



INDIANA
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SCHOOL OF INFORMATICS

INDIANA UNIVERSITY

Alumni Spotlight



GENE HARRAWOOD

Jennifer Ann Witkemper

BS'02, Informatics

MS'04, Computer Science

Associate Director & Senior Systems Developer
Office of Enrollment Management
Indiana University
Bloomington, Ind.

Wife, mother, movie junkie, vacation adventurer

Life Member, IU Alumni Association

“IU truly gave me the storybook college experience. My biggest honor was walking at Commencement as a member of the first graduating class of the School of Informatics. I am so thankful to IU for the opportunities it gave me while I was a student and that it continues to give me through the IUAA. I am proud to be a life member of the IUAA so I can give back to the institution I love so much and to help stay connected to others with the same passion for IU.”

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Cybersecurity

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Bloomington campus now 'Informatics and Computing'

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'Vive la change'

The more things change, the more they stay the same.

That well-known proverb applies, in a way, to the name of the Indiana University School of Informatics. The school has components on the two major IU campuses, Bloomington and Indianapolis. As of July 1, 2009, the name of the Bloomington portion of the School, which is the larger of the two, has changed to **School of Informatics and Computing, Indiana University Bloomington**.

This name better reflects the fact that, since 2005, the school, founded in 2000 with Informatics undergraduate and graduate degree programs on both campuses, has encompassed IU Bloomington's computer science faculty, courses and undergraduate and graduate degrees.

At the same time, the name of the Indianapolis portion of the school remains the **School of Informatics, IUPUI**. IUPUI offers Informatics and closely related degrees, while computer science degrees at IUPUI are offered within the IUPUI Purdue School of Science.

The school as a whole still is referred to as the **Indiana University School of Informatics**.

Confusing? Maybe. But the new name helps situate the Bloomington portion of the School more accurately in the academic and business communities, and makes our mission clearer to prospective students and employers. It also makes it more apparent that today's school provides a welcoming home for the more than 2,000 IU Bloomington computer science undergraduate and graduate alumni, who joined our alumni family in 2005.

To our delight, many of these alumni already are actively engaged in the activities of our school, and all are most welcome. This name change has gone through the full process of approvals by our faculty, the Bloomington campus, IU President Michael McRobbie, and the IU Board of Trustees. We thank them for their support.

In conjunction with our new name, the Bloomington portion of our school no longer is organized into departments. Unified organization is intended to help our school and its faculty. The new structure aids our more than

60 professors — who come predominantly from computer science backgrounds but also from many other fields in the sciences, social sciences, and humanities — as they work together to construct the curriculum and research that will define the next generation of computer science, computing, and information technology.

Further, the name helps the entire breadth of the school to be considered in the only rankings that exist in our field, those for computer science programs. The degrees we offer — including undergraduate and graduate degrees in computer science and in a wide range of informatics — are



DEAN ROBERT B. SCHNABEL

"OUR NEW ORGANIZATION AND NAME IN BLOOMINGTON IS INTENDED TO EMBRACE OUR BREADTH AND DIVERSITY AND REMOVE ANY BARRIERS TO IT."

unchanged, including the recent addition of a master's degree in security informatics.

Speaking of which, the featured topic of this issue perfectly illustrates the rationale behind the renaming and reorganization at Bloomington. Computer security is just one excellent example of a topic that bridges mathematical and computer science theory, applied areas of computer science, and societal implications of computing.

The faculty members in our security group are representative of our faculty as a whole in that they include fairly theoretical computer scientists, applied computer scientists, and social scientists. Our new organization and name in Bloomington is intended to embrace this breadth and diversity, and to remove any barriers to it.

The proverb at the beginning of this column derives from a French saying. As the French also say, "Vive la change."

Bobby

[HAPPENINGnow]

Notes and news about Informatics today



Summer learning

Informatics summer camp was held June 21-25 in Bloomington. The five-day, overnight camp gives high school students the chance to interact with IU faculty and staff and learn about the latest trends in information technology, the Internet and Web design, networking, new media, databases, and gaming.



Campers dissect computers. This year's technology camp had full enrollment and a waiting list.

This year's camp had a maxed-out enrollment of 40 campers (the first year with a waiting list) – with about 25 percent coming from out of state! Campers completed technology-based projects and presented them to staff, family, and friends on the final day of the week.

“This is a great way for students to get an inside look at what college life is like at IU by living on campus for a week and discovering all the ways you can use technology to make an impact on the world,” said Richelle Brown, director of student support and recruiting in the Bloomington School of Informatics and Computing.

Next year's camp dates have not yet been finalized, but are expected to be similar to this year's. For information, contact Richelle Brown at (812) 855-8625 or brownr@indiana.edu.

Imagine that!

Students claim another IU 'Imagine' victory in Egypt

Human Computer Interaction Design program graduate students **Feixing Tuang** and **Yujia Zhao** jetted to Cairo, Egypt, as winners of the United States qualifying competition to compete in Microsoft's 2009 Imagine Cup, a global challenge focused on finding solutions to real-world issues, which this year drew over 300,000 student competitors.

Their design for eXchangeFun, a platform aimed at facilitating the trade and exchange of pre-owned property between residents of a community, won them a spot in the finals.

While exhibiting some traits of popular consumer-based, online product purchase and exchange tools such as eBay, Craigslist, and Freecycle, Tuang and Zhao said eXchangeFun is unique in that it contains design elements that will hopefully stimulate reuse at the community level by creating a recreational, treasure-hunting experience that stimulates interaction between users.

