

OAKLAND ENGINEER

MAGAZINE

2015

ENGINEERING CLEAN ENERGY



OAKLAND
UNIVERSITY™



School of Engineering
and Computer Science



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OAKLAND ENGINEER

MAGAZINE

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A NEW ERA IN ENGINEERING AND COMPUTER SCIENCE HISTORY

MESSAGE FROM THE DEAN

This past year marked the beginning of a new era in the history of the School of Engineering and Computer Science at Oakland University. The most exciting change of the year was our new Engineering Center. The 127,000-square-foot, state-of-the-art building illustrates how our school continues to build on its strengths by bringing together the best minds and resources of its individual departments to achieve key strategic goals. This building is a tribute to our prominent, research-active faculty and outstanding students who help us realize our vision to establish Oakland University as a hub for engineering education, research, creativity and discovery.

In this issue of *Oakland Engineer*, you will learn about many of the accomplishments of our faculty and students. These accomplishments would not be possible without the generous support of our alumni and various industry leaders and corporations. We are truly grateful for the enthusiastic support of our alumni and businesses such as ABB Robotics, Nabtesco Motion Control, Inc., Fiat Chrysler, Ford, FANUC America Corporation, Denso, and many others. Their generosity helps us enhance educational opportunities for students. Furthermore, these gifts assist in the development of a four-year industrial robotics and automation program and will be applied to curriculum improvement and related student programs. Our alumni are known not only for their professional achievements, but also for their generosity and commitment to the betterment of society.

Clean Energy Research Center (CERC) scientists, engineers and collaborators are conducting applied research and facilitating private-sector investment to achieve a 40 percent energy reduction in existing manufacturing and commercial buildings in the Southeast Michigan tri-county region. The CERC effort will deliver energy efficiency solutions, innovation and new clean energy jobs today while providing significant environmental and economic impacts. The CERC is uniquely situated in the heart of the innovative Automation Alley. The center conducts research and demonstrates technologies in energy-efficient buildings, solar, combined heat and power (CHP), biomass, and wind energy.

Our student organizations are truly the heart of extracurricular activities and provide a great educational and leadership experience to engineering and computer science students. For the second year in a row, the Oakland Robotics Association was the first place winner at the Intelligent Ground Vehicle Competition, beating teams from around the world. Our Formula SAE Team has achieved impressive ranks, coming in 59th place in the world and third in Michigan. Students from the National Society of Black Engineers, the Association for Computing Machinery and the Society of Women Engineers sponsored the 2014 Hammerle Lecture, which brought nationally-recognized speaker Dr. Pamela McCauley to campus.

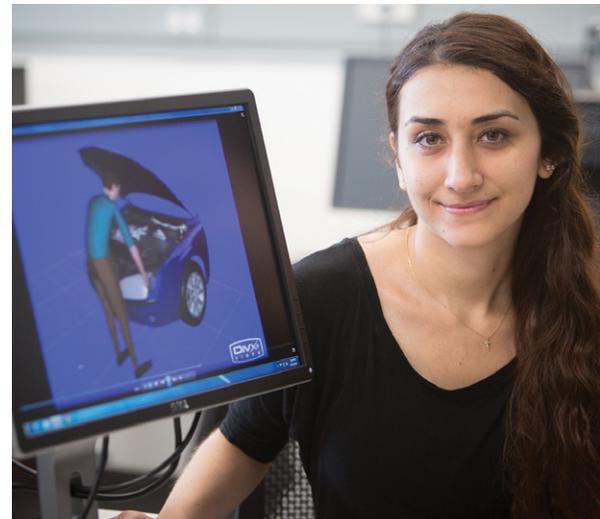
SECS community engagement activities have grown significantly over the last five years. In this issue, you will read about exciting outreach opportunities offered to K-12 students, including school partnerships and on-campus visits. The School of Engineering and Computer Science and its student organizations have hosted hundreds of young boys and girls on campus and engaged them in engineering projects.

Our faculty and staff work tirelessly to provide a great educational experience in an inclusive and diverse environment. Our students are exceptional and continue to contribute immensely to the School of Engineering and Computer Science. We strive to deliver educational programs to transform people's lives and offer economic prosperity to our surrounding communities and the state of Michigan.

Warm regards,



Louay Chamra



THE GIVING CORNER

GREETINGS FROM OUR NEW HOME

In August 2014 the new state-of-the-art, 127,000-square-foot Engineering Center opened. The Center was designed to focus on our undergraduate students' experience, and that goal has already been achieved. Students don't just attend class in the new building – they eat meals, study, apply their knowledge in a lab or just hang out. The new Engineering Center is truly a "home" for our students.

Our new home features more square footage for our students to learn and apply their knowledge than ever before. We have classrooms, more than two dozen teaching labs, a Sophomore Design Lab, a Senior Design Lab, an SAE Design Lab, an SAE Vehicle Lab, state-of-the-art Machine Shop, a Clean Energy Roof Top, a courtyard for student organizations, a 200-seat lecture hall, a beautiful atrium-style entrance as well as Einstein Bros Bagels.

A tour of the new building showcases the School of Engineering and Computer Sciences' capabilities. As one CEO said, "I had no idea that OU's Engineering School has so many capabilities – how can we get involved?"

It is an extremely exciting time to be part of Oakland University's School of Engineering and Computer Science. I invite all of our alumni and corporate partners to come back to campus to see the landscape changes that have been made in the past 36 months alone.

The new Engineering Center, a new 1,200-spot parking deck, the Elliott Tower, and the new Honors College on-campus residence hall have transformed our landscape and opportunities for our students.

Visit us today. Let's explore opportunities together that will support our students and continue the forward momentum of producing job-ready engineers on Day One of their careers. We value our alumni and corporate partners who make a difference in the lives of our students through their generous gifts.

If you haven't visited OU in a few years, I urge you to pick up the phone and schedule a time to visit. You'll be glad you did.

Go Grizzlies!

Rick Rachner
Director of Development – School of Engineering & Computer Science
rachner@oakland.edu



OU SECS RECIPIENT OF MULTIPLE MONETARY GIFTS

“There have been strong advances in manufacturing, both in southeast Michigan and across the United States, and industrial robotics has been at the heart of much of that development,” Dean Louay Chamra said. “By focusing on applied research and cooperating with those in the industry, OU’s goal is to become the premier research center in this area. We want to put quality engineers in jobs and help industry solve their problems and challenges.”



