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E-Dimensions: Issue 8, Summer 2009



Dean's Message

When reflecting upon the past spring semester, there is much to be proud of here at the Purdue School of Engineering and Technology, IUPUI. First and foremost is graduating another talented group of individuals on May 10, 2009, at IUPUI's 40th Commencement ceremonies, which were held at the Indiana Convention Center. The School conferred 100 AS degrees, 379 BS degrees, and 78 MS degrees. In addition, two Purdue University Honorary Doctorate degrees were awarded to IUPUI Chancellor Emeritus Gerald Bepko and Wayne Eckerle, vice president for corporate research and technology at Cummins, Inc. Dr. Eckerle, a member of the Dean's Industrial Advisory Council since 2004, received a Doctor of Engineering degree, while Dr. Bepko received a Doctor of Humane Letters degree. I extend congratulations to all of our graduates and wish them success in their future endeavors.



Another exciting development in the School occurred in conjunction with the one year anniversary of the B.S. in Motorsports Engineering. We enthusiastically welcomed racing expert, Andrew Borme, to the IUPUI Motorsports faculty. Borme comes from Germany to teach at IUPUI after working for over 20 years in the motorsports industry. He was the chief engineer for Helio Castroneves in his first two Indianapolis 500 wins and has worked with several other drivers including Tomas Enge, Mario Haberfeld, Scott Goodyear, and Scott Sharp. This speaks volumes about the program's growth and success in its short existence, as Borme is expected to bring a wealth of knowledge and industry insight to the program.



As our commitment to being one of the best urban schools of engineering and technology, recognized locally, nationally, and internationally can be seen through examples such as the hiring of Borme to strengthen our motorsports program it can also be seen through our relationships with other universities around the world. We have been fortunate to collaborate with several superb universities. The School recently hosted guests from a few of these universities including Dr. Jean-Claude Guillemot, director of international programs at the University of Marseille in France and the delegation of the University of Tehran College of Engineering in Iran headed by Dean Mahmoud Nili-Ahmadabadi.

In April, Dr. Kirimi Kiriarniti, dean of the School of Engineering at Moi University in Kenya, spent several days visiting the School. During his visit we were not only able to strengthen the ties between IUPUI and Moi, but we also signed a memorandum of intent to further foster the collaboration between the two universities. Forthcoming efforts include student and staff exchanges, scholarships for students, collaborative research, community service, supervision of post graduate programs as well as study abroad programs.



Warm Regards,

A handwritten signature in black ink, which appears to read 'H. Öner Yurtseven'.

H. Öner Yurtseven, Ph.D.
Dean

E&T Faculty Member's Co-founded Company, ANGEL Learning:

Sold to Blackboard, Inc. for \$95M

On May 6, 2009, Blackboard Inc., a Washington D.C. based educational technology firm, acquired [ANGEL Learning](#) (A New Global Environment for Learning), an educational and course management software provider, for approximately \$95 million. Originally founded as CyberLearning Labs Inc. in 2000 by Ali Jafari, professor of computer and information technology, and David Mills, a 1999 computer and information technology graduate, ANGEL Learning is a web-based teaching and learning enterprise environment that allows educational institutions to create virtual environments for online learning. Prior to founding ANGEL Learning, Jafari and Mills developed an initial research system,



Indiana University's OnCourse, in 1996, which is still widely used today on all eight IU campuses.

The Indianapolis based company located at INTECH Park employed approximately 200 programmers, analysts, and sales/marketing personnel and had a client base of over 400 K-12 schools, community colleges, universities and private schools. Blackboard was particularly interested in ANGEL Learning for not only their story of entrepreneurial growth and impact on teaching and learning, but also for their customer support culture and record of innovation. More than 2,220 educational institutions in over 60 countries utilize the software applications and related services that are developed and licensed by Blackboard Inc.