When the final competition began, Tuang and Zhao were given a completely new design problem related to an issue of world concern and had 30 hours to come back with a proposal. The pair ended up finishing second in the design competition, and winning the Accessible Design award, a special commendation for which the final six design teams competed.

This is the second consecutive year that a team from the Human Computer Interaction Design Program has won at the Imagine Cup.



Tuang and Zhao

[FLASHBACK]

David Roedl and Will Odom, BS/BA'06, were top finishers in Interface Design at the 2008 Microsoft Imagine Cup, held in Paris.

[BREAKING GROUND]

Costello granted school's first-ever PhD

In August, the school officially awarded its first PhD in informatics. The recipient was **Jim Costello**, MS'04, PhD'09, whose focus is in bioinformatics.

"This is a milestone moment for the School of Informatics and Indiana University," said Bobby Schnabel, dean of the School of Informatics. "And it is particularly exciting that the first informatics doctorate goes to Jim, who has had such outstanding successes here at IU Bloomington, and has such a bright future before him."

Costello is now doing postdoctoral work at Boston University with a fellowship from the Howard Hughes Medical Institute. He's working with James J. Collins, a Rhodes Scholar who in 2003 became the first bioengineer to receive a MacArthur Foundation "Genius Award." Collins is considered a pioneer in the field of synthetic biology.

"Essentially I will be using computational approaches to model how genes interact with each other," Costello said. "I will be working on both synthetic and systems biology projects involving bacteria and mammalian systems."

While at IU Costello worked with Associate Professor Mehmet Dalkilic at the IU Center for Genomics and Bioinformatics. Specifically, he helped to design, develop, and implement integration methods for connecting disparate sources of *Drosophila* data to better inform researchers of functional relationships between genes.



Courtesy, Indiana University

Costello received a master of science in informatics from IU in 2004 after coming from the University of Iowa with undergraduate degrees in biology and economics. In 2003-04, he received the School of Informatics' Outstanding Teaching Award. He also received the Outstanding Achievement Award and the IU Graduate and Professional Student Organization's Outstanding Graduate Student Award.

Jim Costello, MS'04, PhD'09, is now a fellow at the Boston University Howard Hughes medical Institute, where he is researching gene interaction.

IUPUI's Ludwick speaks at Heartland Film Festival



Ludwick

In September, John Ludwick, a lecturer in the New Media Arts and Science program at IUPUI, spoke on "Animated Filmmaking: Emotions in Motion" at the Indianapolis Heartland Film Festival. An award-winning animator and director, he discussed animation principles that are crucial in any successful project. Ludwick's credits include 2-D and 3-D television spots for Cartoon Network, PBS Kids, and Toon Disney.



Quiroz wins campus award



Quiroz

Gloria Quiroz, student services counselor at IUPUI Informatics, was named distinguished recipient of the 2009 Nan Bohan Community Engagement Award. The Bohan Award recognizes employees who, through extraordinary service and special contributions, enhance the culture of service and civic engagement on campus and in their communities. Quiroz received a monetary award and a plaque presented during the Chancellor's Employee Recognition Convocation.

New graduates celebrated

The ranks of the school's alumni continue to grow, with another group of 328 new Indiana University School of Informatics graduates. Graduation ceremonies and commencement dinners were held in Bloomington and Indianapolis — IUPUI's at Meridian Hills Country Club and Bloomington's at the Indiana Memorial Union.

[A CONVERSATION WITH ...]

Dean's Advisory Council Member Julie Meek, DNS'93



Julie Meek began her career as an Emergency Room nurse in Indianapolis. After 10 years of caring for people who had waited too long to seek care, or were in the ER due to risky behaviors such as drinking and driving or smoking, Meek says she felt compelled to help people much earlier. So she completed her graduate education at Indiana University studying behavioral science and started The Haelan™ Group, a company focused on helping people change health-damaging behaviors.

After growth in the 1990s, the company tackled development of three versions of software to support its functions. "I learned a lot about the importance of standardized language, relational database structures, and most importantly what constitutes a successful and ongoing software/hardware development process," Meek says, "I laugh now when I realize that we were actually developing a clinical decision support system in the midst of the earliest days of such notions."

Now in her third year as a Dean's Advisory Council member, Meek says IU played a significant role in the success of her company — in terms of her education, as Regenstrief supported her business's outcomes research, and later as the company became the first entrant to and profitable graduate of IU's Emerging Technologies Center on the canal in downtown Indianapolis. *by Lisa Herrmann*

Tell me about your business and your connection to IU and the School of Informatics.

I was founder and 13-year CEO of The Haelan™ Group, a predictive modeling and health coaching company, subsequently purchased in December 2006 by CareGuide, an integrated health management company.

As the first entrant and successful graduate of the Indiana University Emerging Technology Center, Haelan brought 60 new jobs to central Indiana and won 10 business awards for growth, innovation and entrepreneurship. Haelan achieved best-in-class health care cost control for our employer clients and significantly changed the health management industry by introducing powerful predictive modeling and coaching methods to the spectrum of health management services.

I earned both my master's and doctorate in behavioral science and research with highest distinction from Indiana University and have always remained closely associated with IU, serving originally as part of a health-related subgroup for the School of Informatics and

now enjoying my third year on the DAC.