From left, Dean Louay M. Chamra, Dr. James P. Lentini and Dr. Betty J. Youngblood from Oakland University with Michael Mahfet of ABB Robotics, North America.

One of the awards was a \$50,000 grant from ABB Robotics, a leading supplier of industrial robots headquartered in Auburn Hills.

The gift will support the development of a four-year industrial robotics and automation program and be applied to curriculum development and related student programs. In addition, ABB will provide internship opportunities for several OU students each year in programs designed to produce valuable, work-ready graduates.

In addition to ABB, FANUC America made a substantial gift of robots, software and 2D iRVision to support development of an Industrial Robotics and Automation program within OU’s Department of Electrical and Computer Engineering.

This equipment will give students real-world experience and help them make a smooth transition into the professional workforce.

Some technology includes the FANUC M-1 robot, through which machines can “see” the pieces they are working with, making them useful in a wide spectrum of industries like pharmaceutical, agricultural, small-part assembly and automotive.

The robotics equipment will be used by engineering students in the brand new Industrial Robotics Lab, preparing them with not only hands-on training, but the skills to design applications and understand modern technology.

“The donated equipment will educate the next generation of engineers in order to provide the talent needed in industrial robotics and advanced manufacturing,” Chamra said.

Also in the manufacturing area, a \$30,000 grant from the DENSO North America Foundation will support multiple programs and enhance educational opportunities for students. More specifically, these grants will provide Oakland’s award-winning Formula SAE team and Oakland Robotics Association (ORA) with professional-grade manufacturing equipment, according to Dr. Brian Sangeorzan, interim chair and professor of mechanical engineering.

“This generous grant from DENSO North America Foundation will provide needed, state-of-the-art manufacturing equipment that will help our student teams compete with the best, and will better prepare them for careers in a globally competitive environment,” Dr. Sangeorzan said. “Our students compete against much larger schools, with more team members and much bigger budgets. This grant allows us to remain competitive.”

Composed of more than 40 students from engineering and business majors, Oakland’s Formula SAE team competes in the International Formula SAE student design competition each year and is currently ranked 86th in the world, 18th in the nation, and second in the state.

Nabtesco Motion Control has made generous donations to SECS in 2014 and 2013 by funding a \$50,000 gift each year.

In addition, alumnus M.C. Bowers established a \$100,000 endowment to encourage technically aggressive graduate-level research projects in the School of Engineering and Computer Science. ■



LARGEST FRESHMAN ENGINEERING CLASS IN OU HISTORY

The largest freshman class in the School of Engineering and Computer Science's history started in fall 2014. Enrollment increased by more than 20 percent, growing from 312 to 384 incoming undergraduate students.

"This increase is extremely important to OU and the region, since we are providing the talents necessary for the high demands for engineering and computer science graduates," Dean Louay Chamra said. "Oakland University is providing the workforce to keep the high-paying jobs in Michigan and creating new opportunities for our communities."

With the total enrollment on campus increasing to 20,519 students – up 11

percent since 2008 – there was an overall growth across campus. But even in specific engineering and computer science departments, there was a high enrollment increase in the past year alone, among all class levels.

Computer Science enrollment jumped from 268 to 324 students. The engineering management program increased from 55 to 71.

"The (increased) admission rate reflects highly on the quality of education at Oakland University and the School of Engineering and Computer Science," Chamra said. "In addition, we are very proud of our faculty and students who provide a great educational environment for our incoming students." ■



SECS STUDENTS SUCCEED AT SENIOR DESIGN COMPETITION

For most college seniors, the end of the semester means exams. But for students in ECE 491, ISE 491 and ME 492, presenting a device for the Senior Design Competition is the culmination of the class.

The course, which was first offered in 2004, combines all of the senior design courses in computer, electrical, industrial and systems, and mechanical engineering, with multidisciplinary projects assigned to each group, according to Professor Mike Latcha.

While there are different approaches to the projects, Latcha said his students are typically given a challenge or theme with rules to follow.

The theme of the project changes each semester, but Latcha said the concept “has proven to be a very effective motivator.”

“The senior design experience is brutal — to research, design, model, simulate, build, test and compete with a device that must meet a raft of specifications,” Latcha said. Until this year the competition did not have a dedicated area — though it was funded by the Provost’s fund for undergraduate research — and students had to find their own workspace.

The new 3,050-square-foot Senior Design Laboratory, located across from the machine shop in the Engineering Center, is home to 14 group workstations - each equipped with a computer and electronic and mechanical tools. Latcha said these resources give students almost unlimited ability for their design needs, and help provide a rich learning experience for Engineering and Computer Science students.

Each semester presents a new challenge for the teams to tackle.

Students worked toward the goal of sorting 1,800 Skittles, by color, in the winter 2014 semester. The fall 2014 competition focused on “designing, building and competing with a device that would instantly deliver a precise, randomly determined, number of small parts such as screws and nuts,” according to Latcha. The goal was to help look into common automotive assembly plant issues.

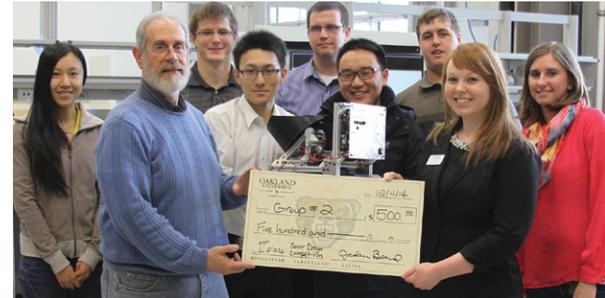
The first place team was awarded \$500, the second given \$300, and the third \$100 — funds which were donated by the Oakland University Credit Union to encourage student competitions.

The winning project for the fall 2014 semester flawlessly delivered the six randomly selected parts - a feat that Latcha said has never happened before.

“These tasks would be difficult to accomplish over an academic year (and they seem impossible to carry out in a single semester. We have been told this by folks at other universities all across the U.S.,” Latcha said.

“Our students, however, understand how to work hard and no matter what wacky idea we come up with for a competition, no matter how difficult of a theme we throw at them, they have always risen to the challenge and exceeded expectations. It is a constant inspiration to be a part of this experience.” ■

More detailed information about past projects and the rules of various competitions and design criteria can be found at secs.oakland.edu/~latcha/.



Senior Design is the culmination of a student's education at Oakland University's School of Engineering and Computer Science.

