

Bits & Bytes

The newsletter of Information Systems & Decision Sciences

Winter 2010

Chair's Message, Kaushal Chari



With the popularization of cloud computing and mobile applications, new IT jobs are being created around these technologies. Further, with a large number of IT personnel involved with maintaining corporate legacy applications retiring, job opportunities in COBOL/mainframe technologies are now available to new college graduates. And, with IT outsourcing and globalization becoming a permanent feature in the IT landscape, there is also a growing demand for IT personnel with international exposure to manage globally dispersed project teams.

This is good news for our students and recent graduates, of course. Despite America's deeper than anticipated recession, more and more corporate partners are coming to recruit and hire business students at USF, especially in information technologies fields. This is even better news for our students and recent graduates!

Speaking of students and graduates, we were very excited to send a group of 26 MIS/IT students to India this past summer to study abroad. The special learning program, which was hosted by IT giant Infosys at the company's Mysore campus, included sessions with Infosys co-founders N.R. Narayana Murthy and K. Dinesh. Read the story about their experiences on page three (and click through to our video).

Other news since our last newsletter:

- The MS/MIS program was formally reclassified by USF's Board of Trustees as a Science-Technology-Engineering-Math (STEM) program. This move allows for a longer practical training period for our students and enables the USF MS/MIS program to attract some of the very best international graduate students. In addition, it also makes our program eligible to seek federal funding that is restricted to STEM programs.

- Six students participated in three ISDS Practice Center projects, working in groups of two to gain valuable "real world" experience (and also get paid for their efforts). Thanks to sponsors JPMorgan Chase, Citigroup, and Fintech for taking part in the program

last fall. In Spring 2011, Time Customer Service and Fintech plan are sponsoring one project each.

- To go beyond traditional classroom learning and boost student skills, we hosted a series of weekend "boot camps" this past semester (some in collaboration with the White-hatters Club). Topics for the recent boot camps included Linux and SharePoint basics; a "soft skills" boot camp is being planned for this semester. Students participating in these camps are able to note their participation in the boot camps on their co-curricular transcripts.



Fall 2010 Senior IT Executives Panel

- The Senior IT Executives Panel program, a joint effort between the ISDS department and the MIS Society, has been one of our more popular student programs and this past semester was no exception. Panelists Kevin McLeish (vice president, Depository Trust & Clearing Corporation), José Torres (managing director, Protiviti), and Clay Schnelker (vice president, JPMorgan Chase) spoke to a packed house about the industry and career opportunities, and spent time networking with our students.

Be sure to read the spotlight stories in this newsletter, which feature Rosann Collins, an associate professor, and Maria Valentino, one of our star students. Alumnus (and advisory board member) Ricardo Lasa is also spotlighted. As always, the newsletter concludes with a research feature, this time penned by faculty members Grandon Gill and Anol Bhattacharjee.

Happy reading!

Cordially,

K Chari
Kaushal Chari

Professor & Chair, ISDS

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Faculty Focus: Rosann Webb Collins



Professor Rosann Collins has witnessed the evolution of the IT industry since its nascent days, working as a telecommunications engineer in 1971. She soon began working in her first computer language, SPITBOL (a subset of SNOBOL, which was developed at AT&T Bell Labs for pattern matching and text manipulation), using it to build information systems “way back” in 1978. Collins has endured challenges throughout her career, namely building hierarchical bibliographic databases on IBM mainframes and using punch paper tapes before “graduating,” in 1978, to using punch cards for data input. Her first academic job, in fact, was supervising graduate students entering bibliographic data using large decks of punch cards!

Many would be surprised to learn that professor Rosann Collins was an art student early in her academic career, with the first academic degree this ISDS professor earned being a bachelor's degree in fine arts, specializing in sculpture and print-making.

Those who knew her in high school, however, might not be surprised. She was a member of a club that aimed to encourage high school students to take more math and science classes, and this club helped spark her interest in computers. As a club member, Collins would head downtown to visit corporate offices and gain hands-on experience with the “computing machine.”