What do you see are the School's challenges going forward? Its strengths?

Virtually all disciplines intersect with informatics in increasingly significant ways.

For example, linking core informatics competencies with nursing has already been accomplished, resulting in high demand for a nursing/health-informatics certificate. The school is actively pursuing similar offerings for other non-major students, thus strengthening and enhancing its reach. I'm also particularly impressed with the dean's commitment to diversity and strong progress is being made there under the leadership of Maureen Biggers.

In today's economic climate, there are new and continuing challenges in terms of securing a sufficient supply of strong PhD candidates, and securing funding for them. In addition, it remains vitally important to support the hiring of strong faculty and assuring that they have the policy, funding, and organizational support to bring increasing amounts of grant funding to the school.

What do you hope will be the DAC's biggest contribution to the School?

The DAC is so strong and supports the dean and the school by coming up with solutions sets and community, funding, and support links that the dean, faculty, and staff can really use.

The DAC is full of leaders who have faced similar challenges in our leadership roles, so I think we provide an excellent and trusted sounding board. If I had to highlight a single contribution, it would be helping the school's leadership shape its long-term vision of what the school can become, and the impact that it can have on students, faculty, the university and Indiana communities, the U.S., and the world.

How do you envision the school down the road — in 5 years? 10 years?

The school has multiple categories for excellence ... undergraduate and graduate education, research, faculty development, diversity, and economic development.

The dean and faculty have crafted an aggressive strategic plan with specific short- and

long-term objectives under each of these goals. As these goals are accomplished, the school positions itself as the preeminent program in the country. In particular, I'm excited about the support the school is already providing to entrepreneurs — students, faculty, and graduates.

What do you hope will be the biggest change?

I hope that the centers for supporting informatics entrepreneurs are full and overflowing in Indy as well as in Bloomington.

Give me your definition of Informatics.

"Informatics" is the science that underlies the academic investigation and practical application of the intersection of information science and computer science, nearly alongside the science underlying a particular discipline such as nursing, medicine, or biomedical engineering. Informatics deals with the resources, methods, and devices that optimize the gathering, manipulating, storing, retrieving, and classification of recorded information. Informatics skills are central to the evolution of nearly every discipline.

Alumni, faculty granted NSF CAREER awards

Five young professors with an IU connection each received CAREER awards from the National Science Foundation (NSF). Recipients were **Yuzhen Ye**, and **Matt Hahn**, current faculty members at the School of Informatics and Computing in Bloomington, along with **Jeremy Siek**, PhD'05, **Katie Siek**, MS'04, PhD'06, and **Jaakko Järvi**, former post-doctoral student. The CAREER grant is part of the Faculty Early Career Development Program.

The award is given in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations.

Both Jeremy and Katie Siek, who now work at the University of Colorado, received PhD's from IU in computer science. Järvi did postdoctoral work in computer science at IU and currently teaches at Texas A & M University. Ye and Hahn are part of the school's bioinformatics group.

Loos earns Google scholarship, Woman of the Year

Sarah Loos, a 2009 graduate, continues to garner awards for her achievements while at IU. She was named a 2009 recipient of a Google Anita Borg Memorial Scholarship, which she will receive for her first year as a PhD student in computer science at Carnegie Mellon University. Loos is the first student from Indiana University to win this extremely competitive and prestigious award.



LOOS

She was also the first undergraduate to receive the 2009 Woman of the Year award, given annually by IUB's Women in Computing (WIC) group. Loos was chosen not only for her outstanding academic achievements, but for her service to the WIC community. Of particular note is her work as 'Bring IT On!' manager and as undergraduate co-president of WIC, and her role as the computer science representative for Y100.

PhD student Keep wins fellowship

Andrew Keep, a second-year computer science PhD student in Bloomington, received the highly competitive and prestigious National Physical Science Consortium (NPSC) graduate fellowship.



Keep

Keep will be sponsored by the National Security Agency (NSA) for his work on Ruby, a dynamically-typed, pure object-oriented programming language.

The six-year NPSC fellowship begins this fall. Keep will receive a stipend, health insurance, a tuition waiver, and the opportunity to spend two summers working at NSA.

His work focuses on improving Ruby through compiler and optimization techniques, such as specialization. He also hopes to use Ruby's domain-specific language idioms to experiment with parallel programming models.

Dr. Schnabel goes to Washington

Congressional panel addresses education, teacher preparation

Early this summer, Dean Bobby Schnabel traveled to Washington to lead a panel hosted by the Computing Research Association and Microsoft at the U.S. House of Representatives' Rayburn Office Building.

Entitled "Bringing Innovative Computing Curriculum Across the Digital Divide," the luncheon briefing was held in cooperation with the House Science, Technology, Engineering and Mathematics (STEM) Education Caucus and the Congressional Black Caucus. Topics covered included the state of computer science education at the K-12 level, along with a discussion of a new computing curriculum and teacher-prep course funded by the NSF and Microsoft.

Schnabel lead a panel that included Dr. Chris Stephenson, executive director of the Computer Science Teachers Association, and Dr. Joanna Goode, assistant professor at the University of Oregon and co-author of the "Exploring Computer Science" course. More than 70 guests, including congressmen and congressional staffers, attended the luncheon.



Leading a panel of experts, Dean Schnabel addressed Congress on the state of computing education.