PLM CENTER UNVEILED AT OU

Automation Alley, Michigan's largest technology business association, opened the Automation Alley Product Lifecycle Management Center at Oakland University last year. The center addresses the tremendous need in Southeast Michigan for affordable training and certification of local employees, students and individuals in product lifecycle management (PLM).

PLM is the process of managing the lifecycle of a product from its conception and design, through manufacture, to service and disposal. It integrates people, data, processes and business systems and is a vital process for all digital design and manufacturing of the future. PLM technologies can improve and optimize a company's productivity and methodologies by making complex processes more cohesive, streamlined and simplified. In doing so, a higher quality product can be brought to market faster and at a less expensive price point, creating less waste and generating higher profits for major manufacturing industries.

Located inside OU INC, a SmartZone business accelerator on the campus of Oakland University, the Automation Alley Product Lifecycle Management Center – in partnership with Siemens, the Michigan Economic Development Corporation, Geometric Solutions, solidThinking, Inc. and Oakland University's School of Engineering and Computer Science – will offer affordable training and PLM certification using cutting-edge equipment and software, including computer-aided design (CAD), computer aided engineering (CAE) and computer-aided manufacturing (CAM), as well as other state-of-the-art PLM technologies including digital factory simulation, 3-D scanning and 3-D printing.

The center will help to grow the talent pipeline for Michigan's small to medium-sized manufacturers. A consulting and technical services program will help companies move from traditional design and manufacturing methods to the latest in digital processes. A matching program will create an education pipeline, pairing job seekers and students trained in PLM with local manufacturing companies interested in hiring interns and employees.

ISE DEPT. LAUNCHES PRODUCT LIFECYCLE MANAGEMENT COURSES

Building on a collaborative partnership between industry and academia, OU's Industrial and Systems Engineering (ISE) Department offered a pilot Product Lifecycle Management (PLM) certification course for engineering student interns and engineers from FCA US LLC (formerly Chrysler Group LLC) in 2013.

PLM software tools help companies to manage all stages of a product's life cycle, from conception and design, to manufacture, service and disposal.

The weeklong pilot course focused on the Siemens PLM Tecnomatix suite's Jack software tool. Jack is a human modeling and simulation software tool used for ergonomic design and analysis. The ISE Department obtained Jack as part of two \$46 million in-kind Siemens PLM software grants made in 2011 and 2012.

The course was developed through an effort led by ISE department faculty Dr. Robert Van Til and Dr. Sankar Sengupta. The pair worked with personnel from Siemens PLM, FCA US LLC, 4D Systems LLC and Alimar Ltd. on course development and delivery. The pilot course was funded as part of a \$50,000 Michigan Economic Development Corporation grant for a PLM/ MSV Training and Internship Program. The course was taught by Phil Nicholson, a subject matter expert in Jack from 4D Systems.

"We have been working with industry organizations and agencies such as Automation Alley and the Oakland County Economic Development and Community Affairs Office to develop PLM as part of the foundation of our ISE and Engineering Management degree programs," Dr. Van Til said.



Biplob Dutta demonstrates the process of 3-D printing to Provost James Lentini.

Due to the success of the pilot program, the ISE Dept. developed a series of for-credit PLM courses using various software tools such as Jack, Process Simulate - Robotics, Plant Simulate, and Teamcenter. These 2-credit courses are held in the ISE department's PLM Laboratory one night per week during the fall and winter semesters. Course development and instruction is from industry subject matter experts in the field.

Three of these courses are being offered during 2014-15 school year while the remaining two will be added in 2015-16. According to Van Til, "offering 2-credit courses allow both our current students as well as engineers from industry to take them, something that really wasn't feasible for certificate courses. Their focus is on training and application of PLM tools, rather than on theory."

Alice Swanger, principal of Alimar Ltd. said, "This is the kind of program that begins to bring both practical skills and engineering acumen to business. Utilizing Modeling, Simulation and Visioning (MSV) tools, Product Lifecycle Management is a next-level, competitive business strategy. The program helps supply engineering talent to address a demand in local industry."

In addition to being open to engineers, either working or looking for career positions, these PLM courses are available to students from any university. ■

Companies, engineers and engineering students interested in learning more about the PLM courses can contact Dr. Van Til at vantil@oakland.edu or (248) 370-2211.

Your gift *matters* to Scott.



Name: Scott Shermetaro

Major: Mechanical Engineering,
just like my dad

Year: Senior

Hometown: Rochester Hills, Mich.

What do you like best about your area of study?

I really like how intellectually stimulating the engineering classes are, and I thoroughly enjoyed my internship at Chrysler as a Powertrain Quality Reliability intern. I am very thankful for the connections OU has with Fiat Chrysler that allowed me the opportunity to work there.

Why did you choose OU?

As a Presidential Scholar, choosing OU was the wisest financial decision that I could have made; plus, my parents and three older siblings all attended the university. We are a family of Golden Grizzlies and I wanted to be a part of that!

How have scholarships empowered you?

The scholarships I have received truly allow me to stay focused on my academic success without having to worry about working full-time and balancing an extremely difficult course load.

What student organizations are you involved in?

I am very involved on campus as the vice president of Golden Key International Honor Society, secretary of the Tau Kappa Epsilon Fraternity, and a member of the National Residence Hall Honorary. I was recently elected into Tau Beta Pi, the Engineering Honor Society for the top 12.5% of juniors studying engineering, and chosen to be part of Leadership OU, an alumni-based mentorship program. I also was the financial affairs director for the past administration of Oakland University Student Congress.

To learn about how your gift will impact more **students like Scott**, visit
oakland.edu/giving/yourgiftmatters

ENGINEERING AND COMPUTER SCIENCE OUTREACH PROGRAMS

Boosting engineering interest in youth



These students work as a team to put together a working circuit at one of the summer outreach programs. Oakland's School of Engineering and Computer Science offers programs for elementary to high school age students that make learning enjoyable.

Oakland University’s School of Engineering and Computer Science (SECS) provides a great place for students to learn more about the field of engineering — and not just those admitted into the program. From camps to field trips and special “engineering days,” OUSECS has a variety of outreach programs to get children and teens interested in engineering and related fields.

The hands-on activities started about four years ago, when the school started offering general engineering and computer science exploration summer camps.

A relationship began with Pontiac Schools, and gradually, camps expanded from general exploration camps to more focused programs.