Top E&T Students Recognized at Annual Bepko Honors Convocation

The Purdue School of Engineering and Technology, IUPUI hosted its 35th Annual Bepko Honors Convocation on April 24, 2009 at the Crowne Plaza Hotel at Historic Union Station. Over \$372,000 in scholarships and awards was presented to 159 of the School's most outstanding students. In addition, several faculty and staff were recognized with \$22,000 in awards. Clayton Nicholas, A.A.S. Mechanical Engineering Technology, 1978, B.S. Mechanical Engineering Technology, 1980 was presented with the Distinguished Alumnus Award.



E&T Hosts Annual POWER Summer Camp for Young Women

The Purdue School of Engineering and Technology, IUPUI was proud to host the 4th annual Preparing Outstanding Women for Engineering Roles (POWER) Summer Camp July 12 – 18, 2009.

The six day overnight camp provided women who are entering the 10th – 12th grades with an opportunity to spend a week on the IUPUI campus. Some of the activities campers participated in included building and programming robots, touring engineering labs and other facilities within the School and campus, attending panel discussions comprised of female IUPUI engineering and technology students, participating in roundtables comprised of a diverse selection of women engineers working in industry throughout Central Indiana, and partaking in various evening activities on campus and within downtown Indianapolis, such as an Indiana Fever game.

Camper Margarette Webb describes her POWER Camp experience as "A great way to learn about new things and expand your horizons. I've learned that engineering is innovative and different, and that draws me in." To learn more about this year's POWER Camp, visit <http://www.engr.iupui.edu/power/>.

Plug - In Hybrid Electric Vehicle Research Underway

Researchers at the Purdue School of Engineering and Technology, IUPUI have begun a study on the way to improve the fuel economy of Plug-in Hybrid Electric Vehicles (PHEV). Dr. Sohel Anwar, assistant professor of mechanical engineering, leads the research team comprising of Dr. Yaobin Chen, chair and professor electrical and computer engineering, one exchange doctoral student, one electrical and computer engineering graduate student, and one mechanical engineering graduate student and along with Indianapolis Power & Light Company (IPL) and Central Indiana Clean Cities Alliance (CICCA) serving as collaborative partners in promoting and disseminating the research results.

The team has modified two Toyota Prius hybrid vehicles with additional equipment and new high energy Li-Ion batteries, turning them into PHEVs. Traditional Hybrid Vehicles, like the Prius, recharge their batteries only through the use of the vehicle's engine and regenerative braking. Plugging a PHEV into an outside power source increases the distance the vehicle can go on purely electric power before the vehicle's gasoline engine must be engaged to run the vehicle and recharge the battery.



The preliminary data from the road tests of these vehicles indicate that the fuel efficiency of these vehicles is improved by as much as 90 percent within a commuting distance of 40 miles or less. This improvement in fuel efficiency also factors in the energy cost due to recharging of the battery from a power outlet. Since it is expected that a PHEV would recharge during the overnight hours, the load on the power grid occurs during a period of lower overall electricity usage.

Currently, the research team is developing innovative energy management algorithms for PHEV propulsion system and validating them on real-time PHEV simulation models to further improve the fuel economy and reduce vehicle emissions. This project has provided a number of educational opportunities for both IUPUI students, and the public, with IPL and CICCA assisting in the public educational aspects of the project.

Student Group Travels to Hawaii to Help the Homeless

The Global Design Studio recently spent a week in Hawaii during their first service learning experience. The group was comprised of students, teachers, architects, engineers, contractors, interior designers, and artists from the Purdue School of Engineering and Technology, IUPUI, Canada, Hawaii and Japan united forces on the Island of Oahu to construct a sustainable home to be used as temporary housing for the homeless. Students from the School, The College of the North Atlantic, and the University of Hawaii learned about sustainable building practices, Hawaiian culture, and the ability to use what they learned in order to help others in need. The group hopes the home they built, constructed from used shipping containers, will serve as a model home to inspire others to look for new efficient ways of building practices.