Courtesy CRA

[SECTION FEATURE]



Fall Career Fair boasts record attendance

The 2009 Fall IT Career Fair was held in September at the Indiana Memorial Union in Bloomington and had a record-setting turnout with over 460 students making the rounds through the fair.

Fifty employers attended, and all will interview at some time in the near future, but approximately 30 visited the Bloomington career services office to interview on campus between Sept. 15 and Nov. 1.

This marks the fifth year for the fall fair, the larger of the two offered by the school's Bloomington career services office. The spring fair will be held at Alumni Hall in the IMU on Feb. 16, 2010, with an anticipated 40-plus employers in attendance.

To participate or for more information on the spring fair, e-mail Staci McFall at sgmcfall@indiana.edu.

Nearly 500 students and 50 employers filled the Indiana Memorial Union Alumni Hall for the school's fall career fair.



Photos by Ann Schertz

UNDER LOCK & KEYBOARD?

What does a vulnerable online world mean for education?

An innovative master's program is preparing IU students for today's market.

By L. Jean Camp

It's a safe bet that everyone who reads this magazine uses the Internet and has some understanding of its vulnerability to attacks, particularly at consumer endpoints. There are well-organized groups, including criminal enterprises and government-backed forces seeking to disrupt our work and play online.

Exacerbating the threat, networked computers are increasingly used to control physical systems that are deeply embedded in governmental and commercial processes. Yet, neither the number of vulnerable computers nor the overall threat level is subject to agreement by experts. This uncertainty is due in large part to the lack of reliable information.

A National Academy of Science report, *Toward a Safer and More Secure Cyberspace*, noted that it is "simply not credible to assert that the problem [security in cyberspace] is getting better."

Consider two examples that illustrate the increasing abilities of network attackers:

In January 2009 a virus (called "Conficker") infected nine million computers worldwide, providing the criminals behind the virus with more offensive network capability than most nation states. Currently, there more than one million computers are infected by Conficker and thus under the control of its authors.

The Chinese worm that created Ghost Net targeted high-value computers (including embassies, international organizations, and the Dalai Lama's offices). Ghost Net operated for up to two years on more than 1,200 US computers and in 102 other nations.

President Barack Obama's cybersecurity lead, Melissa Hathaway, recently asked select security experts convened by the National Science Foundation, "Who is responsible/accountable for the protection of rights and property [online]... under regulatory/compliance regimes?"

Those experts found the question unanswerable.

The Internet needs more defenders and a better defense. To address this need, the IU Bloomington School of Informatics and Computing has launched a new Masters of Science in Security Informatics (MSSI) program. The MSSI is an innovative, tightly focused program with a long-range goal of yielding highly qualified specialists in the growing field of security. With an interdisciplinary curriculum, an emphasis on applied knowledge through a strong internship program, and a core group of faculty who have a wide range of relevant experience, this new program stands to become the model for other programs across the country.

The program's basic premise is simple. An effective security specialist must possess a broad



range of skills — skills that extend beyond the technical aspects of security.

Professionals in this field are entrusted with all of an organization's most pertinent (and private) personal and organizational data — a position that requires strong management skills and financial literacy, in addition to highly technical knowledge.

Our program ensures that students receive that basic knowledge.

The program has been purposefully designed to give students a solid background in *all* the areas they need to work in the security field.

In addition to integral core competencies, the MSSSI degree program offers a range of interdisciplinary options depending on students' interests. With this personalized course of study, graduates entering the workforce as security specialists can "talk the talk" in their chosen industry.

Alumni of the program will have the technical background to protect their organization, plus the applied knowledge of a specific field — making them more "in touch" with their work.

Even more crucial will be the strong internship element of the MSSSI program. Internships will be widely available for our students, starting right here at Indiana University. IU is home of the Global Networking Operating Center, which manages elements of Internet2, Lambda-Rail's FrameNet, and PacketNet. RENISAC is famously based at IU, where faculty and staff work with the Advanced Network Research Management Laboratory to keep the international honeynet network status system constantly active.

These various IU initiatives will provide a rich environment for real world experiences.

The core faculty members in this program have a wide range of relevant expertise. Steven Myers is a mathematical theorist, providing students with an understanding of the nuances of cryptography.

Raquel Hill addresses the core of the machine itself, with examinations of trusted hardware.

Minaxi Gupta considers the network as a mechanism for attack delivery.

XiaoFeng Wang is a noted researcher in the area of malware analysis and defense, and Apu Kapadia examines both the mechanisms and content of the network.

Lastly, I have expertise in the economics of security.

This group brings years of teaching, research, and real-world experience to the program. Beyond this core faculty, students have access to internationally renowned faculty in many relevant areas. As the field of security expands, and as the program grows, we will add faculty members who bring dynamic expertise and abilities.

Reality: security issues impact absolutely every organization and individual, and they're not going away any time soon.

Adapting to this fact is a must for companies who must protect data and systems, as well as educators who are charged with making sure the workforce is adept at identifying and solving the problems associated with security issues. The new MSSSI degree program stands poised to train the next generation of leaders in this essential field.

L. Jean Camp taught at Harvard's Kennedy School of Government and is a senior member of the IEEE. A pioneer in the interdisciplinary study of trust and design for values, Camp has taught at MIT and Tufts. She is currently on faculty at IUB and serves as director of the Security Informatics Program.

Keys to the MSSSI: program requirements



- **Core computer security.** Study cryptography, protocol analysis, and distributed network security. .
- **Three courses in networking and systems.** Students take advantage of the IU computer science program's strength in this area.
- **Complete an internship**
- **Select a concentration.** Options include three courses that effectively function as a graduate equivalent minor.