After positive feedback from the parents and kids, the camps have expanded greatly — providing more options and facilitating an increase from 100 to about 700 attendees in the summer alone.

“From mid-June to mid-August, the students are here all day, everyday,” Director of Outreach and Recruitment and Associate Professor of Mechanical Engineering Christopher Kobus said.

Science, Technology, Engineering and Math (STEM) camps take place on OU’s main campus, the OU INC business incubator and the Macomb County satellite Anton Frankel Center. OU engineering undergrads and other local engineering students lead the camps, instructing the hands-on activity, which they plan with direction from Kobus.

While the camps benefit the community, they also help the program grow. With jobs increasing in the engineering field, more graduates are needed, so gauging students’ interest — and indulging and encouraging them in those interests early on — is crucial.

“Around seventh and eighth grades, parents start talking to their kids about what they want to do,” Kobus said. “Having an opportunity to come out to a STEM camp — either a focused camp or general exploration camp where they learn a bit of everything — helps kids get acquainted with what the substance is, and get excited because now they get to decide what math and science courses they might take next year, and into high school. If they want to be in the STEM field, they’ll need to take a certain pathway to get there, so this both prepares them and lights their fire for the subject.”

STEM camps focus on hands-on, project-based learning. Students have

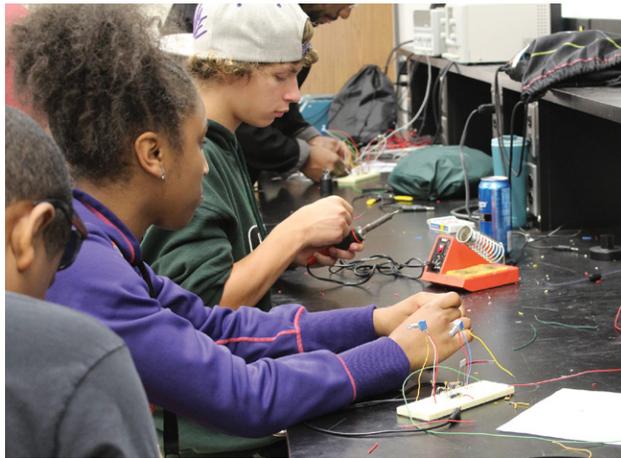
the opportunity to apply material and themes to real-world situations, through experiments and projects, for a unique learning experience.

Noelle Rossetto, who is homeschooled, found out about STEM camps from her sister. Attending them was enjoyable for her, and the work she did made her more interested in engineering and computer science.

“It was really fun,” Rossetto said. “I did a lot of stuff that I haven’t done before and that I honestly didn’t think I could do. Making web pages was my favorite because I liked writing the code. I would definitely come back again.”



A student assembles a windmill during one of the summer camp sessions. Alternate energy sources were a big part of the camps.



Rochester Hills resident Kristin Schreck enrolled her children in STEM camps for the first time this summer, and said they will attend again next year.

Abby Schreck, 11, and Nate Schreck, 9, both took part in an Engineering Exploration week and had a great time learning new things.

"I think the most valuable part of the camp was that my kids were able to see a side of science and technology that they don't get a lot of exposure to in school," Schreck said. "The topics were current and relevant, and taught by experts in the field. Lessons were explained to them in a technical way, but in a way they

could understand and get excited about and have fun with. The counselors were excellent too, and explained so much about OU's campus during the tours."

Kobus said the camps have continued to grow, and in turn, have boosted enrollment in the OU Engineering and Computer Science Programs.

He said he plans to continue adding more outreach programs each year — from STEM camps to field trips and visits to schools — because of the positive effects they have on everyone involved.

"The whole point is to get more students excited about STEM," Kobus said. "For

every student who graduates, there's two or more job openings — we can't possibly fill them all without increasing enrollment. It (STEM) has done quite a bit for our enrollment. Since this program got rolled out a few years ago, our enrollment has almost doubled. From 2009 to 2014, we've almost doubled the number of students we have. We're growing this year — about 20 percent. You don't see that kind of growth in other units on campus. So what's different? The outreach program. We're getting the name out there." ■

For more information about the outreach program, visit oakland.edu/SECS/Outreach.

MCCAULEY DELIVERS IMPORTANT MESSAGES AT HAMMERLE LECTURE

Dr. Pamela McCauley, an engineering professor, researcher, published author and nationally-recognized speaker, brought her wisdom to Oakland University's 2014 Hammerle Lecture with her presentation "Seeing Beyond Us: True Diversity."

The Oklahoma University graduate — also the first African-American woman in Oklahoma to receive a Ph.D. in engineering — discussed a variety of topics, including diversity, adversity and following your passion.

"Her (McCauley's) lecture was excellent and very engaging," said School of Engineering and Computer Science Dean Louay Chamra. "I am hoping that her lecture can motivate more women and underrepresented students to major in STEM fields and specifically engineering."

Started in 1987 in honor of the late William G. Hammerle, founding professor of engineering at OU, the lecture series features creative and innovative speakers with ideas for problem solving.

After an opening from Chamra, McCauley took the stage. Discussing her efforts to overcome adversity as a teen mother and black female pursuing engineering, McCauley transitioned into the topics of opportunities in innovation, diversity in innovation and why today's engineers are so important to the field.

She discussed the importance of everyone coming together to accomplish goals — regardless of their differences — since each person plays a role in innovation.

"People from different backgrounds can work together for a common good, because we're better when we work together," McCauley said.

In addition to stressing the excitement of a career in engineering, as well as the financial and personal benefits that come with a job in the field, diversity was also a big topic of discussion.

McCauley highlighted the need for variety of race and gender in the engineering and computer science field.

"We've got to have more diversity," McCauley said. "It's about our survival as a nation."



The Hammerle Lecture was hosted by the National Society of Black Engineers (NSBE), the Association for Computing Machinery (ACM-W) and the Society of Women Engineers (SWE). Jared Oluoch, president of NSBE, said he thought McCauley did a great job with the presentation.

His club reached out to McCauley in an effort to get her to visit OU. They also got ACM-W and SWE interested, and with Chamra's help, the groups worked to bring her to campus to share her wisdom.



Dr. Pamela McCauley, speaker at the 2014 Hammerle Lecture, touched on such topics as diversity in engineering and the value of today's students.