Student Spotlight

Perez Agaba

Major: Biomedical Engineering

Degree: Bachelor of Science

Anticipated Graduation Date: Spring 2012

He's a long way from his family in Uganda, but Perez Agaba is far from homesick. In his short time at IUPUI, the freshman student has made friends on the soccer field and in classes who have helped IUPUI feel like his "home away from home."

Agaba first came to the United States a few years ago when he was chosen as one of the top academic students of Uganda to study at Brooks School, a prestigious college preparatory college in Boston. That experience, which also afforded him the opportunity to play soccer, increased his desire to study abroad after high school.

After completing the required six years of high school in Uganda, including advanced courses in physics, chemistry, biology, and mathematics, Agaba began looking for colleges to pursue a degree in biomedical engineering.

He was introduced to the Purdue School of Engineering and Technology, IUPUI through mentor and friend Dr. Peter Orono, freshman year faculty and advisor. With his academic achievements and athletic ability, Agaba earned a scholarship to come to IUPUI to study and play soccer.

Agaba lives and breathes soccer, a sport he's played since he was a young child. As an offensive player, he enjoys the opportunity to compete as much as the camaraderie of his teammates.

"The program is very good. We have the facility and resources we need to play well," says Agaba. "A lot of credit goes to the coaches who are shaping us into a more united group of talented individuals who are willing to be there for one another."

Agaba is finding similar bonds with his fellow classmates and professors. He says the smaller class sizes—25-30 students compared to 60 students in Uganda—have allowed for more of a connection between professors and students. "We interact more and are able to solve problems together," he says.

He's also learned the ins and outs of college life from other international students. With help from Marilyn Mangin, director of student recruitment, Agaba has linked up with engineering students from other countries who provide guidance and share helpful hints.

After he obtains his biomedical engineering degree, Agaba plans to further his education so he can work in the medical field in some capacity. IUPUI's tie to the IU School of Medicine may prove to be yet another benefit for him.

"The people back home are suffering so much. Whether it means to construct health centers or become a doctor, I want to do something to help them," he says. Agaba's willingness to work hard, coupled with his disciplined approach to life, are telltale signs that he'll do just that.



Indiana Summer Transportation Institute for Indianapolis Public Schools (IPS) Students

The Indiana Summer Transportation Institute (ISTI) is a five day enrichment program designed to create awareness and stimulate interest in Indianapolis Public Schools (IPS) secondary school students of the opportunities that exist in the transportation industries.

Since its inception in 1993, several colleges and universities have partnered with state and federal transportation agencies to host a Summer Transportation Institute, developed by the U.S. Department of Transportation.

The Purdue School of Engineering and Technology, IUPUI sponsored the program for the second time in June, bringing over 20 high school students to campus for a week. Students were exposed to new frontiers and adventures in transportation such as highway design, modes of transportation, laws, regulations, safety, environmentalism, and career preparation/opportunities. In addition, students learned the basics of completing the college application process including applying for financial assistance. To learn more about ISTI, contact Patrick Gee at pgee@iupui.edu or 317-274-2943.

E&T Graduation Reception

The Purdue School of Engineering and Technology, IUPUI along with the E&T Alumni Association co-hosted a graduation reception with the Purdue School of Science, IUPUI on May 8, 2009 at the Woodstock Club. Over 430 guests attended the reception including over 80 E&T graduates. The evening provided opportunities for graduates to celebrate with not only their families, but also with their classmates, E&T alumni, and some of their favorite faculty and staff. The event was a wonderful way to kick-off the start to the weekend filled with many graduation festivities.



RFID Research Paper Receives Award from AAMI

Recently Barbara Christe, program director of biomedical engineering technology, along with colleagues, Elaine Cooney, professor of electrical and computer engineering technology, and Gregg Maggioli, president and CEO of BlueBean, LLC and students Dustin Doty, Robert Frye, and Jason Short received recognition from the Association for the Advancement of Medical Instrumentation (AAMI) for their work on adapting radio frequency identification (RFID) technology to a clinical application. AAMI awarded the 2008 Outstanding Management and Technology Paper Award to them for their paper entitled, "Testing Potential Interface with RFID Usage in the Patient Care and Environment."



