

Bits & Bytes



Chair's Message, Kaushal Chari

What do you think of when you see company names such as Microsoft, AT&T, Raymond James, Depository Trust Clearing Corporation, Citigroup, Time Customer Service, JPMorgan Chase, Verizon, and Fintech? If you're like me, you think of prominent IT employers, which is why I am so pleased that this is just a partial list of corporations that recruited our students for full-time and/or internship positions. It is gratifying to see more and more top U.S. firms are visiting USF to identify new talent.

I am pleased to report the following ISDS news:

- A new MIS program was approved by USF and is slated to begin in 2012. This integrated bachelor-master degree program would allow eligible undergraduate students to earn a master's degree more quickly (as opposed to pursuing the graduate degree separately from the undergraduate degree).
- We've hosted a series of very successful weekend boot camps over the last six months. The camps focused on Sharepoint, soft skills, PHP, and CAPM exam preparation (in collaboration with the Tampa Bay Chapter of the Project Management Institute).
- We received a \$171,000 grant from the National Science Foundation. Read more (and find out which professors are part of the team) on page 5.
- Faculty members **Grandon Gill** and **Al Hevner** received the Herbert A. Simon Best Paper Award at the Sixth International Conference on Design Science Research in Information Systems in May.
- USF's MIS research has been ranked #14 in

the world for publication in premier journals (*Management Information Systems Quarterly* and *Information Systems Research*) during the 2008-2010 period (<http://www.vvenkatesh.com/ISranking/>).

- The MIS Society helped host another successful Senior IT Executives Panel Discussion. Thanks to panelists **Paul Demirdjian**, CEO, Jagged Peak; **Linda Baril**, partner, BPM Solutions; and **Stephen Jackson**, CTO, EMS Consulting.



- Peak 10 recently hosted a fundraising event for us in April. Thank you to USF alumni **Debra Curtiss** and **Jeff Spalding** of Peak 10 for their support.
- A group of MIS students will be leaving this month for USF's "IT summer school" at Infosys in India. This is the second year USF students have traveled to learn at one of the world's leading IT firms.

Our newsletter includes a research spotlight on user resistance in system implementation. Be sure to read that story, as well as the spotlight on **Lance Raab**, an alumnus who started his business out of his dorm! Professor **Ron Satterfield** is spotlighted and student **James Ponikvar** talks about his experience with our ISDS Practice Center.

Happy reading!

K Chari

Kaushal Chari
Professor & Chair, ISDS

ISDS News

MIS Alumni Association Formed

The USF MIS Alumni Association was launched at the April advisory board meeting, with ISDS advisory board member and MIS alumnus **Brian Day** serving as the group's first president. This association provides professional development and networking opportunities for alumni as well as the opportunity for alumni to reconnect with the ISDS department. All alumni are invited to join the "USF MIS Alumni" LinkedIn group.

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Faculty Focus: Ron Satterfield



Ron Satterfield is a business professor who teaches topics such as statistics and mathematical modeling, but he doesn't focus solely on traditional business students. He also teaches physicians and other healthcare professionals about the business side of medicine in an innovative eight-week "Business of Medicine Boot Camp."

This program, which aims to teach medical students the basics of business, is driven by the growing involvement of physicians with medicine-related business enterprises. It gives medical students a comprehensive look at business skills needed to be a successful physician leader. Several other USF business faculty members are also participating in the endeavor.

"I really enjoy working with a wide range of students," said Satterfield. That range includes everything from young undergraduates to seasoned executives to medical professionals.

"My courses all present solid business principles; the challenge for the professor is to make these principles relevant to the learner, to tailor delivery to the student audience. Relevance to the audience is key."

Satterfield has a lot of audiences to consider. In addition to the student in the medical "boot camps," he teaches young undergraduate students, masters-level information systems students, and working professionals who are pursuing an MBA or Executive MBA. He also teaches week-long graduate-level courses in Lean Six Sigma.

"My job as a professor is to help students think about operations in ways they haven't thought of it before," said Satterfield, referring specifically to the MBA and graduate students who might be taking the Lean Six Sigma course.

Satterfield began his career in manufacturing, an experience that allowed him to see first-hand the kinds of conflicts that can arise between marketing and operations functions in a business. Often, he said, challenges arise as marketing personnel aim to please customers with added features for a product or service, while operations staff need to focus on regularity and efficiency in production. The key is building systems which can accommodate the needs of both parties.

"People think ideas of flow and balance as applying only to the manufacturing industry," said Satterfield. But he wants his students to think beyond that.