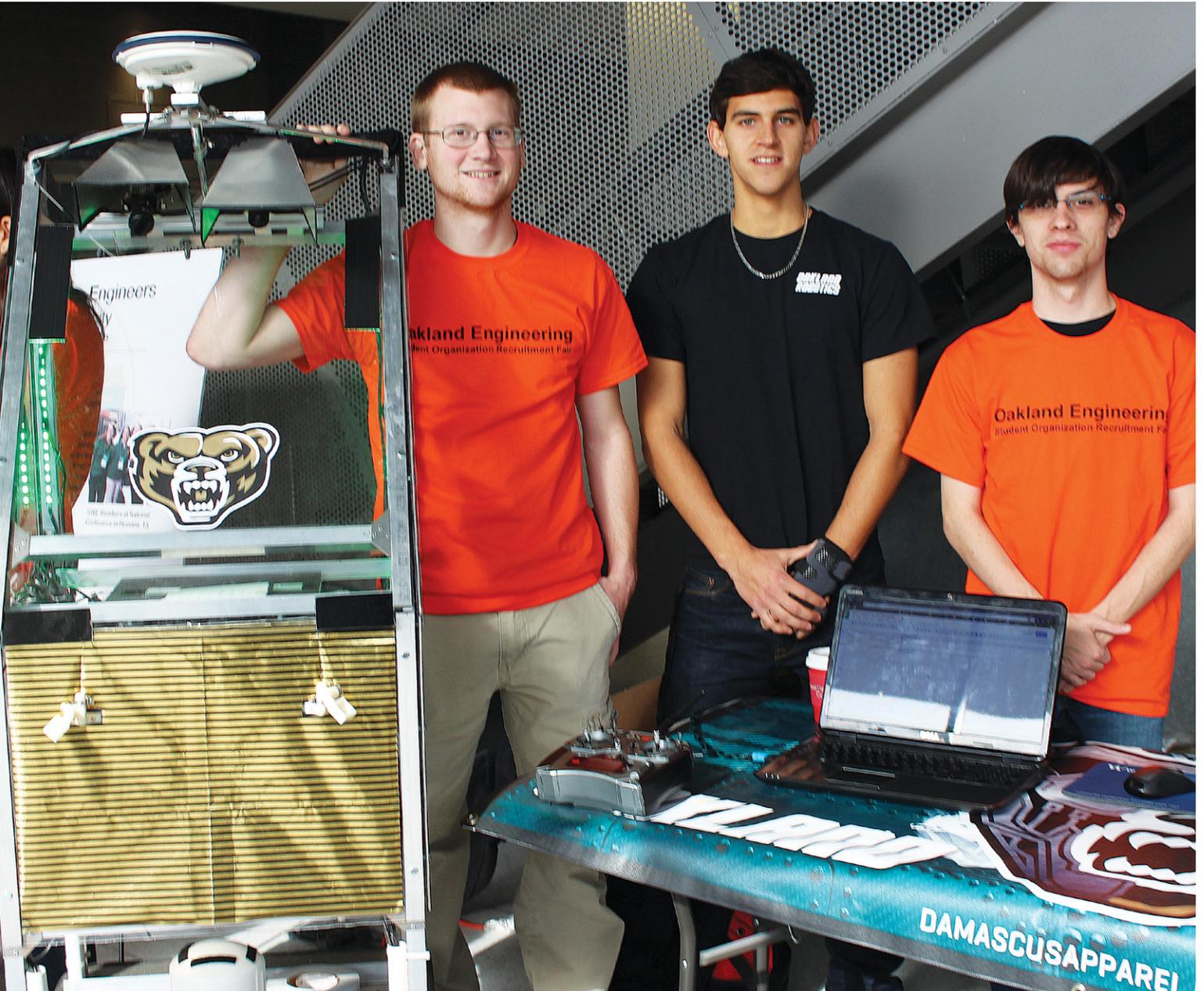
"Dr. McCauley's lecture was very inspirational and educative," Oluoch said. "She kept her audience listening with rapt attention. The most valuable subject Dr. McCauley discussed was the glaring underrepresentation of minority groups and women in STEM careers. She offered the spot-on advice that "we don't need to wait at the end of the pipeline. We need to start encouraging women and minorities early — right from elementary school — to study STEM disciplines."

McCauley stressed with students the importance of having confidence.

"You are special; you matter a lot." McCauley said. "Students at Oakland University — in engineering and computer science — we need you like we haven't needed engineers in a long time. We need you to graduate, innovate and be confident in your abilities." ■

BACK-TO-BACK CHAMPIONS

Oakland University Robotics Club's hard work pays off



Oakland University Robotics club members with their award-winning robot, "Mantis."



The Oakland University Robotics Association knows the value of hard work. Taking home First Place for the Main Autonomous Navigation Challenge, Third Place in the Basic Autonomous Challenge, Third Place in the Interoperability Profile Challenge and the Grand Award for Overall Performance at the 22nd annual Intelligent Ground Vehicle Competition (IGVC) didn't come easy.

"(Winning) was an exciting moment — a stress-relieving, load-off-the-shoulders moment," member Sami Oweis said. "It meant even more for us when we were told that we had just broken a record that was held unbeaten since the Auto-Nav challenge was developed to finish the complete advanced course."

OU Engineering students Mike Truitt, Brian Neumeyer, Hudhaifa Jasim, Kevin Hallenbeck, Link Lorenz, Lucas Fuchs, Michael Norman, Micho Radovnikovich, Oscar Sanchez Vazquez, Parker Bidigare, Steve Grzebyk and Oweis make up the association.

"Every single year since then we've improved, and it was really nice to see the team reach the peak this year."

Taking place annually on OU's campus, IGVC is the main event for OU Robotics. Hundreds of hours were spent building their robot, "Mantis," to perfect it for the international competition, allowing them to take home the Lescoe Cup — top prize in the entire competition — for the second year in a row.

This award grants the team \$10,000, which is well-deserved for the hundreds of hours put into the development of Mantis. Mantis had a wheelchair-based suspension with a lightweight aluminum superstructure, the programming power of two Lenovo ThinkPad computers, a removable electronic box and green lights

for effect — a combination the team knew would be effective at IGVC.

And it was — the Mantis became the first and only robot to ever fully complete the Advanced Autonomous Challenge course which was introduced in the IGVC three years ago.

"This year we were more ready than ever before," Hallenbeck said. "This meant more time for testing and tweaking parameters at the competition, and reasonable amounts of sleep."