The study conducted by Christe's team originated in response to a study featured in the Journal of the American Medical Association (JAMA) that concluded RFID could induce potentially hazardous incidents in medical devices. Consequently, Christe et al. found that the original JAMA study utilized unrealistic scenarios and thus, RFID technology actually was safe when antennas were placed in the appropriate locations for these scenarios. Christe explains, "There is very little academic research in the engineering arena on the application of technology in healthcare, in part because the human body is outside the comfort zone of most engineers. More scientific research is needed focusing on clinical applications." The team was recognized during AAMI's Annual Conference and Expo in June.

Volunteer Opportunities for E&T Alumni and Friends

In an effort to give back to the local Indianapolis community, the Engineering and Technology Alumni Association Board of Directors is pleased to present you with several volunteer activities over the next year. Future activities include volunteering at a shelter during the holidays, helping build a home for a family in need, and collecting items for a clothing drive.

The first volunteer opportunity will be at the Juvenile Diabetes Research Foundation's Walk to Cure Diabetes. The event will take place on Saturday, October 10, 2009 at Military Park, located in downtown Indianapolis on the southeast corner of the IUPUI campus. Volunteers are needed to assist with various tasks, such as registration and directing walkers. In addition, the E&T Alumni Board is looking for people to walk on their team. If you are interested in volunteering or walking, please contact Courtney Wooton at cwooton@iupui.edu.

The E&T Alumni Board is also looking for mentors to work with children in grades K-12 in Science, Technology, Engineering, and Mathematics (STEM). As a mentor, you will be able to help children become more proficient in STEM subjects, which are currently the subjects that children in the U.S. are having the most difficulty mastering. You will also be able to not only serve as a role model, but also promote the exciting careers of STEM. For additional information or to express your interest in becoming a STEM mentor, please contact Nathan Mott at 317-278-0914 or nmott@iupui.edu.

Watch for more information about all of the E&T Alumni Board's exciting upcoming volunteer opportunities!

Purdue School of Engineering and Technology, IUPUI Announces New Administrative Appointments

In preparation for the 2009-10 academic year, several administrative changes are taking place at the Purdue School of Engineering and Technology, IUPUI.

Stephen Hundley will assume the role of associate dean for academic affairs and undergraduate programs on August 1, 2009. Hundley, an associate professor of organizational leadership and supervision, joined IUPUI in 1997.

As Hundley serves in his new capacity, Eugenia Fernandez will become the chair for the Department of Computer, Information, and Leadership Technology. An Associate Professor of Computer and Information Technology with over 22 years of teaching experience.

In addition, Elaine Cooney was appointed as chair of the Department of Engineering Technology, effective July 1, 2009. Cooney, a professor of electrical and computer engineering technology, has been with the university since 1987.

After spending the 2008-09 academic year as an American Council of Education Fellow at Ohio State University working with President E. Gordon Gee, Andrew Hsu will return on August 1, 2009 to his position as the associate dean for research and graduate programs.

Hasan Akay served as the interim associate dean for academic programs and research during the 2008-09 academic year.

For more details on new academic appointments, [click here](#).

Technology Students in Thailand for Service-Learning Project
Led by Jan Cowan, associate professor in the architectural technology program, a group of six Purdue School of Engineering and Technology, IUPUI students are spending part of their

summer engaged in a service-learning project in Thailand. Timothy Diemer, director of international services, is assisting the group, as he has extensive experience in Thailand.

All of the students are from the Department of Design and Communication Technology, with five studying Interior Design Technology and one pursuing a degree in Computer Graphics Technology, who is serving as the group's multi-media specialist. While Cowan provides technical guidance to the group, Diemer provides an ongoing program of orientation to Thai language and culture. The group's current project, the design for renovation of a traditional canal-side market, is an activity of Global Design Studio, an international network of students who apply their skills in architecture, interior design, and related fields in service to communities in need.



