

>>> Bits and Bytes

News Magazine of the Department of
Computer Information Systems

J. Mack Robinson College of Business



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Dr. Ephraim McLean, Department Chair

Greetings. With the highly successful launch last fall of Bits and Bytes, the news magazine of the CIS Department here in the Robinson College, I am pleased to welcome you back to this spring issue.

As you look through the pages of this issue, you will see that the Department continues to be ranked in the top ten nationally by the latest survey in *U.S. News & World Report* (2009). Also, please read the cover story on p. 6 about CIS masters student, Jimmy Dickinson, who with his brothers won the 2009 Microsoft Imagine Cup U.S. Championship in software development. Their team, coached by Associate Professor Dave McDonald, will be going to Egypt in July to compete for the World Championship. Good luck to Jimmy, Dave, and the team; the competition is expected to be brutal.

I also want to say goodbye to three members of the CIS family: Melody Moore Jackson, Peter Meso, and Carol Patterson. Dr. Melody Moore Jackson joined the Department in 1998 after earning her doctorate in computer science at Georgia Tech in 1998. She was promoted to associate

professor (with tenure) in 2005 and returned to Georgia Tech for a two-year leave of absence in 2006-08. She came back to Georgia State this past year, but the tug of Georgia Tech was too great and she resigned this spring to accept an appointment as a tenured associate professor there in order to pursue her highly-regarded research on Brain-Computer Interfaces.

Dr. Peter Meso, who has been with us as an assistant professor for eight years, is moving to Georgia Gwinnett College, where he will continue his teaching and research on software development and on the adoption of IT in Sub-Saharan Africa. He will carry with him his editorship of the African Journal of Information Systems.

Carol Patterson has been on the staff of the Department for 15 years, most recently as the Business Manager. Because of the current economic downturn, which has brought severe budgetary pressures on the university, a number of staff positions have had to be eliminated, including hers. During her time with us, she has provided dedicated and valuable service to the Department and she will be missed. Indeed, all three of these individuals, each in their own way, have left a valuable legacy here that will be difficult to fill. We wish them all well.

As I said in my last letter, I hope that you find this news magazine of interest and that you will send us information about your news. We want to stay in touch.

Department Chair
Regents' Professor
Smith Eminent Scholar's Chair
in Information Systems

One-Year Masters for IT Professionals

A one-year, 12-course Executive Master of Science in Managing Information Technology (eMS-MIT) is offered by the nationally-ranked CIS Department in Georgia State's Robinson College of Business. The courses are the same full-length courses taught in the normal two-year program, but tailored to an executive audience and offered on 25 Saturdays and 25 electronic distance-learning modules over a one-year period.

Individuals working in the IT field with a minimum of four years of industry experience and an undergraduate degree from an accredited university are eligible.

More information on the program and how to apply is available on the program Web site: robinson.gsu.edu/masters-managing-it

Ranked again as Top Ten by U.S. News & World Report

Here are the best graduate MIS programs heading into 2009-2010:

1. Massachusetts Institute of Technology (Sloan)
2. Carnegie Mellon University (Tepper)
3. University of Texas (McCombs)
4. University of Arizona (Eller)
5. University of Minnesota (Carlson)
6. University of Maryland (Smith)
7. New York University (Stern)
8. Stanford University
9. University of Pennsylvania (Wharton)
10. Georgia State University (Robinson)

{Undergraduate CIS program ranked 8th in U.S.}



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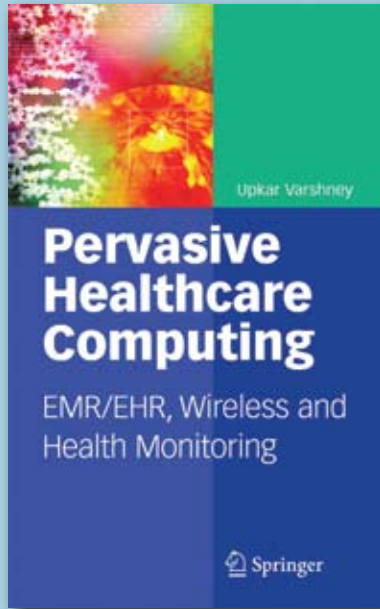


Dr. Upkar Varshney publishes new book *Pervasive Healthcare Computing*

Healthcare's first book published on this topic

Pervasive healthcare is the conceptual system of providing healthcare to anyone, at anytime, and anywhere by removing restraints of time and location while increasing both the coverage and the quality of healthcare.