For example, students interested in criminal justice can choose from options that include digital forensics, data analysis in criminal justice, and an overview of law and the legal system, all of which are offered by IU's Criminal Justice Department.

Students can also specialize in embedded and pervasive systems with courses offered in our own computer science program. Another option is to study cognitive behaviors leveraged by criminals when they commit fraud: risk perception, decision-making under uncertainty, or courses that examine the workings of the human brain. Concentrations are also available within our school including bioinformatics security, health informatics security, modeling security as a complex system or usable security.

Five new faculty members strengthen growing school

The School of Informatics and Computing brought five new faculty members to Bloomington over the summer. They are Amal Ahmed, Johan Bollen, Kris Hauser, Apu Kapadia, and Selma Sabanovich.

Amal Ahmed holds a PhD from Princeton, a master's degree from Stanford, and a bachelor's from Brown University. She joins the faculty at IU after three years as a research assistant professor at the Toyota Technological Research Institute in Chicago. Her interests include programming languages, type theory, and language-based security.

Johan Bollen was a staff scientist at the Los Alamos National Laboratory from 2005 to 2009, and an assistant professor at Old Dominion University from 2002 to 2005. He obtained his PhD in experimental psychology from the University of Brussels in 2001 on the subject of cognitive models of human hypertext navigation. His present research interests are usage-data mining, complex networks, and digital libraries.

Kris Hauser received his PhD in computer science from Stanford University in 2008, and received bachelor's degrees in computer science and mathematics from UC Berkeley in 2003. His research examines the motion spaces of complex, high dimensional robotic and biological systems.

Apu Kapadia received his PhD in Computer Science from the University of Illinois at Urbana-Champaign in 2005. Following his doctorate, Kapadia spent time at Dartmouth College as a post-doctoral research fellow, and as a researcher at MIT Lincoln Laboratory. He does research in topics related to systems' security and privacy.

Selma Sabanovich received her PhD in science and technology studies from the Rensselaer Polytechnic Institute in 2007. Prior to joining IU, she was a member of the Science, Technology, and Society Program, and the Human-Robot Interaction Community at Stanford University. Her research focuses on culture's role in scientific practice and technology design.

Welcome to the newest members of the Informatics family!



Ahmed



Bollen



Hauser



Kapadia



Sabanovich

Sawyer Award supports seminars

Medina, Shankar receive prestigious award to explore techno-scientific spread

Through its prestigious Sawyer Seminars, the Andrew W. Mellon Foundation has awarded more than \$140,000 to Indiana University faculty members, including professors Eden Medina and Kalpana Shankar, two Bloomington social informatics faculty members.

The award supports a yearlong seminar series titled "Rupture and Flow: The Circulation of Technoscientific Facts and Objects." Invited experts from around the world, as well as local specialists, will speak. The seminar is divided into four eight-week sessions corresponding to themes that address how and why cultural, social and material forces interrupt the circulation of technoscientific objects, and with what consequences for communities.

Vice Provost for Faculty and Academic Affairs and Rudy Professor of Sociology Tom Gieryn will serve as convener for the seminar.

The Mellon Foundation's Sawyer Seminars program was established in 1994 to provide support for comparative research on the historical and cultural sources of contemporary developments. The seminars, named in honor of the Foundation's long-serving third president, John E. Sawyer, bring together faculty, foreign visitors, postdoctoral fellows, and graduate students from varied fields — mainly but not exclusively, in the humanities and social sciences — for intensive study of subjects chosen by the participants.

A small number of universities worldwide are invited to compete for the Sawyer Seminar, and this is the first time that IU faculty members have submitted a successful proposal.



Medina



Shankar

Dean named interim VP of research

In August, Indiana University President Michael McRobbie named Dean Bobby Schnabel interim vice president for research. Schnabel will address immediate initiatives while a search continues to permanently fill the position.

Schnabel has served as dean of the IU School of Informatics since July 1, 2007, and he will continue in that role while leading IU's pursuit to discover and broaden opportunities for research on IU's eight campuses.

Schnabel is responsible for an office charged with developing and advancing new research opportunities at state, national and international levels, in addition to overseeing compliance with research rules and regulations, preparing and tracking grant proposals, and negotiating awards and contracts with private industry and government agencies.