After college, she accepted a job as a telecommunications engineer, and, although this field was totally unrelated to her academic degree, the experience gave her the opportunity to work with computers and databases. She liked it so much that she chose to return to school and earn a master's degree, this time in library sciences.

As a graduate student, Collins was involved in building bibliographic research databases under a grant from the Council of Library Resources. She worked to build a variety of library automation (as it was then known) applications and worked as a consultant for libraries and schools throughout the southeastern United States. Collins credits her advisor in the Library program, Ted Hines, for motivating and guiding her into an academic career. With his encouragement, Collins continued studying, earning a PhD in business administration from the University of Minnesota, which was one of the “oldest” MIS programs in the nation.

The Emergence of MIS in B-Schools

Collins' PhD committee at Minnesota was co-chaired by Gordon Davis, who is widely considered to be one of the fathers of MIS discipline. He co-founded the first MIS academic department in America, along with Minnesota professors Gary Dickson (management) and Tom Hoffman (operations management).

At that time, AACSB, the Association to Advance Collegiate Schools of Business (the leading accreditation body for business schools), had just begun to require business schools educate students in the use of computers in business. To address this shift, the University of Minnesota hosted a Summer Institute to train business school faculty members who were making the transition to teach computer courses. The Summer Institute retrained many faculty members from other disciplines to teach MIS courses; IBM helped this endeavor by supporting MIS curriculum development and PhD students in MIS departments. Collins was in the last group of these students, and she helped with the Summer Institute.

Teaching

Collins began her career at USF as an instructor in 1992, teaching the undergraduate Systems Analysis and Design course. When she started, businesses were not as widespread globally as they are today, and she never imagined teaching abroad!

Today, Collins' most popular class is the Global Information Systems class, which focuses on both the role of information and communication technologies as the enabler of a global world as well as how information systems are being impacted by the global environment. This class prepares students to work in a global workplace with colleagues from around the world. Collins teaches these courses with first-hand knowledge of business in other cultures; she has taught in France, Singapore, and India.

Since her first days at USF, Collins has seen numerous changes in the way USF educates students in the field. She has witnessed the introduction of the MS/MIS program (and a slew of many new courses). Collins says that while she's been involved with such advances and changes, she also finds things that remain the same: USF's underlying focus of MIS programs has been on analyzing and modeling data and processes in an organization, and on how to implement the models using the technologies of the day.

Collins is a life-long learner, which is essential in this field, given the rapid changes in technology's landscape. She believes that she would be bored working on something that did not have this level of change and impact on business and society. Pointing out that anyone with a long career as a computer professional must continually learn, Collins notes that the ISDS department has grown and changed along with technology, becoming more specialized, with increased depth in newer technologies, and tightly integrated with the local industry.

A researcher herself, Collins also believes that it is important for faculty members to be active researchers as this requires them to continue to learn while contributing to the body of knowledge. Though her research topics have changed over the years, the enduring focus of her research has been on the development and use of computers, especially on the human cognitive effort and processes required for those activities. §

2010 IT Summer School in India

News

The Department of Information Systems & Decision Sciences and the USF Education Abroad Office jointly organized the 2010 IT Summer School at Infosys, India, led by professors Kaushal Chari and Rosann Collins. A group of 26 students, primarily management information systems undergraduate and graduate students, participated in the three-week study abroad program at the Global Education Center of the IT giant, Infosys, in Mysore, India.

The head of Infosys' Global Education Center, Professor B.M. Subraya, taught software engineering to USF students, while Collins taught global information systems. Students participating in this program, earned up to six graduate or undergraduate USF academic credits.

This was the first time that Infosys participated in a study abroad program with any American university. USF students not only learnt software engineering from one of the leading practitioners, but also gained a better understanding of the global delivery model and outsourcing. The USF team had the privilege of attending presentations by Dr. Narayana Murthy and Dr. K. Dinesh, co-founders of Infosys and eminent business leaders of India, and also having lunch with them. This interaction was perhaps, the highlight of the 2010 India program. Apart from visiting Infosys Bangalore, students also visited Cisco in Bangalore.