Dr. Upkar Varshney's *Pervasive Healthcare Computing* is at the forefront of this research, and presents the ways in which mobile and wireless technologies can be used to implement the vision of pervasive healthcare. This vision includes prevention, healthcare maintenance and checkups, emergency intervention, treatment, etc.



"I have been very actively involved in pervasive healthcare for some time and noticed there is not a book on pervasive healthcare. I decided to write this book to help advance the emerging area," said **Upkar Varshney**.

Wireless and mobile technologies discussed in the book include: cellular/3G networks, wireless LANs, satellites, sensors, radio frequency identification (RFID), WiMax, Bluetooth, fixed wireless, and ZigBee.

For those that don't know, ZigBee is a low-cost, low-power, wireless mesh networking standard. The low cost allows the technology to be widely deployed in wireless control and monitoring applications, the low power-usage allows longer life

with smaller batteries, and the mesh networking provides high reliability and larger range.

Pervasive Healthcare Computing fills the need for a research-oriented book on the wide array of emerging healthcare applications and services, including the treatment of several new wireless technologies and the ways in which they will implement the vision of pervasive healthcare.

This book is written primarily for university faculty and graduate students in the field of healthcare technologies, and industry professionals involved in healthcare IT research, design, and development. Available May, 2009 from Springer.com, a global scientific publisher.



Upkar Varshney

"I wrote this book to inspire significant research in pervasive healthcare computing that would allow healthcare professionals to manage patients from any location and patients to stay more independent in their place of choice while reducing the cost of healthcare."

Upkar Varshney, who is an associate professor within Robinson, conducts research on these topics: wireless networks, pervasive healthcare, ubiquitous computing and mobile commerce. In a recent CAIS study, he was ranked among the most productive IS researchers for 2001-2005. He has served as an editor for *IEEE Transactions on IT in Biomedicine*, *ACM/Kluwer Mobile Networks*, *IEEE Computer*, *Decision Support Systems*, *Communications of the AIS*, *International Journal on Network Management*, *International Journal on Mobile Communications*, *International Journal of Wireless and Mobile Computing*, and *Handbook of Research on Mobile Business*.

CIS Department Ranked 7th in the World for Articles Published

The J. Mack Robinson College of Business was recently recognized as one of the top U.S. business schools for faculty research according to an analysis by the School of Management at the University of Texas in Dallas (UTD). Robinson's faculty was 54th overall and 24th among U.S. public schools in worldwide rankings. Robinson's Computer Information Systems (CIS) department finished seventh in the world for articles published on information systems research. CIS Department researchers are also third in articles published in the prestigious *MIS Quarterly*.

The survey is a rolling five-year survey that ranks the top 100 schools in the world based on faculty research contributions. The most recent rankings are based on a database created by the Center for Information Technology Management at UTD which tracked faculty contributions in 22 leading business journals from 2004 to 2008. The journals represent a variety of disciplines and measures contributions to prestigious publications. "The foundation for excellence of any business school is the caliber of its faculty," said Robinson College Dean **H. Fenwick Huss**. "This recognition, combined with the college's other national rankings, speaks to the strength of our faculty and underscores our position as a world leader in business education."

Business Process Management



It's a Jumble Out There

BPM Simplifies the Complexities of Service Delivery



Hear the term “business process” and what likely comes to mind is a series of tasks and activities involving the physical flow of goods and materials. Think Henry Ford’s assembly line.

A new form of the practice, called Business Process Management, or BPM, is helping firms unclog bottlenecks in the flow of information between functions, streamline the execution of end-to-end services performed by different business units, and enhance the overall customer experience.

Richard J. Welke, director of Robinson’s Center for Process Innovation, says the underpinnings of Business Process Management trace back to document work flow systems developed in the mid-1970s. BPM itself emerged within the last few years through advances in information technology and the convergence of supporting services. As a field of study, he notes, “BPM is so new that there isn’t a true textbook for the area.”

Although it ultimately will be applied to C-level issues including agility, real-time business intelligence, regulatory compliance, market innovation, value chain management, and reduction of transaction costs, BPM thus far has been implemented most broadly in front-office applications used to deliver information-intensive services to end-users.