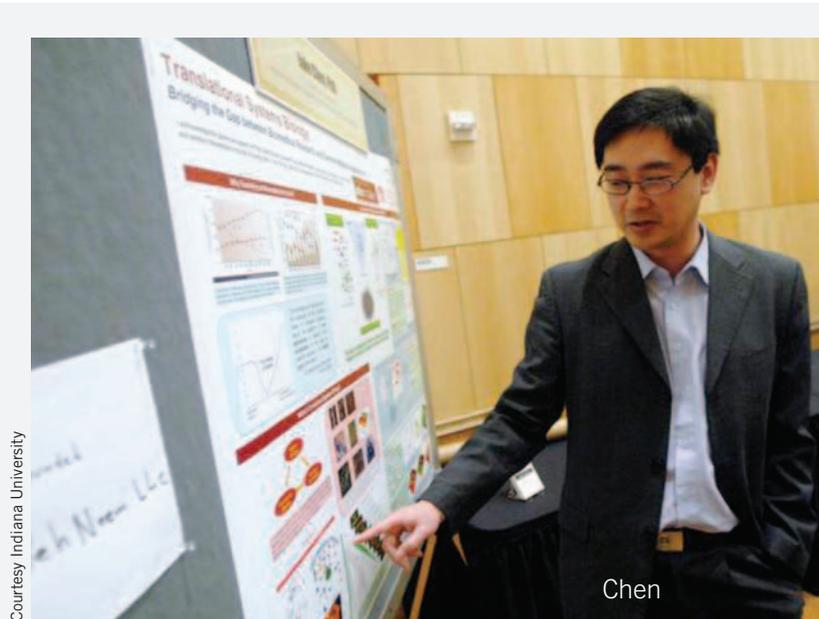
"I am very pleased that Dean Schnabel has agreed to take on these additional responsibilities at a time when the importance of promoting and facilitating productive research has never been greater," McRobbie said. "Since his appointment as dean, he has rapidly mastered the complexities of cross-campus collaboration on research projects, which is vital to our long-term strategy of optimizing our resources to become more competitive for major research grants."

Computer Science faculty part of New Knowledge Seminar grant

Indiana University's Institute for Advanced Study awarded a 2009-2010 New Knowledge Seminar Grant to a group consisting of faculty members from both the School of Informatics and the College of Arts and Sciences. The award is for a seminar on "Quantum and Natural Computing," and the group that applied was Jerry Busemeyer (Psychology and Brain Sciences), Andrew J. Hanson (Computer Science), Lawrence Moss (Mathematics), Gerardo Ortiz (Physics), and Amr Sabry (Computer Science). The \$10,000 award helps the group bring visiting scholars from throughout the world to its meetings.

[WEB MAKEOVER]

IUPUI Informatics recently launched its re-vamped Web site: <http://informatics.iupui.edu>. The site is designed for usability and to foster a clearer definition of informatics and its implications for the future. New elements include improved navigation, video and other interactive tools, and a fresh, new design.



Courtesy Indiana University

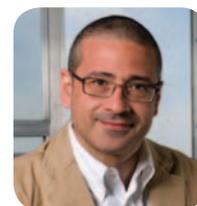
Chen

IUPUI's Jake Chen receives top-level ACM designation

The Association for Computing Machinery (ACM) named Jake Chen, assistant professor at IUPUI, a 2009 Senior Member. According to ACM, the senior member grade is, "an award that recognizes those ACM members with at least 10 years of professional experience and five years of continuous professional membership who have demonstrated performance that sets them apart from their peers."

Paper by complex systems professor Vespignani published in *Science*

In the July 24, 2009, "Perspectives" section of the journal *Science*, Professor Alex Vespignani writes that advances in complex networks theory and modeling, along with access to new data, will enable humans to achieve true predictive power in areas never before imagined. He says this capability will be realized as the one wild card in the mix — the social behavior of large aggregates of humans — becomes more definable through progress in data gathering, new informatics tools, and increases in computational power.



Vespignani

In his article "Predicting the Behavior of Techno-Social Systems," Vespignani recognizes challenges in creating a predictive system that includes social adaptation. Large-scale data, for example, are still needed about how information spreads and society reacts in times of crisis, but he believes advancing communications databases may address that issue.

Vespignani is the James H. Rudy Professor of Informatics and adjunct professor of physics and statistics at IU, where he is also the director of the Center for Complex Networks and Systems Research (CNetS) and associate director for IU's Pervasive Technology Institute.



[INdevelopment]

HCI/d students inspired to purchase chip

Transparency isn't always the best approach. The recent HCI/d class of 2009 will attest to that.

"I am very happy to report that almost the entire class contributed to the gifts and met for our 'secret' meeting," said 2009 class member Bob Molnar.

Molnar coordinated the efforts of the class of 35 graduates to purchase a School of Informatics and Computing Chip. The Chip program supports the school's scholarship fund, which helps undergraduate and graduate students pursue their academic careers.

Seeking the perfect expression of appreciation for their faculty and staff, Molnar and his classmates communicated via clandestine e-mails and secret meetings. "From our first orientation session," Molnar said, "all of us knew that we were part of something special and very meaningful."

Class members received care and support from their faculty members beyond their expectations, and that contributed to the extraordinary sense of community and accomplishment the class achieved.

Wishing to commemorate their experience and to honor their mentors, the class decided on purchasing a Chip because it "represents a lasting dedication to our faculty and staff and symbolizes the cohesiveness they have forged in our class." The HCI/d Class of 2009's Chip will be displayed in the new chip board, which is expected to be installed in the coming months.

To see the Chip Board and to learn about how you, as an individual or as a group, can be included, see the Web site: www.informatics.indiana.edu/chipgivenow. Or contact Mary Beth Roska at mroska@indiana.edu or (812) 856-0591.

"FROM OUR FIRST ORIENTATION SESSION ALL OF US KNEW THAT WE WERE PART OF SOMETHING SPECIAL AND VERY MEANINGFUL."— BOB MOLNAR, BS'09

What is the CHIP?

The InformatiCS Chip, an ever-growing wall of tiles, is housed in the school's Bloomington headquarters. Arranged in a pattern resembling a computer chip, the tiles celebrate you — our alumni and friends. Most importantly, the wall is a symbol of the school's future, as each donation (of \$100 or \$250) directly supports student scholarships.

Visit informatics.indiana.edu/chipgivenow.