"Ideas like flow, balance, error prevention, etc. apply to health care, insurance, banking, pharmaceutical sales, the telecom industry, staffing services, and even non-profit industries," he said. "The lessons students learn in these areas can help them do their jobs better, run their companies better," he added.

Satterfield joined USF in 1993 after earning a PhD in operations management from the Kelley School of Business at Indiana University. His professional service includes serving on the board of directors for the USF Federal Credit Union. Prior to his appointment to the board, he served as a member and chair of organization's supervisory committee, charged with overseeing credit union operations. He also is frequently called upon to assist outside companies with problems and training in supply chain management and process improvement.



Satterfield's research interests include supply chain management, facility location, distribution system design, demand modeling, and service operations management. He has authored teaching materials in these areas. He is also a regular presenter at academic conferences.

A resident of Apollo Beach, Satterfield lives in the waterfront community with his wife, Michele, and their cats Lucy and Ethel. Weekends will usually find him experimenting with something good in the kitchen. §

Faculty Profile

Student Profile: James Ponikvar

Student Profile

Recent graduate **James Ponikvar** turned a semester-long Practice Center project with the IT group at Time Customer Service into full-time employment.

James Ponikvar's story starts much like any typical student's story. He chose to attend a state university after high school graduation, and, given that he lived in Gainesville, it was only natural that he study at the University of Florida. After two years of coursework, he decided to seek meaningful employment and, building upon the lessons he learned in class, sought a job related to computers. Given that one of his favorite courses was a computer architecture class, he began working at a computer store, building personal computers and servers for small businesses.

Clients regularly asked for help setting up websites, so Ponikvar, taking advantage of the fact that most of his colleagues at the computer store preferred to work on building computers instead of building websites, (and, he admits, to beat the monotony of assembling computers) bought a copy of the book, "Building a Website for Dummies." Self-taught, he soon became "the web guy" at the computer store!

As he compared the sites he created against some excellent sites prepared by professionals, Ponikvar soon realized that the best web pages were using JavaScript extensively. Ponikvar followed suit, and, while searching for JavaScript content, came across the website of Douglas Crockford (www.crockford.com). He followed the examples this senior JavaScript architect at Yahoo! shared. He continually dug through the code used in exemplary sites. Ponikvar soon became an expert in Javascript, working in this new capacity for roughly three years. He was succeeding even without finishing the degree program at UF.

Ponikvar moved to Jupiter, Fla., and struck out on his own. At the time, real estate was booming he began to create websites for friends and family who were realtors. Using the Multiple Listing Service, Ponikvar created sites that enabled clients to browse through realtors' current listings. His business flourished. In fact, he could not build the websites fast enough to meet demand!

Four years later, the real estate market crashed and busi-

ness slowed, so Ponikvar accepted a job at MyFlightData, a company that maintained flight logs for pilots and aircraft owners. This job involved using .NET technologies to create user interfaces for pilots to manipulate data received from the Federal Aviation Administration.

Ponikvar worked in that industry for eight years then deciding it was time to finish work toward the college degree. He considered studying computer science, but wanted to learn business basics in addition to the technical skills. His father, who was the architect and interior designer for the USF Patel Center, gave Ponikvar a copy of the USF course catalog. While other schools were shutting down their MIS programs, USF was growing its program, so he decided to investigate the program. Ponikvar met ISDS faculty member **Barbara Warner**, who had invited current students to share their perspectives on the department and the USF curriculum with prospective students. Warner pointed out that the department paid great attention to industry needs which helped sway Ponikvar to USF and the MIS program.

Ponikvar found the system analysis and design class taught by **Joni Jones** particularly noteworthy. Each week the class covered one specific skill (such as project estimation, requirements gathering, interviewing, and change management) that forced him to view technology as a means to implement various business processes and to support various business metrics. §

James Ponikvar participated in a semester-long ISDS Practice Center project for Time Customer Service, creating a project wall-board to provide managers with project status information. Working with a fellow USF student, a complex software system was developed – starting from scratch – in sixteen weeks. After beta testing, they deployed the system in the company's production environment.

Time Customer Service has since hired him as a full-time employee.

Questions and Answers



Alumnus Feature: Lance Raab

Lance Raab earned a bachelor's degree in business in 1987, majoring in management information systems. After graduation, Raab founded, built, and sold two Tampa-based technology companies. He is now in the process of starting a new Internet company.

How did you become an entrepreneur?

When I was a student at USF, I had the good fortune of being able to work in both a large, corporate environment and in a small, entrepreneurial setting. Both of these opportunities came to me as a direct result of being involved in the USF College of Business. On the corporate side, I was referred to USF's cooperative education program by a business professor.