By way of example Welke cites the transformation of the airline ticket purchase and check-in experience: “Not that long ago customers booked a flight with a travel agent, brought a hard ticket to

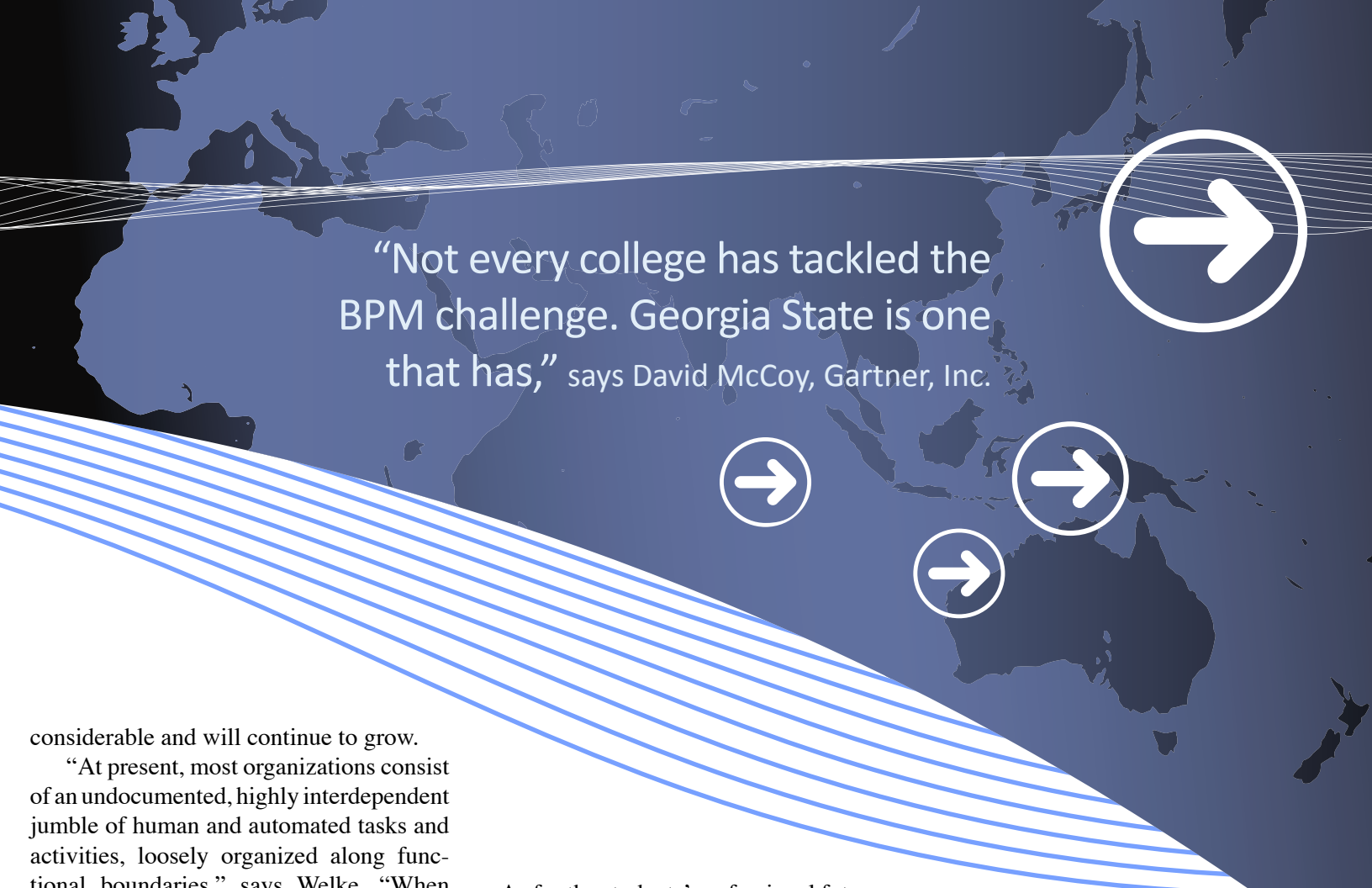
the airport, then stood in a long line to secure a boarding pass, which was a labor-intensive and inefficient series of steps.”

Seamless Self-Service

Today, of course, the complete transaction is one of customer selfservice, conducted electronically. The customer buys the ticket online, selects his or her seat, prints out a boarding pass, and presents it at the gate. Below the surface remain a set of large and complex processes that must be carefully managed, but the customer is no longer exposed to them. Not only does BPM improve the customer experience, it also provides management with real-time visibility into what is happening as well as with the ability to intervene before the customer knows there is a problem, should one develop.

Whether tracking the progress of a shipment or inquiring about the status of an insurance claim, every external customer interface is supported internally by an underlying, often multistep, process. The advent of BPM has made improving or changing such steps “relatively simple,” Welke says, adding that its use helps firms avoid the sort of radical reengineering that used to trigger “‘big bang’ change management issues.”