[GENEROUS GIFTS]

Two new scholarships for IUPUI New Media students

The School of Informatics at IUPUI announced the creation of a two new scholarships that will be given to students in the School's New Media Arts and Science program. Both scholarships will be awarded for the first time in spring 2010.

The first, honoring the late Joseph Maley who passed away in August 2008 of leukemia, was created by Conrad Piccirrilo, president of Innovative Inc., and a Media Arts and Science Advisory board member. The second scholarship is supported by Carmel, Ind.-based MediaSauce, a national leader in Internet strategy, Web development, and interactive solutions. MediaSauce CEO Bryan Gray is chairperson of the Media Arts and Sciences Advisory Board.

Computer Science alumnus receives Distinguished Asian Alumni Award

Mendhekar's recipe for success: A groundbreaking invention, six-plus patents, several professional accolades, and a selfless act for a higher cause.

IU alumnus and entrepreneur Anurag Mendhekar, MS'94, PhD'98, of Los Altos, Calif., founder of Blue Vector Systems, was awarded the 2009 IU Asian Alumni Association's Distinguished Asian/Pacific American Alumni Award. This award recognizes outstanding professional achievements and community service of Asian/Pacific American Alumni of IU.

Mendhekar earned a master of science degree in 1994 and a doctorate in 1998, both in computer science, from IU. He has contributed to the field of computer science as an entrepreneur, founding three successful companies. His first start-up, Online Anywhere, was the



Mendhekar

first firm to create the whole new market category of content transformation tools for mobile and non-PC devices.

He began his career at Xerox's Palo Alto Research center, where he was one of the inventors of Aspect Oriented Programming, a rapidly spreading paradigm of programming that forms the core of products produced by his current firm, Blue Vector Systems.

Along with several scientific publications to his credit, Mendhekar has been awarded six patents, with several more pending. In 2008, he was named the "2008 Pro to Know" by *Supply & Demand Chain Executive* magazine. Blue Vector also was recognized last year by the *Silicon Valley/San Jose Business Journal* with its Emerging Technology Award.

One of many personal successes came in 2001, when a friend and coworker needed a bone marrow transplant. Mendhekar

organized several drives for bone-marrow donors in Northern California. His efforts were significant, as the number of bone marrow donors available for the South Asian community makes up a tiny percentage of the 4.5 million donors registered on the National Bone Marrow Registry, often leaving those of South Asian origin with no potential matches.

"All of us are pleased and proud that Anurag has been chosen to receive such an honor," said Bobby Schnabel, dean of the School of Informatics. "Anurag has contributed significantly to the field of computer science — as a serial entrepreneur and founder of three successful companies, as holder of multiple patents, and as author of an extensive array of academic publications. It is also important to note his extraordinary level of service outside of his profession — organizing multiple bone marrow drives is an impressive undertaking! Anurag is committed to academic and professional excellence, as well as service to community, which makes everyone at the School of Informatics and Computing proud to have him as an alumnus."

CALL FOR *nominations*

Nominations are now being accepted for the 2010 IU School of Informatics Awards.

Presented by the school's Alumni Association and Dean's Advisory Council, these three awards recognize individuals for outstanding career achievement, service, and contributions to the field of Informatics.

Criteria, an online nomination form, and more information can be found at www.alumni.iupui.edu/informaticsawards.html. Nominees can be from either the IUB or the IUPUI campuses. Nominations are due by Dec. 11, 2009. Questions? Please contact Danny Kibble at djkibble@iupui.edu, (317) 274-2289 or toll-free (866) 267-3104.



2009 award winners Mark E. Hill, MBA'82; Jennette Fulda, BS'03; Anand Deshpande, MS'86, PhD'89; and Professor Ed Robertson. (Not pictured: Cheng Wu, MS'77)



Alumni connect stateside and in Seoul

Informatics alumni kept busy over the late spring and summer, with networking events in Indianapolis, Chicago, and the San Francisco Bay Area, as well as an international alumni reunion in South Korea.

In April, the school hosted the Indiana University Bay Area information technology professional networking program at the Computer History Museum. The event combined a panel discussion of distinguished IT entrepreneurs, business people, and investors as well as a reception and networking with fellow alums.

Early June found Informatics Dean Bobby Schnabel meeting with alumni during the IU International Alumni Conference and Reunion, June 5 to 7. More than 330 alumni from seven countries attended the event, hosted in Seoul, South Korea.

Back home in Indiana, 85 gathered at the The Rathskeller in downtown Indianapolis for talks by Dean Bobby Schnabel and Richard Edwards of the Media Arts and Sciences program at IUPUI. And, later in June, at least 35 people headed to the Elephant and Castle in Chicago for an after-work reception and meet-and-greet with current informatics students doing summer internships in the Chicago area.



Seven countries and each of IU's schools were represented at the International Alumni Conference and Reunion. Attendees of a June 6 banquet enjoyed music by IU alumni as well as Korean folk performers. The Didim Dance Troupe, pictured at top, performed Kiakcheon Dance. The dance is accompanied by a yogo, a double-headed drum.

Below: An after-work reception in Chicago gave Informatics Alumni Association and IUAA members a chance to meet current students completing summer internships in the area.

Bottom photo: IU Informatics alumni enjoyed a panel discussion and technology professionals reception at the Computer History Museum in San Fransisco.



John Blue



John Blue



John Blue



Skip Comer

Dean Bobby Schnabel welcomes special guests at the April Alumni Awards banquet.