Students involved say the club is a great opportunity to apply skills honed in the classroom into the real world. In addition, it gave them experience working as a team. Being involved since IGVC's start, Oakland Robotics moved up from 20th, 13th and 3rd place, earning 1st for two years in a row, Grzebyk said.

"This was the eighth IGVC I've participated in since I was a junior in undergrad in 2007," said Radovnikovich. "Every single year since then we've improved, and it was really nice to see the team reach the peak this year, my first year as an advisor."

At the 2014 competition, Oakland broke the four-year record of no team completing the advanced course, making a mark on the industry and the university.

"(This trophy serves) as a reminder that we must continue with the proud tradition that this team has established, excellence in engineering and hard work," Grzebyk said. "Now it falls to the senior members to step aside and help train and mentor a new generation of eager engineers." ■

AN INTERNATIONAL COMPETITION

Bluefield State College
 Bob Jones University
 California State University, Northridge
 The Citadel Team
 École de Technologie Supérieure
 Embry-Riddle Aeronautical University
 Georgia Tech
 Hosei University
 Indian Institute of Technology – Kharagpur
 Indian Institute of Technology – Bombay
 Lawrence Technological University
 Michigan Tech
 Missouri S&T
 M.S. Ramaiah Institute of Technology
Oakland University
 Princess Sumaya University for Technology
 Stony Brook University
 Trinity College
 United States Naval Academy
 University of British Columbia
 University of Cincinnati
 University of Illinois at Chicago
 University of Michigan, Dearborn
 University of Minnesota-TC
 University of Texas at Arlington
 University of Waterloo
 University of West Florida
 Virginia Tech
 Yale University
 York College of Pennsylvania





Oakland University is ranked 11th in the country for the percentage of women tenured/tenure-track faculty in engineering.



OU RANKS 11TH IN THE COUNTRY FOR PERCENTAGE OF WOMEN FACULTY IN ENGINEERING

According to recent data from the American Society for Engineering Education (ASEE), Oakland University is among national leaders in categories related to women faculty in engineering and the number of undergraduate computer science degrees awarded to students.

The ASEE's latest "By the Numbers" survey ranked Oakland 11th out of 246 schools in the nation for the percentage of women tenured/tenure-track faculty in engineering. Oakland also was listed 32nd out of 171 schools for the number of undergraduate computer science degrees awarded within an engineering program.

"These rankings by the ASEE reflect two statistics we are very proud of at Oakland," said Louay Chamra, professor and dean of Oakland University's School of Engineering and Computer Science. "We take great pride in the strength and diversity our women faculty members provide our students, and we are proud of our continually growing undergraduate computer science program."

To offer perspective, the survey showed that in fall 2012 the national percentage of women tenured/tenure-track faculty in engineering was about 14 percent. In 2001, it was just 8.9 percent. Laila Guessous, associate professor in OU's Department of Mechanical Engineering, recalls a distinct lack of diversity in engineering classes during her undergraduate years.

"I didn't have a single female engineering professor for any of my classes and was often the lone female engineering student in my class," she said. "I believe that as women represent a higher percentage of engineering faculty, it will help make the School of Engineering and Computer Science more welcoming to women engineering students who, unfortunately, continue to be underrepresented in engineering programs across the country—especially in mechanical engineering." ■



ENGINEERING CENTER GRAND OPENING

Students, faculty, industry leaders and friends of the university converged on Oakland University's campus in September in celebration of the grand opening of the state-of-the-art Engineering Center. Visitors heard speeches from student and community leaders. The engineering building dedication plaque was unveiled after it was fittingly wheeled out on Mantis, a robot which recently won the Intelligent Ground Vehicle Competition. Attendees gathered to socialize in the atrium of the 127,000-square-foot Engineering Center. The building, besides being spaciouly designed, includes lecture halls designed for 50, 100 and 200 people. Lab demonstrations and student organization displays were also part of the grand opening. ■



CLEAN ENERGY AND ENGINEERING

Going green on campus with help from SECS



With eco-friendly courses and clean energy efforts across campus, it's no surprise that Oakland University has a good reputation for "going green." Infrastructure and courses help build morale towards energy efficiency, from the power supplied to the campus to the School of Engineering and Computer Science itself.

"Energy-efficient buildings have made a huge difference to the entire university," said Louay Chamra, dean of Engineering and Computer Science. "These clean energy systems provide a healthy indoor environment for the students, faculty and staff. Furthermore, we are being a great neighbor to our surrounding communities by caring about the environment and implementing many energy conservation techniques to qualify for top LEED honors."

EFFICIENT FACILITIES

From the Human Health Building (HHB) to the Clean Energy Research Center (CERC) and the new Engineering Center, OU is filled with an abundance of energy-efficient and environmentally-friendly establishments.

OU's campus will utilize multiple existing and planned sources of on-site clean energy, according to James Leidel, director of Clean Energy Systems. A Central Heating Plant gas turbine, SECS microturbines, solar projects and a dual-fuel diesel-gas peaking system, among others, are the separate entities of clean energy at the school.

"It saves money, and being energy-efficient is the right thing to do," Leidel said. "These buildings are examples of green technology and clean energy. What better place than a university to engage in this sort of technology? Universities should be at the forefront to demonstrate and to educate."

HHB was completed in fall 2012, and is the only campus building certified Leadership in Energy and Environmental Design (LEED) Platinum designation in Michigan, assisted by Leidel's \$2.75 million

geothermal technologies grant from the U.S. Department of Energy.

The building features energy-efficient LED lighting, a geothermal heating and cooling system, recycled materials, a 50kW solar PV system on the penthouse and a large solar thermal system to assist the geothermal cooling with summer desiccant dehumidification.

While it hasn't yet been designated LEED, the Engineering Center is very energy-efficient and would rank Gold, according to Chris Kobus, Associate Professor of Mechanical Engineering, Director of Outreach and Recruitment.

Chilled beams cool the building, two 200kW Combined Heat Power (CHP) microturbines provide a large portion of electricity and waste heat is brought back into the building for space and water heating.

Another innovative clean energy building on campus is the CERC, which uses LED and induction lighting and is heated by a high-tech, automated wood chip boiler.

The CERC was made possible with a \$500,000 grant from the U.S. Department of Energy. Chamra said that the goal is to make the entire campus "the first sustainable campus in the US."

The CERC is embedded in the OU INC, a Smartzone business incubator located on the OU east campus' Shotwell Pavilion.