BPM also is a bright spot in a tough job market. Because it is a fairly new field that has not yet been widely adopted, the demand for business process analysts and eventually for chief process officers is



“Not every college has tackled the BPM challenge. Georgia State is one that has,” says David McCoy, Gartner, Inc.

considerable and will continue to grow.

“At present, most organizations consist of an undocumented, highly interdependent jumble of human and automated tasks and activities, loosely organized along functional boundaries,” says Welke. “When you want to change something, where do you start? Where do you end? What’s going to break and who’s going to fix it?”

Career Potential and Kudos

Given the career potential for BPM professionals, it’s hardly surprising that Welke’s upper-level undergraduate course, *Defining and Innovating Business Processes*, is packed to capacity. Moreover, its students and curriculum receive high marks from a recent guest lecturer, **David W. McCoy**, who leads the business process group at Gartner, an IT research and consulting firm.

McCoy, who received his MS in computer information systems from Robinson in 1987, wrote about the class on his Gartner blog, noting that the group has been “building models, learning simulation, [and] gathering insight that some enterprises have not even started working on. Not every college has tackled the BPM challenge. Georgia State is one that has.”

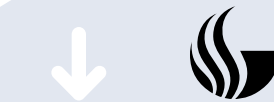
As for the students’ professional futures, McCoy encourages his readers to “Check out what they are learning. Imagine hiring someone who doesn’t have to ask, ‘Ugh... just what is a process?’” He directed the final, and somewhat urgent, comments in his blog entry to Welke’s BPM students: “We need you out here. Hurry up and graduate and get those resumes on the street.”

Jenifer Shockley

Originally published in *State of Business*, Spring 2009, used by permission.



Richard Welke



Dr. Richard Welke is the director of the Center for Process Innovation, a professor, and the previous chair of the CIS department at Georgia State University. He was a co-founder of several of the information systems discipline’s now-major academic organizations, (ICIS/AIS, TIMS College on IS, IFIP WG 8.2). He has owned and managed several IT companies in Canada and the US, and was CIO for two large engineering companies in Atlanta. His 100 plus papers are published in various books, refereed journals, and conference proceedings. Dr. Welke’s current research is focused on business process management in service-oriented enterprises.





Robinson Student Wins Microsoft Imagine Cup 2009 U.S. Championship



Grand Prize Winning Brothers for Software Design!

Jimmy Dickinson, a second-year CIS graduate student at the J. Mack Robinson College of Business, teamed with his two younger brothers to win the U.S. software design championship at the 2009 Microsoft Imagine Cup competition held in Boston in May. The victory qualifies the brothers, known as Team MultiPoint Web, to represent the United States at the world finals in Cairo on July 3.

Dickinson, a Master of Science student majoring in computer information systems (CIS), along with his brothers **Mark** and **Luke Dickinson**, formed the victorious programming team. Mark and Luke live in Portland, Oregon, where Mark is an undergraduate computer science student at Portland Community College and Luke is a student at Tigard High School. Their team created a set of low-to no-cost Web-based learning applications built on Microsoft's MultiPoint technology, which allows several students to simultaneously use a single computer through multiple mice.

"Our team is excited to represent the United States," said Jimmy Dickinson, who credited his Robinson College education with providing the boost he needed to excel in the national competition.

"Robinson's top 10 ranked CIS department has provided me with an excellent education," adding that "the flexibility of the program allowed me to gain a wealth of professional experience while still working toward my degree."

Noting that the Imagine Cup is one of the most prestigious student programming competition in the nation, **David McDonald**, associate professor of computer information systems and Robinson's director of emerging technologies, said that "Jimmy and his brothers produced a great idea and created a suite of exciting educational software designs that fit perfectly into the theme and technical challenges of the competition. They deserved their first place finish for their technical artistry and innovative thinking."

Team MultiPoint Web defeated 14 competitors, including teams from the Massachusetts Institute of Technology, Purdue University, and California Polytechnic University to gain their title. The Dickinson brothers' winning suite of educational software programs can be updated with new lessons and activities that can be shared around the world in multiple languages with little or no hardware or software investment. Further, it has the potential to stretch existing hardware resources several times over, benefiting developing nations where students are many and resources are few.

The Imagine Cup is an annual technology competition that brings together students around the world to showcase innovative technology creations that help resolve some of the world's toughest challenges. Now in its seventh year, this program is one way Microsoft Corp. helps foster students with skills, experience, and connections for both their academic and professional career.

The Imagine Cup encourages students to apply their innovation and creativity to using technology to make a difference in the world today.