[IUPUI REGATTA]



Danny Kibbler/IUAA

The Inaugural IUPUI Regatta, sponsored by SOAR (Student Organization for Alumni Relations), the Central Indiana Chapter of the IU Alumni Association, and the IUPUI Alumni Council was held Sept. 19, 2009. A total of 48 teams composed of students, faculty, staff, and alumni participated in this "canoe race on the downtown canal."

The Informatics Student Government team placed ninth with a final heat time of 9:26:84. Proceeds from the IUPUI Regatta benefit student scholarships.

The 2010 IUPUI Regatta is scheduled for Sept. 25. To participate or volunteer for next year's race, visit www.alumni.iupui.edu/regatta.

class notes

1970s

In October 2008, the Indiana University Foundation presented **John R. Gibbs**, BS'72, with its Keystone Award for outstanding leadership through multiple IU fundraising campaigns and initiatives, especially his support of the School of Informatics. The award was presented as part of the "Celebrate IU" month festivities by IU President Michael McRobbie and IU Foundation President Gene Tempel. Gibbs was the co-founder of Interactive Intelligence, one of the most successful IT companies in Indiana, and chairman and CEO of Qtrac Software, a life sciences company. He played an instrumental role in the development of the IU School of Informatics, which was the first school of its kind when it was founded in 2000, and he served as the founding chair of the school's dean's advisory council. Under Gibbs guidance, an endowment was established on behalf of the School of Informatics dean's advisory council and he went on to endow the John R. Gibbs Scholarship for Innovation in the School of Informatics on the Bloomington and IUPUI campuses. Gibbs lives in Carmel, Ind.

1980s

In April, IUPUI and its schools paid homage to donors, supporters, and individuals who have propelled the campus forward in key mission areas. The 2009 Spirit of Philanthropy honorees included **Danita Huston Forgey**, BS'81, MIS'01, a faculty member and former program director of the Informatics Health Information Administration Program. In addition to classroom instruction of HIA students, Forgey oversaw curriculum development and

evaluation. She has been recognized by the Indiana Health Information Management Association with distinguished member and professional achievement awards and is also a past president of the organization. Prior to her academic career, Forgey served in management roles in health information management with IU hospitals, Columbus Regional Hospital, and the YPRO Corporation. She lives in Greenwood, Ind.

1990s

Track I-Man **Kristian W. Desch**, BS'92, writes that he has been promoted to vice president of U.S. information technology at TransUnion in Chicago, where he lives.

John D. MacCuish, MS'93, is president of Mesa Analytics and Computing, a company that provides consulting, high performance computing, web applications, data mining solutions, and early drug design and discovery. After spending 12 years in the visual arts, MacCuish studied computer science at IU where his research interests were graph theory, algorithm animation, and scientific visualization. He worked as a graduate research assistant at Los Alamos National Laboratory, while pursuing a Ph.D. in computer science at the University of New Mexico. At Los Alamos, MacCuish worked on numerous projects, such as the IRS Fraud Detection of Electronic Returns Project; LINK, a software workbench for combinatorics; and parallel implementations of cluster algorithms for image processing. Since then he has worked for the Center for Adaptive Systems Applications in Los Alamos, and at Bioreason in Santa Fe, New Mexico. MacCuish started Mesa Analytics & Computing in the spring of 1999. He has published numerous articles and technical reports

on graph theory, algorithm animation, scientific visualization, image processing, cheminformatics, and data mining, and he has written or contributed to many internal and confidential reports on fraud detection, image recognition, precision agriculture, economic modeling, queuing theory models, and cheminformatics. MacCuish lives in Santa Fe.

Mark A. Bishop, BS'95, BA'99, is a principal software engineer for Citrix Systems in Goleta, Calif. He lives in Santa Barbara, Calif.

2000s

Justin Escue, MS'07, of Indianapolis, is working on a film about the first-ever Indianapolis 500 Race, which was held in 1911. With a script by Angelo Pizzo, BA'71, who wrote *Hoosiers* and *Rudy*, the film will form the last of a trilogy of sports films set in Indiana that Pizzo has worked on. It is slated for a May 2011 release. The movie introduces to the screen characters such as Carl Fisher, whose vision it was to bring an auto race to an area where most people had not even seen a motorized vehicle. Renowned track architect Paxton Walters helped design and build a replica of the Indianapolis Motor Speedway as it was from 1909 to 1911 for the film, on a site north of Indianapolis.

[CONNECT]

Enter your class note online at alumni.indiana.edu. And connect with fellow grads at facebook.com/iualumni.

Upcoming alumni events

Dec. 9 • IUPUI Alumni Holiday Night, Indianapolis Children's Museum, 6:30 p.m. Register: www.alumni.iupui.edu.

Jan. 30 • Informatics Alumni Networking and Men's Basketball Viewing Party, Kilroy's Indianapolis, 201 S. Meridian Street. Hoosiers vs. Illinois game tip-off is at 2 p.m.

Feb. 12-14 • IUAA's Winter College, Ft. Myers, Fla: www.alumni.iupui.edu/wintercollege.

April 28 • SAVE THE DATE for the Informatics Alumni Continuing Education Symposium, "How Healthcare Information Technology is Impacting Indiana."

For details or reservations, contact Danny Kibble at (317) 274-2289 or Rachael Jones Crouch at (812) 855-3575.



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