The charm of the old style "floating markets" along Thailand's canals is still a valued image, as Thailand is a country that puts high value on tradition and the past. Thai students and faculty advisors from a partner institution, Rajamangala University of Technology in Thanyaburi (RMUTT), are working closely with the group on a design to renovate and revitalize a nearby canal market that has fallen into disuse. The design combines traditional Thai architectural forms into a modern facility that will attract a new clientele accustomed to strip malls and city markets. Current activity includes site visits, interviews with remaining residents at the canal market, and design sketches. The exchange of ideas between students whose traditions, language, and cultural backgrounds are so vastly different presents extraordinary opportunity for the lasting insights that can result from intense experiential learning.

IUPUI Music Academy's 6th Annual Performathon

The [IUPUI Music Academy](#) hosted its 6th Annual Performathon at the Artsgarden in downtown Indianapolis on May 16, 2009. The free event, which serves as the Academy's largest fundraising event of the year, raised \$2,099 to provide student scholarships to the Academy this summer. IUPUI Music Academy Director and Assistant Professor of Music, Dr. E.J. Choe served as the MC for the "musical marathon" featuring a variety of solo and ensemble music from students and faculty of the Academy. Over 400 students aged 18 months – adult participate in high quality, professional music instruction each year at the Academy. Once again this summer, five summer day camps were held in conjunction with the [IUPUI Sport Complex](#) exploring piano, guitar, percussion instruments, and music harmony.

Donor Spotlight

Delphi

The Purdue School of Engineering and Technology, IUPUI is privileged to have many wonderful donors, friends, leaders, and supporters. Without these key constituents, the School would not be where it is today. A prime example of one of these key constituents is Delphi, who was honored at the Spirit of Philanthropy Luncheon on April 22, 2009.

A leading global supplier of electronics and safety systems in controls, security, entertainment, communications, and power electronics, Delphi is an exemplary corporate partner of the School, committed to making a difference through active engagement at all levels. Their financial support

and investments established the Transportation Active Safety Institute (TASI), an IUPUI Signature Center, as well as related research opportunities. With core faculty drawn from nine academic departments representing seven schools, TASI is a university-wide interdisciplinary center for advanced automotive-safety research and development that will ultimately reduce vehicle crashes and save lives. Additionally, Delphi provides outstanding voluntary leadership to TASI, the Lugar Center for Renewable Energy, Dean's Industrial Advisory Council, and several departmental advisory boards. The School salutes Delphi for their transformational contributions and visionary leadership.



Ball Gardens Summer Concert Series

Please join the Department of Music and Arts Technology and the Indiana University Foundation this summer for the summer concert series in Ball Gardens. Each concert will be held from Noon – 12:45 p.m. and are free and open to the public. Ball Gardens is located on the IUPUI Campus north of Ball Residence Hall and east of the Union Building. The rain location will be the Riley Outpatient Center Auditorium. The concert schedule is as follows:

Tuesday, August 4 – John Alvarado, Classical Guitar
 Tuesday, September 8 – The Chatham Arch String Quartet
 Thursday, September 17 – IUPUI Chamber Ensemble



Eighteen E&T Students Named to the IUPUI Top 100

For the past 10 years, the IUPUI Alumni Council and the Student Organization for Alumni Relations (SOAR) have honored the Top 100 students at IUPUI. Each winter, junior and senior students are selected via a nomination and application process based upon scholastic achievement, collegiate and co-curricular activities, and civic community service.

Of the 100 students selected, the Top 10 males and the Top 10 females are named, including a Top Male and Top Female. This year's outstanding students recognition dinner was hosted at the Indianapolis Marriott Downtown on April 3, 2009. Congratulations to the 18 students from the Purdue School of Engineering and Technology, IUPUI named to the IUPUI Top 100!