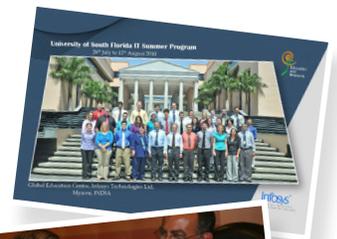
In addition to academics, the group also took part in excursions, visiting tourist attractions such as the Taj Mahal in Agra, India Gate in New Delhi, Maharaja's Palace in Mysore, Keshava Temple in Somnathpura. They also participated in a wildlife safari at Nagarhole.

Students were impressed by the advances made by the Indian IT industry. For some students, it was a "life-changing" experience visiting India and almost all of them were fascinated by the rich culture heritage. Program highlights can be seen in a YouTube video at

http://www.youtube.com/watch?v=w_yLx9iGxxM

Encouraged by the success of the 2010 study abroad program, a similar program to Infosys Mysore is being organized during summer 2011. Students would have the opportunity to earn three credits by taking the software engineering course offered at Infosys.

To make the program affordable to students, the Information Systems Decision Sciences department and the USF College of Business jointly awarded 16 scholarships of \$1,500 each to select students participating in the 2010 IT summer school. To support the program for the coming year, a scholarship fund has been established to enable students to attend the 2011 summer program. To make a gift, please visit <https://advinternal.fastmail.usf.edu/Tickets/>.



Top: USF group outside the Infosys Global Education Center-1; Center: Infosys chairman N.R. Narayana Murthy and Information Systems Decision Sciences chair Kaushal Chari at the interaction session; Bottom: USF students at the Infosys campus in Bangalore.

Questions and Answers

Alumnus Feature: Ricardo Lasas

Ricardo Lasas obtained his BS and MS degrees from the Information Systems Decision Sciences department and is now a successful Internet entrepreneur. Professor Don Berndt, who has collaborated with Lasas on a number of projects, spoke with him for this newsletter.

DB: I know you grew up in Madrid and most of your family still lives in Spain. What brought you to America for college and USF in particular?



While I was in Madrid, I read about USF and the city of Tampa, and it seemed like a great choice to get a degree in information systems. At the time, the university I was attending in Madrid had a business or computer science major, but they did not have a management information systems program. I love business and software has always been my passion, so when I saw USF had a combined major I decided to come to Tampa to finish my degree.

November 2010 marked my 18th year since arriving at USF. I have made good friends and found a circle of professional colleagues that are key success factors in my entrepreneurial efforts. Quite simply, the USF community has been a central part of my personal and professional life. Much of my family still lives in Spain, but I happily visit as often as possible.

DB: What was your career path like after USF?

In my last semester of the MBA program I wrote a business plan for my entrepreneurship track that received funding. From this, I became the CEO of First Choice Systems in 1998 and built an Internet system to help transfer patients into nursing homes. I have been involved in founding and running Internet companies ever since. We went through the crazy days of the tech bubble and have built solid software as a service companies during all these years.

My second venture was Web Piston (WebPiston.com), a site builder for small businesses we launched in 2003. Since

the launch, Web Piston has been used by tens of thousands of clients to build and maintain their online presence. More recently, I co-founded SiteWit.com with Brendt to optimize online marketing campaigns on Google AdWords and Bing. We launched in March 2010 and have added hundreds of clients and raised money from a publicly-traded company in Silicon Valley, California.

DB: You continue to play a role in the USF community through activities such as the Information Systems Decision Sciences Advisory Board and your work with faculty members. What are some of your recent projects?

I recently collaborated on a case study with Professor Grandon Gill about Web Piston and what route it should take for the future. Gill presented the case in a conference in St. Louis, Missouri, this past December. The case is currently used in the capstone course of the management information systems program. I have also been collaborating with Berndt on Web data mining for paid search campaign optimization and building machine learning engines that predict if Web visitors are going to accomplish a goal on a Website or not. This technology is at the core of my most recent startup mentioned above. SiteWit is a market leader in Web predictive analytics and online marketing optimization. Our core team is composed of USF graduates and as we are growing the company we actively recruit at USF. We are proud to hire USF graduates and build a cutting-edge technology company in Tampa with home-grown talent.