This provided me with the opportunity

to spend three semesters working full-time for a large company and gain invaluable on-the-job experience. On the entrepreneurial side, I connected with a few other USF students, and we did custom programming work out of our dorms for several Tampa Bay area businesses. By the time I graduated from USF, our little company had enough clients and projects that we could actually make a living at it! Having worked in both entrepreneurial and corporate environments as a college student, I felt the entrepreneurial environment was a better fit for me.

Talk about some of your entrepreneurial experiences as a USF student.

Initially, our company did custom programming for a variety of Tampa Bay area businesses (law firms, home builders, government agencies, insurance companies). This was in the 1980s, back in the DOS days. Personal computers were still relatively new, and companies were

just starting to use PCs in their businesses. We leveraged the rapid business adoption of PC's to grow our business and expand our service offerings to training, computer setup, and accounting software. We did all this part-time, as we were still in school pursuing our degrees. After graduation, we focused full-time on the business.

What do you remember as the most useful thing about your USF/ISDS experience?

I can't say there was just *one* most useful thing; I had numerous experiences at USF that taught me valuable lessons and created opportunities. Working at the Business Computing Center, getting involved in the MIS Society, joining the Cooperative Education program, competing in a scholarship program for MIS majors, and attending USF-sponsored events in the Tampa business community all had a major impact on me and my future.

Tell us about your career path.

After graduation, I grew the consulting business we started as students. We focused primarily on custom programming, accounting information systems and training for a variety of businesses in the Tampa Bay area. One of our earlier clients was a retirement community that needed custom developed software. It turned out that the software we developed for this client was needed by other retirement communities, so I started a separate software company to serve the senior living industry. Both companies grew over the next 19 years. The software company expanded to thousands of customers throughout the United States and Canada. I eventually sold Ideal Consulting in 2006, and shortly thereafter I sold REPS Software in 2007. I took some time off and have since started a new company focused on internet opportunities.

As an employer, what skills do you look for in new hires?

Different positions have different requirements; however, there are common attributes I look for in any position I am trying to fill: a positive "can-do" attitude, the ability to work with people in a team environment, the ambition to grow and develop, and a passion for the work.



What are some significant trends ahead for IS/IT?

Cloud computing and mobile computing are two major trends that will create significant opportunities for job seekers and entrepreneurs. As user adoption grows, there

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ISDS News, *continued*

ISDS Faculty Team Receive NSF Grant

ISDS department faculty team lead by **Grandon Gill**, along with **Manish Agrawal** and **Kaushal Chari**, received a \$171,718 grant from the National Science Foundation, Division of Undergraduate Education. This grant was awarded to develop authentic, open cases in STEM subjects and to explore their use in a MIS capstone course for undergraduate majors. The project also will investigate the effectiveness of the case-based approach in teaching a MIS capstone course. This is truly a collaborative project with many ISDS faculty members such as **Alan Hevner**, **Joni Jones**, **Rick Will**, and **Don Berndt** serving as senior personnel on the project.



Grandon Gill

Gill and Hevner Receive Best Paper Award

ISDS professors **Grandon Gill** and **Alan Hevner** received the Herbert A. Simon Best Paper Award at the Sixth International Conference on Design Science Research in Information Systems and Technology. Their coauthored paper is titled “A Fitness-Utility Model for Design Science Research.” Applying ideas from evolutionary economics, the authors defined a fitness-utility model that better captures the evolutionary nature of design improvements and the essential nature of searching for a satisfactory design across a rugged fitness landscape.



Alan Hevner

ISDS Faculty Promotions

ISDS faculty members **Ron Satterfield** and **Barbara Warner** were promoted to Instructor Level 2. Congratulations to both for their well deserved promotions!



Blend Technology and Business

USF's MIS programs blend technology with business. In addition to software development, our emphasis on project management, databases, business intelligence, ERP, and information security gives you skills to do more. You'll have the technical savvy to lead developers and analysts. And you'll have the business skills to execute projects on time, under budget, and on target.

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USF MIS Alumni

News Feature: ISDS Practice Center

Because the University of South Florida is located in a metropolitan location, it's not unusual to see business students coming at companies such as Fintech, the leader in electronic payments for alcohol distributors and retailers. For the last year, a group of management information systems students has been working at Fintech. But what *is* unusual is that they haven't been serving as interns. Instead, they've been working in a practice center where students participate in meaningful, service learning projects while gaining crucial experience.

The difference between a practice center and an internship is that in a practice center setting, USF College of Business faculty members serve as co-supervisors (with the client also serving as a co-supervisor), and students are on the university's payroll. Companies are treated as clients and the businesses play host to the students.

Since its 2010 launch, the ISDS Practice Center has partnered with JPMorgan Chase, Citigroup, the U.S. Department of Veterans Affairs, Fintech, and Time Customer Service.