(* Denotes Top 10 Student)



Jonathon Brack
 Darrell Goodwin*
 Adam Hooker
 Deven Kaufman*
 Kellen Knowles*
 Kevin Mauser
 Jessica McGown

Lora Perry*
 Andrew Pierluissi
 Daniel Roberts
 David Sempstrott
 Luke Spradlin
 Lynsey Tilton
 Edgar Torres

Josè Muñiz
Dara Navaei

Todd Wilson
Erika Yasuno

Third Indiana Renewable Energy Forum is a Success

The [Richard G. Lugar Center for Renewable Energy](#) hosted its third Indiana Renewable Energy Forum on May 29, 2009, at the University Place Conference Center and Hotel at IUPUI. Eric Halverson, WISH-TV 8 anchorman, was the MC for the half day event which included twopanel discussions on Public Policy and Utilities and Industry, as well as remarks from Paul Mitchell, president and CEO of the Energy Systems Network, and Kären Haley, director of the Office of Sustainability for the City of Indianapolis. Dr. Larry Kazmerski, executive director of science and technology partnerships at the National Renewable Energy Laboratory (NREL), served as the dynamic keynote speaker for the event, addressing the prospects of current and upcoming renewable energy and solar-photovoltaic (PV) technologies.



Recruiting Opportunity at Annual ET Career Connection

The Purdue School of Engineering and Technology, IUPUI is hosting a career fair on October 8, 2009, from 10:00 am – 3:00 pm. Brought to you by the Purdue School of Engineering and Technology Student Council, the Career Connection is designed for those companies specifically looking to meet and recruit Engineering and Technology students and graduates.

With over 2,500 students enrolled, the Purdue School of Engineering & Technology is the largest degree-granting school on the IUPUI campus. While maintaining a level of excellence in their academics, E&T students strive to be well-rounded individuals through their involvement in extracurricular activities. Our students engage in an environment that encourages and promotes opportunities to develop necessary professional skills. Their high level of involvement in their academics and extracurricular activities demonstrates motivation and ambition that will help them become excellent employees.

The 5th Annual Engineering & Technology Career Connection is an excellent opportunity for your company to locate students and alumni for internships, co-ops, and career opportunities. For more information on the Career Connection, please visit the event's website at www.engr.iupui.edu/etsc/cc/employer.shtml.

Join Us on Facebook!

The Purdue School of Engineering and Technology, IUPUI now has a Facebook Page and Group! These are informal online gathering places to find out information about upcoming events, view pictures, reconnect with lost classmates, network, and much more. If you have a Facebook profile, you can become our "fan" today by visiting the [Engineering and Technology Facebook Page](#) and also join the [Engineering and Technology Facebook Group](#).

Save the Date for our Upcoming Events!

Purdue Day at the Indiana State Fair

The Purdue School of Engineering and Technology Alumni Board will be hosting a tent at Purdue Day at the Indiana State Fair on August 7, 2009. There will be alumni, staff, and current students present to visit with, as well as several giveaways and information about the School. In addition, one of the Plug-in Hybrid Electric Vehicles will be on display throughout the day. Come visit our tent along State Fair Boulevard!

Purdue School of Engineering & Technology Student Scholarship Golf Classic

The Engineering and Technology Alumni Association is proud to host the 7th annual Purdue School of Engineering & Technology Student Scholarship Golf Classic on Friday, September 18, 2009 at Saddlebrook Golf Course. The Golf Classic raises money to support IUPUI students pursuing degrees in engineering or technology. Last year, ten scholarships were awarded from the proceeds. [Meet the 2009 scholarship recipients](#). For additional information or to register for the outing, please visit http://alumni.iupui.edu/events/et_golf/.

EDDP Affinity Reunion

The Engineering Dual Degree Program (EDDP) will have an affinity reunion to celebrate 10 full years! Save the date for Saturday, October 3, 2009. Invitations to follow shortly with details of the event. Please contact Jessica Rodgers McCormick at jrmccorm@butler.edu or 317-940-9021 with any questions.

Class Notes

Anything new since graduation? Let us know about your outstanding accomplishments by sending your updated information to Paula Jenkins, assistant dean for development and external relations, at pj@iupui.edu or 317-274-8807.

Missed an issue? Visit our E-Dimensions archive.

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