DB: What major technology trends do you see enabling or affecting your business?

As discussed above, data warehousing, data mining and machine-learning technologies are embedded in the core processes used to measure, optimize and predict with respect to online advertising campaigns at SiteWit. Another technology that has affected our business is cloud computing, which provides a cost-effective path for growing the company. From the start, we architected SiteWit to run on the cloud and currently we use Amazon Web Services and their Elastic Compute Cloud. It would have been far more difficult to assemble the sophisticated computing infrastructure and skilled staff to bootstrap the company in-house. In fact, we're moving Web Piston to the cloud as well. However, cloud computing provides far more than just cost savings. Scalability is a key factor in delivering the Web-scale measurement and optimization services offered by SiteWit. In addition, the flexibility to re-design and develop new features by using our modular infrastructure has allowed us to continually innovate. There is certainly a learning curve in building a company on top

of a cloud computing platform, but overall it has been a competitive advantage.

DB: You have hired several USF graduates. What skills do you feel are important for current students to cultivate?

I think there is a clear need for good software programmers and engineers. There are thousands of Internet software companies innovating here in the United States and they need quality programmers. I think it is a myth that the programming jobs are all being off-shored. I would agree that “commodity” programming is being shipped to India and other places, but core innovation and Internet businesses are strong in the United States, generating thousands of programming and product management jobs. I have been visiting with our partners in Silicon Valley

on a regular basis and it is interesting to see how talented engineers are aggressively pursued in that environment. Secondly, I think there is a need for good technical sales people. It is difficult to find trained sales people that also have the technical knowledge. I think that would be a great skill to develop within the management information systems program.

In my field, the Internet software business, we need programmers and technical sales people and we do not outsource any of our development. There is a bright future for good programmers and technical people with strong creative skills if you look in the right industry. §

Faculty Recognition

Congratulations to the following ISDS faculty members who were recognized for their accomplishments.



- **Mark Dummeldinger**, a statistics professor, was promoted to Instructor Level 2. Dummeldinger is an outstanding teacher in the department, who has won numerous teaching awards.

- **Barbara Warner**, ISDS instructor, was appointed coordinator for the MS/MIS program. Warner will manage the day-to-day administration of the program, which is one of the most successful graduate programs in the college.



- **Varol Kayhan**, a former doctoral student, joined USF St. Petersburg on a tenure track faculty position.

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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Newsletter Editorial Team: Manish Agrawal and Lorie Briggs

Research Feature

Professors Grandon Gill (left) and Anol Bhattacharjee (right) recently published an article, “Whom Are We Informing? Issues and Recommendations for MIS Research from an Informing Sciences Perspective,” in *MIS Quarterly*, the premier academic research journal in the management information systems discipline [1]. The central theme of the article was the difficulty in attempting to communicate disciplinary research to practice. They specifically identified a number of areas for concern that include:



- A drop in the number of collaborations between academic researchers and MIS practitioners. In the late 1970s, for example, around 40 percent of all articles in premier journals involved at least one practitioner author. Today, that number is practically zero.
- MIS research has become increasingly divorced from teaching. While most of research centers on management behavior and organizations, the bulk of the program is built around technical subject matter.
- MIS research has increasingly become a functional silo, divorced from other disciplines. Of all business research areas, MIS ranks second-to-last in terms of the likelihood that it will be cited by other business disciplines.

Perhaps the most serious indication that a problem exists is that the authors were unable to identify a single situation in which an MIS research publication has appeared to have influenced practice in any substantive way.