Projects are specific and provide students the opportunity to actually participate with a greater responsibility than the average undergraduate intern would carry.

"It's invaluable because you get everything that doesn't happen in the classroom that you will need in order to get a job - anything from skills that they don't talk about to just real-life experiences," said **James Ponikvar**, who recent graduate who worked on a project for Time Customer Service.

For some students, the center provides an opportunity to apply classroom lessons to real-world problems. For others, the ISDS Practice Center is helping them to broaden their global knowledge.

"I already have three years of work experience with Infosys in India," said **Lekshmi Rajagopal**, an MIS graduate student.

"But having work experience in the United States is invaluable to me. It gives me real-time experience on how the market works here in the U.S."

Rajagopal worked at Fintech for the last semester, spending 20 hours a week assisting Fintech

engineers with new analytics products, establishing quality assurance and control for its current client base.

"They took us on their team and gave us the work just as they would share among themselves," said Rajagopal. "We had daily meetings, and we shared our experiences in what we did...what we planned to do the next 24 hours, and if we had any issues or had roadblocks, they would jump in and help us solve them. It was an amazing experience."

Aside from the familiarity of working with others within a company, students also receive the benefit of being able to combine classroom knowledge with active skills.

"I've enjoyed the opportunity to apply all the concepts and theories that I've learned to a real problem that's affecting real people, and I get to see how my solution to that problem affects people," said Ponikvar.

Both Ponikvar and Rajagopal have been hired full-time by the sponsoring firms they worked with on their respective projects. A video on the ISDS Practice Center can be found on YouTube at <http://bit.ly/IJyxic>. §



Alumnus Feature, *continued*

will be huge opportunities in infrastructure, applications, new product innovation, and consulting.

Any advice to current students?

I highly recommend taking the right classes, studying hard and earning good grades, as this lays a foundation, of course. In reflecting back on my student years at USF,

however, I find that the opportunities that came my way were a direct result of getting involved. I strongly encourage students to step out of their comfort zones and get involved beyond the classroom. Become active in student organizations, network in the business community, gain relevant job experience, and make business contacts within and outside the university. I can't emphasize this enough. §

Research Spotlight: User Resistance in System Implementations



Tim Klaus (right), a PhD alumnus who is an Associate Professor of Management Information Systems at Texas A&M University – Corpus Christi, and **J. Ellis Blanton** (left), ISDS professor, researched user resistance in system implementations. Their paper was recently published in the *European Journal of Information Systems*¹. Below is a summary of the article.

For a long time, companies have installed large-scale business systems or upgraded their current systems. Despite the great improvements in technology over the years, however, user resistance remains a major issue when companies use new large systems or make major upgrades to their existing systems. In fact, previous studies have indicated that user resistance can be the reason for outright system failure, or the reason for why a system is not meeting targeted goals.

In order to better understand user resistance, Klaus and Blanton examined the issue, looking at it through the lens of the psychological studies that focus on the psychological contract. This concept revolves around the idea that employees have subjective beliefs about the promises made by their employer, beliefs that continually change as employees' expectations of their employer change.

Using a focus group, interviews, and a case study, Klaus and Blanton found four categories of “perceived unmet promises” that occurred in system implementations that affected the employees' psychological contract. These categories are:

- individual issues (uncertainty, lack of input, loss of control/power, low self-efficacy),
- system issues (technical problems, system complexity),
- organizational issues (facilitating environment, poor communication, poor training), and
- process issues (job/job skills change, additional workload, lack of fit).

The impact of these issues on system implementation were examined and a **User Resistance Behaviors Development Model** was created to explain the process that may occur in employees, from when they first perceive one or more unmet promises until they actually exhibit resistant behaviors.

“User resistance is not necessarily a negative thing for a company. It can help a company identify problems in an implementation plan.”

There are a number of both theoretical and practical contributions from this study. The impact of the psychological contract on employees' behaviors was examined, and the psychological contract literature was further built upon with the User Resistance Behaviors Development Model. In addition, specific areas of perceived unmet promises that occur in system implementation were identified.

Finally, recommendations were provided on how managers could create or rework strategies on how to better address perceived unmet promises in order to minimize the level of user resistance.

User resistance is not necessarily a negative thing for a company. It can help a company identify problems in an implementation plan. By following the recommended strategies in this paper, the causes of user resistance can be better identified in order to address problems in the implementation plan and help employees better support changes that are taking place. §

¹ Klaus, T. and J. E. Blanton. User resistance determinants and the psychological contract in enterprise system implementations. *European Journal of Information Systems* (2010) 19, 625–636.

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