U.S. Department of Energy grants helped fund the CERC bio-energy demonstration modules and building wood chip boiler, the geothermal/solar-thermal system for HHB,

solar PV projects and an outdoor LED lighting pilot project with DTE Energy.

"Heating the entire campus on wood chips would make an even more significant impact," Kobus said.

The study and proposal undertaken by Leidel, formerly with Facilities Management, culminated with a public bid and a third-party financed proposal. However, as natural gas prices fell, the project was shelved in favor of a Central Plant CHP gas turbine.

In October 2013, the OU Board of Trustees approved Chevron Energy Solutions to undertake a public-private partnership for a 4.6MW natural gas CHP system.

The Chevron group recently spun out to a new company, OpTerra Energy Services, and installed and operates the CHP system to help power and heat the campus. Switching from mostly grid coal to clean-burning natural gas with waste heat recovery will lower OU's environmental footprint by 40 to 50 percent.

From 2006 through 2008, wind speed data was collected on a 50-meter-tall meteorological tower and a wind power study was commissioned by Leidel.

RESOURCES FOR LEARNING

In addition to being an eco-friendly energy producer on campus, the CERC provides engineering students and faculty with a place for research projects and hands-on opportunities with operated bio-fuel production systems.



"Clean or renewable energy is important because of the great environmental and economic benefits," Chamra said. "In addition, the clean energy systems will be used as living laboratories for SECS students and faculty to study and conduct research."

While there is a limited budget, there are still many volunteer and internship opportunities — paid and unpaid — to help students gain class credit and real-world experience.

Students can come to Kobus or Leidel to help on existing projects, or pitch proposals of their own.

"I definitely want more people here helping," Leidel said. "Students get to see hands-on real equipment — it's not just lab-scale. We have real equipment operating and they'd work with hardware and prototyping. I focus on real-world experiences in the university environment." In addition to research, the building and structure of the campus can be a clean energy living laboratory.

Through outreach programs, younger students get a taste of engineering and computer science, during week-long summer STEM camps.

Students tour campus, where they learn how the grid works and are shown the modern architecture and green design and technology of the buildings.

"As part of the outreach program and the one-week camps we brought here in the summer, there are always tours going on there and it's not a campus tour like admissions does, it's more of a technology tour," Kobus said. "We've gotten great feedback on the tours. The kids love seeing technology in action — they've seen some really neat stuff."

According to Kobus, the buildings also provide great research experience for University students to learn outside the classroom without going too far away.

His students learn from the school's energy system and efficient buildings; and many professors take their students to CERC for research and field trips.

"Clean or renewable energy is important because of the great environmental and economic benefits," Chamra said.

"All the buildings built on campus, including HHB, the new residence hall and the new Engineering Center, are being designed as living laboratories," Kobus said. "We can teach students theory in the classroom with little table-top experiments to get practical experience, but to go out and see it in its full form — that's really what we want. So when we design these buildings, we design them with the perspective that we want this to be part of a learning laboratory for students to be able to tour through and see the technology in action."

“In the alternative energy universe, if you don’t have conservation first, simply switching to other sources makes little sense.”



The latest “green” addition to Oakland University’s campus is the Engineering Center. Chilled beams cool the building, two 200kW Combined Heat Power (CHP) microturbines provide a large portion of electricity and waste heat is brought back into the building for space and heating.

EDUCATION IN ENERGY

With the resources available, it’s also important to understand how everything works. More energy-focused courses are being made available for students.

Recently, classes in energy efficiency have been proposed and added, and now engineering students can take their studies a step further with the new energy management master’s concentration. Kobus described it as a course teaching how “to optimize energy distribution systems, better manage environmental resources and help employers or clients significantly reduce energy costs.”

The class “Alternative Energy Systems” goes over major energy technologies. There is also a hybrid electric battery course and a fuel cell class, in addition to a series of three other conservation-focused energy management courses that will be taught executive-style next summer.

“The one technology that is truly clean is the energy you never use, so if you can learn to do more with less, not using energy is the cleanest thing you can do — conservation is number one,” Kobus said. “In the alternative energy universe, if you don’t have conservation first, simply switching to other sources makes little sense.”

Leidel is looking to launch more classes in clean energy to drive the importance back home and give students more experience learning about power systems engineering and combined heat and power systems.

“We have a lot of infrastructure projects,” Leidel said. “The existence of the Clean Energy Research Center, combined with multiple infrastructure projects provides a comprehensive educational front in clean energy systems. Students are drawn to Oakland by the visibility of these systems, classes and web sites. Many students have stated that they come to OU because of the things we’re trying to do with solar power, and the platinum

LEED building we have on campus. Clean energy is a significant area of focus for many universities, so to have that here is hopefully a draw for students.”

Right now he is developing a proposal for a clean energy and power engineering program, which could be offered as a master’s program in Clean Energy Engineering.

“The United States is a little behind in clean energy investment,” Leidel said. “However, in Michigan, we have a huge amount of engineering and innovative capacity that can be channeled into the clean energy sector. Here at Oakland, numerous clean energy projects have created a living, learning laboratory for students to experience these systems first hand, and learn. —As additional engineering courses are brought online, they can capitalize on this unique infrastructure.” ■



Steven Wiggins, Andrew Clissold and Brandon Powell discuss their diabetes mobile application, TypeOneTwo. The app takes diabetics' glucose and insulin readings from their diabetic device, aggregates it and graphs it using Google Charts.

STUDENTS MAKE TOP 10 AT MHACKS FOR DIABETES APP

Innovation and focus helped senior computer science majors Andrew Clissold, Steven Wiggins and Brandon Powell achieve success at nationwide programming competition, MHacks, where they ranked in the top 10 for their application, TypeOneTwo.

"The team created a great app that services to people with diabetes," said Sebnem Onsay, special instructor of Computer Science and Engineering at Oakland University. "I thought it was incredible that they put something like this together in such a short period of time. With all the time pressure (36 hours), they delivered a high-quality and most importantly — a working app.

This is no small achievement. These students who joined MHacks loved programming; they already were feeling confident with their skill set."

TypeOneTwo, described by the team as

"a trifecta of apps for diabetic tracking and analysis," allows patients to take their glucose and insulin readings from their diabetic device, which aggregates it and graphs it using Google Charts.

The app was created using Swift programming language on iOS, and Java on Android, and is integrated with Facebook's Parse framework as well as a custom web server written in Go.