The theme centers on the U.N. Millennium Development Goals, which outline some of the hardest challenges in the world today such as fighting hunger and poverty and eradicating AIDS, as well as improving education, maternal health and environmental sustainability. For Imagine Cup contestants these are guiding pillars to inspire change all over the world.

Students develop technology-based solutions to address the Imagine Cup theme, competing for cash prizes and career-boosting opportunities, in nine categories: Software Design, Embedded Development, Game Development, Robotics and Algorithm, IT Challenge, MashUp, Design, Photography, and Short Film.

Fifteen teams, narrowed down from thousands of students representing over 125 schools, compete for cash prizes in the Imagine Cup 2009 U.S. Finals in Cambridge, Mass. The winning team goes on to represent the U.S. at the Imagine Cup 2009 Worldwide Finals in Cairo, Egypt, July 3-9.



Larry Clark, Former CIO of Randstad USA, joins the CIS Department as Executive in Residence

Larry Clark, BBA 1969, has been appointed Executive in Residence in the CIS Department for the current year. He will focus on building the department's corporate relationships with IT executives in the Southeast.

He recently was the managing director and CIO for Randstad USA, a leading employment services company and a wholly owned subsidiary of the Netherlands-based Randstad Holding nv. Since joining Randstad in 2000, Clark has been responsible for leading the company's information technology strategy, aligning the activities of the information technology division to the needs of the business. He integrated and consolidated the information technology resources which resulted in annual savings in excess of 10 million dollars.

Before joining Randstad, Clark served as the CIO for Onesource, Inc, a national provider of facilities services with annual revenues in excess of one billion dollars.

Clark has also served as Vice President, CIO, for Central Health Services, Inc., a regional provider of home health care services with revenues in excess of 350 million dollars. As Commissioner of Administrative Services for the State of Georgia and cabinet member of Governor Joe Frank Harris, he managed the State's business and financial functions.



Larry Clark,
Executive in Residence

human computer interaction, information system management and leadership, and outsourcing. His book, *Advanced VB.NET: Programming Web and Desktop Applications in ADO.NET and ASP.NET* was published by Prentice Hall in 2003.

Gregory H. Rose, PhD 2000, received tenure at Washington State University. His research involves understanding ways in which software innovations are developed, adopted, and used. His particular interests are in Internet-based systems and cross-cultural issues.

Christopher Huff, MBA 2005, is leading Home Depot's initiative towards a Service Oriented Architecture. In this role, he is setting the strategy and high-level plan for delivering the services capability as well as helping to determine business functionality. This role is in addition to his current responsibilities providing oversight and governance for all enterprise integration efforts.

Share your knowledge

Our best teachers come from your ranks! So, if you have a masters in information systems and five or more years experience in IS or a related field, come and give back to our CIS students as a part-time instructor. Contact **Carl Stucke**, Associate Departmental Chair at cstucke@gsu.edu.

Distinguished Speakers Visit Robinson

On alternating Fridays throughout the academic year, distinguished scholars from around the world are invited to present their research at the CIS Department's Research Colloquium Series. These presentations are held in the Manners Room on the 7th floor of the Robinson College, 10:00-11:30 am, and visitors are always welcome to attend.

During the Spring of 2009, the following scholars made presentations.

Allen S. Lee, Professor of Information Systems and Associate Dean for Research and Graduate Studies in the School of Business at Virginia Commonwealth University, presented "*A Scientific Basis for Rigor in Information Systems Research.*"

Ann Majchrzak, Professor of Information Systems, Marshall School of Business, University of Southern California, presented "*The Effect of Expertise Sharing and Integrating Behaviors in Wiki-based Organizational Intranets.*"

Jeanne W. Ross, Director and Principal Research Scientist at the MIT Sloan School's Center for Information Systems Research, presented "*Enterprise Architecture as Strategy.*"

John Venable, Associate Professor and former Head of School at the School of Information Systems, Curtin University of Technology, in Perth, Western Australia, presented "*The Development of Design Science Research - Ongoing Issues.*"



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Calling all CIS/MBA IS Alumni

Help Support Computer Information Systems at GSU

Alumni contributions help us provide more value with our educational offerings such as the creation of our one-year Executive Master of Science in Information Systems, our new Computer Forensics Lab, and our

new program in Health Informatics.

Support these initiatives in the Department of Computer Information Systems with a tax deductible donation. Donating is easy with Georgia State's online system.

Our IT education programs are recognized as some of the best in the nation, ranked in the top ten by *U.S. News & World Report*. Help us build a brighter future.

To donate to the CIS department, visit:

www.gsu.edu/giving

Direct your gift to Robinson College, select “other,” and type in “Computer Information Systems”