

Highlights of the 2012-13 Academic Year

School of Informatics and Computing,
<http://soic.iupui.edu>

During the 2012-13 academic year, the School of Informatics and Computing underwent significant changes. Formerly the School of Informatics, our name evolved to more strongly identify our mission with computing. IUPUI school leadership transitioned as Dr. Mathew Palakal became Executive Associate Dean. The School merged with the former School of Library and Information Science, broadening the scope of our faculty and academic offerings and catalyzing, for the first time, an internal reorganization of the School into chaired departments. Although these changes challenge us to evolve, we believe this evolution is essential, allowing us to better address the responsibilities and profound opportunities the future will bring.

Teaching and Learning

- The School experienced significant increases in undergraduate majors, from 602 to 679 over the previous academic year, and increased credit hours from 9,765 to 12,960 hours. Graduate enrollment increased from 242 to 287, and graduate credit hours increased dramatically from 2,774 to 3,683.
- Dr. Polly Baker and a team of students in her Visualization and Interactive Spaces lab developed a tablet computer application for the “Down-by-the-Water” project. The project is part of the “Discovering the Science of the Environment” program devoted to, environmental education.
<http://vis.iu.edu/Discover/Water/index.html>
- Professor Sara Hook successfully completed the process of implementing a new certificate program in Legal Informatics.
- Through a grant to the School’s MARLA facility (Media Arts/Sciences Research Lab and Arcade), directed by lecturer Mathew Powers, a team of faculty and students were commissioned to develop teaching games for GenCon, a national gaming convention in Indianapolis in the summer, 2013. The School also initiated the MARLA 2 program under the direction of lecturer Todd Shelton, to advance the our commitment to the rapidly expanding world of mobile computing.
<http://www.iupui.edu/impact/gencon2012/>
- Instructors Robert Comer and Jennifer Stewart led a team of student in their “Informatics for Social Change” course, which engages students in collaboration with community partners to utilize information technologies to advance the partners’ mission. In 2012-13, the course produced videos for Bicycle Indiana,

the Indiana Organ Procurement Organization, and an interactive game based on stories of the Indianapolis flood of 1913 used by the Indiana Historical Society.

- The School collaborated with the Department of Museum Studies in the School of Liberal Arts to jointly offer a class called “Media in Museums.” Over 30 students from Informatics and Museum Studies visited five local institutions to explore to how information technology is transforming this profession.
- Assistant Professor Davide Bolchini and Professor Steve Mannheimer each received grants for Research Experiences for Undergraduates (REU) as supplements to their ongoing research projects funded by the National Science Foundation.

Research, Scholarship, and Creative Activity

- Associate Professor Josette Jones was awarded \$80,000 as Principle Investigator on a grant from the Indiana Clinical Translational Sciences Institute (CTSI) – Sustainable and Collaborative Informatics Projects (SCIP). The grant was for the “Development and Usability Testing of a Mobile Application for Nurse Shift Report Tool.”
- Dr. Brian Dixon was the first author of “A pilot study of distributed knowledge management and clinical decision support in the cloud” published in the prestigious journal *Artificial Intelligence in Medicine*. The article describes landmark research conducted by Indiana University, the Regenstrief Institute, and Harvard University on cloud-based systems to improve primary care facilities. Dr. Dixon also received a \$26,657 grant from the Centers for Disease Control and Prevention to research Lyme Disease in veterans.
- Associate Professor Jake Y. Chen was senior author on an article entitled “Seed-weighted Random Walk Ranking for Cancer Biomarker Prioritization: a Case Study in Leukemia,” by Tianxiao Huan, Xiaogang Wu, Zengliang Bai, and Jake Y. Chen, in the *International Journal of Data Mining and Bioinformatics*. Also, Professor Chen received two research subcontracts from Purdue totaling \$85,509.
- Informatics Associate Professor Edgar Huang and his student Christine Dunbar co-authored and presented a paper entitled “Connecting to patients via social media: A hype or a reality?” to the annual conference of the Association for Marketing & Health Care Research, in Montana, February 27 – March 1, 2013. <http://www.amhcr.org/AMHCR.htm>
- Dr. Davide Bolchini received a Research Support Funds grant for \$45,000 from the Office of the Vice Chancellor for Research, a grant to support an innovative

- exploration of “Next-Generation Interaction with Ultra Large, Wall-sized Displays.”
- Informatics colleagues Mexhid Ferati (graduated PhD student), Mark Pfaff, Steve Mannheim, and senior author Davide Bolchini published “Audemes at work: Investigating features of non-speech sounds to maximize content recognition,” in the top-tier *International Journal of Human-Computer Studies* (IJHCS), 70 (12), 2012, 936–966.
 - Visiting Associate Professor Dr. Roland Gammache served as a co-investigator on a Department of Defense grant entitled “Health Terrain: Visualizing Large-Scale Health Data” in the Novel Presentation of Health Related Data program (NPHRD). Principle Investigator is Dr. Shiaofen Fang from the Computer Science Department, and Informatics EAD Mathew Palakal is Co-Principle Investigator.
 - Associate Professor Karl MacDorman was first author on “The uncanny valley does not interfere with level 1 visual perspective taking” in *Computers in Human Behavior*, 29(4), 1671–1685.
 - Assistant Professor Mark Pfaff received a grant for \$108,000 from the Mitre Corporation for an ongoing study of the impact on visualization technologies for human decision making processes in emergency management.