Drawing upon knowledge diffusion theory and the emerging Informing Science transdiscipline, the authors argue that part of the problem is that research findings tend to be complex. Complex knowledge, however, almost never transfers to practice very well through channels such as articles. Instead, it tends to flow best through face-to-face contact. The reason for this is simple. Complex problems, such as those involving technology and business, tend to have multiple solutions. Quite often, these solutions are very different from each other. For example, when you implement a particular system, there are a variety of different architectures that you might choose from. Which architecture you choose will have a dramatic impact on other aspects of your system, such as the appropriate organizational structure. When, as a researcher, you attempt to offer a general one-size-fits-all solution, almost everyone reading the article from their particular viewpoint will find much of the research seems to focus

on what seems obvious (to the reader) while, at the same time, other parts seem to contradict the manager’s experience. To avoid this trap, researchers should understand the practitioner’s own experience better, before presenting research findings.

The obvious implication is that MIS researchers need to spend much more face-time with practice. They propose a number of ways to improve personal contacts with practice. These include:

1. Encouraging activities such as action research—researchers participating in the situation they are studying—case writing, processes that nearly always results in the development of a strong and enduring bond between researchers and the practitioners.
2. Developing professional doctoral programs directed at practicing managers as a means of moving research knowledge into the field.
3. Developing programs for academics to participate in business, such as sabbaticals-in practice, to foster a practice-oriented mindset.
4. Encouraging journals to set aside space for practice-focused articles, encouraging researchers to focus on practice-related ideas.

Absent these types of incentives, Gill and Bhattacharjee argue that the MIS academic discipline could well become completely irrelevant to practice. If that happens, its very existence could be threatened, since institutions are increasingly demanding that departments justify the substantial amount of funding that goes into research activities. §

¹ Gill, Grandon and Bhattacharjee, Anol. 2009. “Whom Are We Informing? Issues and Recommendations for MIS Research from an Informing Science Perspective,” *MIS Quarterly*, (33: 2) pp.217-235.

Questions and Answers

Student Profile: Maria Valentino

Maria Valentino is a senior MIS major and program manager at PricewaterhouseCoopers.

International Experience

Despite her busy balancing act among school, work and personal life, Valentino found time this past summer to participate in the intensive, three-week study abroad program held at the Infosys Training Center in Mysore, India. The program involved 26 MIS undergraduate and graduate students, who earned six credit hours by completing a software engineering class

delivered by an Infosys instructor, Professor B.M. Subraya, and a global information systems class taught by USF faculty, Professor Rosann Collins.



In addition to staying on the Infosys training campus for classes (an experience in itself), the group traveled to Bangalore, India, to visit IT companies and went on several sightseeing activities, such as tours of New Delhi, the Taj Mahal and a jeep safari to see elephants and other wildlife.

Combining Both Worlds

Participating in the program has been helpful to Valentino, at both school and work. She has been able to “take the experience from India and tie it to what we are learning in other classes.” Currently taking classes with others who went on the trip, they sometimes say to each other “remember when we saw that in India?” when presented with new concepts during a lecture.

At PricewaterhouseCoopers she has been approached to share what she learned in India and at Infosys, and as a result she has made new connections within the company. Working with other cultures is a hot topic, especially in the areas of

outsourcing offshore and knowledge transfer. Anyone tasked with working globally, specifically those who haven’t gone through any training program, can be frustrated when they have to collaborate with other cultures to come up with a solution. As she notes, “until you really see it and experience it” the cultural differences are not so obvious.

A Challenging Schedule

With five classes left after this semester, Valentino hopes to graduate at the end of summer 2011. At PricewaterhouseCoopers, she is in the knowledge management group and coordinates ongoing projects across functional groups. “Time is the number one thing,” says Valentino, identifying the main difficulty. In particular, she notes that group projects in classes are hard to schedule, as well as accommodate students with different schedules and business backgrounds.

What’s Next

Valentino has been in IS for more than ten years, but she is also considering to pursue a career in teaching in the future. She would like to use her business experience and skills to make the course content relevant to students, as well as leverage her communication skills. “I can help them understand things that are going on in words that they can understand.” §

Feature written by Professor Rosann Collins



USF students in front of the Taj Mahal in Agra, India.