¹.

The use of agile methods has received a great deal of attention over the past decade. Agile method successes and failures have been widely reported in the trade literature but little research has been done on the underlying theories that explain why, when, and where they work. It is difficult for software managers to decide when and how to select and apply agile techniques to their projects without this understanding.

Potential Insights

The research team studied the question, "When should software development teams have the flexibility to modify their directions and how do they balance that flexibility with controls essential to produce acceptable outcomes?" The research study applied dynamic capabilities theory and an extension of control theory to understand these questions of when and how.



This study provides a rich understanding of the nature of control when using flexible software development approaches. Based on an in-depth analysis of software development methods as presented in a companion paper², a new category of controls is defined: emergent outcome controls which are particularly relevant to the use of flexible methods. The research demonstrates that current methods-in-use employ a portfolio of controls that vary by project, within project, and by development team; so that, rather than speaking of mutually-exclusive, discrete development approaches, it is more appropriate to discuss how individual controls are employed to produce approaches that may be termed ad-hoc, plan-driven, or controlled-flexible. The results of the research in the ISR

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paper show that increased uncertainty of the software product market and the technology will lead to the use of more flexible approaches and the use of more controlled-flexible development methods results in a better product-market match.

The theoretical implications of this research are that the concept of emergent outcome controls elaborates on and extends control theory in a way that is important to the study of today's dynamic work environments. The results support and extend previous research on control theory in software development that models a portfolio of controls, rather than singular, discrete controls. The researchers explain that a portfolio approach is necessary when individual controls are not sufficient. In addition, the study identifies two key boundary conditions (time pressure and project size) that influence the relationships between uncertain environments and flexible work methods in the dynamic capabilities extension of the resource-based view of the firm.

The practical implications of this work are that project man-

agers can use this understanding of how and why flexible approaches are used in practice to guide their selection of software development methods and of a control portfolio. This is particularly important in today's complex development environment where the exercise of control cannot easily be done through direct, face-to-face observation or interaction with team members who may be distributed in different countries and/or companies. Many project managers must meet the challenge of managing projects in uncertain environments that argue for increased flexibility, while operating in a distributed, virtual control setting. These project managers can use the study results to adapt development approaches that control flexibility through emergent outcome controls. §

¹ M. Harris, R. Collins, and A. Hevner, "Control of Flexible Software Development under Uncertainty," *Information Systems Research: Special Issue on Flexible and Distributed Information Systems Development*, September 2009, pp. 400-419.

² M. Harris, A. Hevner, and R. Collins, "Controls in Flexible Software Development," *Communications of the Association for Information Systems: Vol. 24, Article 43*, 2009, pp. 757-776.

Case Competition, *continued*

Four teams from the undergraduate MIS capstone class participated in the competition, which focused on Web-Piston, a company founded by alumnus Ricardo Lasa. Each student team analyzed a case study developed by Lasa, the firm's CEO, and ISDS professor Grandon Gill. The case profiled a key question that Lasa was himself pondering at the time - how to transform his business in light of a changing competitive environment.

Students crafted recommendations and initially made presentations before their peers and a pair of ISDS faculty members. The student teams received constructive criticism and feedback and then, a week later, they made formal presentations before the ISDS Advisory Board, a council of top-level MIS executives and entrepreneurs. These executives served as judges, with the teams competing for prizes totaling \$600.

The executive group gave participants

high marks, saying they were impressed with the level and quality of work presented. Lasa, who said the entire process proved to be very useful in clarifying his own thoughts, indicated that he will consider their recommendations as he determines direction. §



Students shared their recommendations with industry leaders.

- Advanced System Analysis & Design
- Advanced Database Administration
- Distributed Information Systems
- Enterprise Information Systems Management
- Electronic Commerce
- Project Management
- Enterprise Resource Planning & Business Process Management
- Web Based Applications

- Information Security & Risk Management
- International Aspects of Information Systems
- Managing the Information System Function
- Multi-Media Applications
- Software Testing
- Decision Support Systems
- Data Mining
- Data Warehousing

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Questions and Answers

Alumna Feature: Phara McLachlan

Phara McLachlan (BS MIS '99) is the CEO and founder of Animus Solutions, an IT consulting firm specializing in Asset Management and Compliance. She shares some of her personal and professional experiences below.

Tell us about your job responsibilities and team?

I oversee all aspects of a management consulting company from marketing and sales to client deliverables, finance, operations, and administration. We are a staff of 16 people; we will add 10 more this year.



We are a team of senior consultants (industry background; our certifications include CITAM, CSAM, ITIL, Six Sigma Black Belt, Six Sigma Green Belt, PMP, CMMI). We have marketing and public relations staff, analysts and administrators, and financial and legal staff.

You've won awards as a business leader. Which ones?

- CEO of the Year – Emerging CEO Finalist 2009
- The Stevies – Executive of the Year Finalist 2009
- Tampa Bay Best Places to Work – 2009
- Top 500 Businesses in the US - 2010
- Top 100 Women-Owned Businesses in Florida – 2010

I'm also a columnist for asset management industry publications.

What significant trends do you see on the IT horizon?

I see more emphasis on compliance in regard to software licenses, regulations related to corporate governance, required record keeping, and protection of personal, private and corporate data. Organizations must be able to demonstrate that they have employed best practices to protect critical data, especially within the bounds of software licenses and in the area of training of employees who come in contact with critical data. Organizations that neglect these areas risk trouble during auditing. Another trend - organizations are seeking cost-effective software asset management strategies and certified training programs in software and data management.

What entry-level jobs are available in the field today?

Asset management is a growing field and those certified in the major asset management tools will have a good chance of landing a great job. Graduates who obtain certifications from large manufacturers of software, service or asset management products (such as BMC, HP, LANDesk) will find opportunities to implement and support such systems at large companies worldwide.

Describe your educational background.

I worked and attended school full-time, graduating with a BS in management information systems. I have certifications/expertise in IT asset management, software asset management, internal auditing, business process management, compliance management, and corporate governance.

What courses have you found most useful for your career?

MIS was a new course when I was at USF and the professor had just transitioned from the corporate world. He made us think outside the box. The class was informative and everything taught applied to real world experience. I loved the class.

My professors were there for me when I had questions or needed guidance. Most would share their experiences in the field and background. They were encouraging and understanding.

Today, I speak at a lot of seminars or conferences as an industry expert, so outside of ISDS, public speaking courses have proven to be invaluable. I apply everything I learned from those courses; I wish I had taken more classes in that area.

Tell us about some other student experiences.

I joined Delta Sigma Pi, an international business fraternity, my junior year. The organization stressed professional dress and we were very involved in charity. We also organized business seminars where members who were in the workforce would speak about their experiences. This was great, because we were able to ask direct questions on what to expect and how to truly act and dress in a corporate environment.

Any advice to current students?

Participate in internships whenever possible to apply what you have learned; you will be ahead of the game.

At Animus, we hire staff consultants who have a real interest in helping clients solve problems, a positive attitude, and an ability to learn from senior staff and from clients. The ability to generate well-written reports, as well as developing and delivering presentations for clients, is very important. A solid command of English grammar, sentence structure and spelling, though it may sound like a given, is critical. §