Civic Engagement

- The School hosted the Hoosier Healthcare Innovation Challenge, sponsored by Develop Indy, TechPoint and Ice Miller, LLP. The Challenge brought together innovative leaders in Indiana’s healthcare and technology communities working to solve some of health IT’s most challenging problems. The event attracted over 200 clinicians, IT developers, designers and entrepreneurs from across the state. <http://www.hoosierchallenge.org/>
- The School’s Dr. Mathew Palakal and research associate Skip Comer worked with Dr. Sherri Bucher from the IU School of Medicine to develop a mobile phone app for health-care trainers in Kenya. The project is funded by the Laerdal Foundation.
- The School’s Skip Comer, together with faculty from the department of Library and Information Science (LIS) and the School of Nursing, also Dr. Mathew Palakal, were redeveloped the informational web portal for the Indiana University Mel and Bren Simon Cancer Center. The new site will feature customized symptom management and reporting functions, allow guided literature search by patients and their families, and facilitate better doctor-patient communication.
- Informatics lecturer C. Thomas Lewis and Dr. Rachel Vreeman from the IU School of Medicine, were awarded an internal IUPUI International Development

Award to create a series of culturally relevant narrative videos for use in family-centered counseling of parents and children in Kenya, helping these families through the difficult process of disclosing HIV status to HIV-infected children.

Diversity

- The School's Dr. Polly Baker led our involvement in STARS (Students and Technology in Academics, Research, and Teaching), coordinating a \$28,000 sub-award from a program funded by the National Science Foundation, (PI: University of North Carolina) to attract women and under-represented groups to study in computing-related disciplines. In October, 2012, the STARS students, faculty and staff hosted 80 junior and senior high school students from Providence Cristo Rey High School to tour Informatics and the IUPUI campus. High school attendees were 65% African American.
- Women in Technology (WiT) at IUPUI, a recognized student organization at IUPUI advised and sponsored by the School of Informatics held its third annual Women in Technology networking event. The event attracted nearly 100 students, faculty and area employers.
- In an effort to increase the diversity and international profile of our undergraduate population, Dr. Mathew Palakal and Prof. Steve Mannheimer took a first-ever recruiting trip to 10 secondary schools in India, meeting over 1,000 students.
- The school hosted Girls Inc. Day, providing hands on experiences for 104 young women between the ages of 9 and 15 on Saturday, April 27. Attendees created their own websites using HTML and CSS in a workshop designed by and run by STARS (Students and Technology in Academics, Research, and Teaching).

Best Practices

- The School merged with the School of Library and Information Science, thus achieving important economies of scale that the two schools could not as readily consider when separate. This merger also creates important opportunities for collaborative endeavors in research, teaching and civic engagement.
- As a result of the merger of former School of informatics and the School of Library and Information Science, the school designed and implemented a new internal structure of departments for Bio-Health, Human-Centered Computing, and Library and Information Science.
- The School adopted a set of new guidelines for promotion and tenure, including a first-ever provision that candidates for advancement in the tenure track must demonstrate ongoing effort to attract external support for faculty and school

- The School of Informatics officially became the School of Informatics and Computing. Not only does this new name recognize the significant portion of our core school faculty trained in computer science, it also articulates for the IUPUI campus and the community at large the inextricable relationship of informatics and computational thinking and application.

External Awards and Appointments

- Informatics Associate Professor Karl MacDorman was appointed to the International Scientific Advisory Board of the Seventh EU Framework Programme for Research and Technology Development, Large-scale Integrating Projects (IP), European Commission. This board focuses on Adaptive Strategies for Sustainable Long-Term Social Interaction (ALIZ-E) <http://www.aliz-e.org/>
- Informatics Associate Professor Josette Jones was elected to the Board of Directors of the TIGER Initiative (Technology Informatics Guiding Education Reform). <http://www.thetigerinitiative.org> This initiative is dedicated to advancing the integration of health informatics and nursing practice, to make healthcare safer, more effective, efficient, patient-centered, timely and equitable.
- Dr. Brian Dixon was selected by the Healthcare Information Management and Systems Society (HIMSS) Board of Directors to serve as the Chair of the society's Annual Conference Education Committee (ACEC) at the HIMSS 2014 professional meeting in Orlando, FL. <http://www.himssconference.org>
- Dr. Brian Dixon was selected as an "Outstanding Peer-Reviewer" by the American Medical Informatics Association (AMIA) for his work on the Scientific Program Committee (SPC) during the society's annual meeting. AMIA is the nation's premier society for biomedical informatics. <http://www.amia.org>
- Dr. Brian Dixon was inducted as a Fellow in the Healthcare Information Management and Systems Society (HIMSS), the largest professional organization for health information technology professionals in the world. Dr. Dixon is the first member of the IU faculty to be elected as a Fellow of HIMSS.
- The School's director of the Bio-Informatics program, Dr. Yaoqi Zhou, become a member of Faculty of 1000, <http://f1000.com>. This organization is the publisher of four services for life-science researchers and clinicians.
- Informatics EAD Dr. Mathew Palakal received the Distinguished Service Award from the Special Interest Group on Applied Computing (<http://www.sigapp.org>) of the Association for Computing Machinery, the profession's premier organization. <http://soic.iupui.edu/news/palakal-receives-distinguished-service-award-from-computing-group>.