With an endless supply of snacks and caffeine, Clissold, Wiggins and Powell built the app during the 36-hour coding marathon, and earned attention from big companies like Google.

"We each brought our own unique skillset to the table, and that is what enabled us to excel," Wiggins said. "It was a great opportunity and experience, and we're super excited for the next one."

"Hackathons are a great tool to develop a network," Onsay said. "I encourage our students to participate more in these types of events if they would like to work for highly popular companies. We are so proud of our OU students. Congratulations to all who took the extra step to go to this event and test their skills." ■

OU STUDENT GETS GOLD AT MHACKS NATIONAL PROGRAMMING COMPETITION

Out of 1,000 students from across the nation competing at this year's MHacks, 14 were from Oakland University, and Dominic Dabish, a senior computer science major, was on the team that earned the gold prize from Microsoft for their app development "Pong With Me."

"The experience was pretty awesome," Dabish said. "Everyone was really inviting. I went there not really knowing what it was about, but I got the idea. There was a lot of food and it was really good. I barely slept, but not because I was working too much — because I was having so much fun."

MHacks started as a small University of Michigan-Ann Arbor hackathon group of 50 participants using their computer programming skills to compete. It now draws programming students from across the United States and is open to students at all levels.

"This is not a small event," said Sebneem Onsay, OU School of Engineering and Computer Science special instructor. "The fact that (Dominic's team) got selected and made it to the finals and got a gold prize is a huge deal. I treat them like local celebrities."

Onsay said in addition to Dabish, many other OU students did great at the competition, including Andrew Clissold, Bhargavkumar Rughani, Stephen Payne, Ryan Conroy, Brandon Powell, Steven Wiggins, Arpan Rughani, Jack Stouffer, Archana Sevak and Ziyad OI Obaidi. The first time Dabish applied, he did not get in. He was then asked to take a C# programming test, and was later invited to compete.

Dabish joined a group with two other students from other universities.

Over a series of three days, the team created three applications, including the award-winning "Pong With Me," which earned them the \$1,299 Microsoft Surface Pro 3 award.

The application was programmed for iOS, Android, BlackBerry, OS X, Linux and Windows — and the people at Microsoft were impressed.

"We caught all of the Microsoft employees playing it when we stopped by, hours after we initially showed them," he said.

MHacks started as a small University of Michigan-Ann Arbor hackathon group of 50 participants using their computer programming skills to compete.

Attending the hackathon gave Dabish and other students involved a great networking opportunity. Representatives from Google, Facebook, Microsoft and Apple were on site judging and interacting with participants.

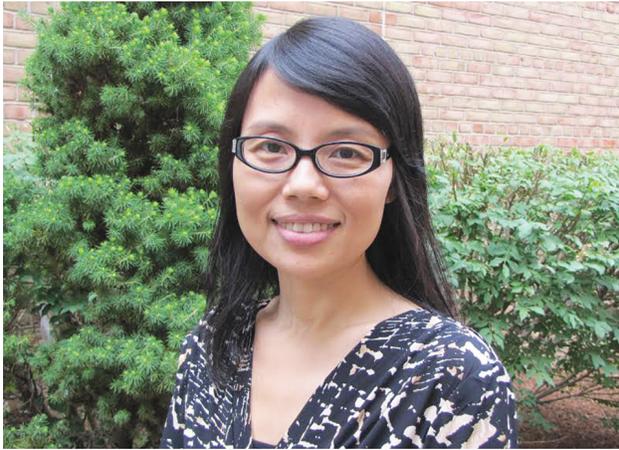
Onsay and Special Instructor Laura Dinsmoor recommend students get involved in future programming competitions, regardless of their level of experience.

They also hope to someday host a hackathon on campus.

"As soon as students see there's a competition, they should sign up," Onsay said. "The sooner they sign up, the sooner they see what they're getting into. A lot of the students that we have are very talented programmers, but they question themselves. My advice to them: do not question — apply and go there. What's the worst that would happen? You won't like the project, so what? You'll meet many people. Go there and take the opportunity." ■



FACULTY UPDATES



DR. QIAN (BETH) ZOU

Appointed SECS interim associate dean

“Dr. Zou is an excellent teacher who has an extensive research record and great service to her department, SECS, and Oakland University,” Dean Louay Chamra said. “I strongly believe that she will do a great job in serving and helping SECS faculty and students to reach their full potential and achieve excellence in all areas of teaching, research and service.”

Zou’s background is mainly focused in tribology. She earned her B.S. in mechanical design and manufacturing from Tsinghua University in China, in 1992. Continuing her studies at the university, two years later, she received her M.S. in mechanology, and in 2001, her doctorate in mechanical design and theory. During her stay in Tsinghua University, Zou worked at the National Tribology Laboratory, doing research in addition to lecturing. In 2002, she started at Oakland University as a visiting professor, soon moving up to assistant and associate professor for the Mechanical Engineering Department.

When Zou began her interim associate dean duties in August 2014, she also officially became a full professor. She said her experiences provided her with a solid basis for her teaching, which is something she really enjoys.

“I think teaching and research cannot be separated,” Zou said. “Being a professor, one of the good things is that you teach students knowledge, but you also affect

them in different aspects. This is the part I enjoy most as a professor.” Bringing the research projects, and also, the current technology in the field will definitely make the student be more interested in the subject. I definitely think my research helped my teaching.”

When Dean Chamra approached Zou about becoming interim associate dean, the offer surprised her at first.

Zou spoke with fellow faculty, her husband and outgoing associate dean Dr. Lorenzo Smith, and soon made her decision.

With a focus on organization and details, Zou is confident she will succeed in her new position.

“I am honored to be given this position and I look forward to working with the faculty and students,” Zou said. “I will do my best to serve them better in the future. If they have any questions, concerns or anything, I will be more than happy to help.” ■

UNIVERSITY BIDS ASSOCIATE DEAN SMITH FAREWELL AND GOOD LUCK

Associate Dean Lorenzo Smith has accepted a position as dean of the college of engineering and computer science at California State University-Sacramento.



“OU has definitely become home to me,” Smith said. “I love this campus and its people.”

Following work with Ford and General Motors, Smith started working as a professor at OU in 2000. His research focused on sheet metal experimental mechanics. Dean Louay Chamra asked him to take on the position of associate dean in 2011.

“I am forever thankful to Dean Louay Chamra for taking a chance on me,” Smith said.

Smith’s responsibilities as associate dean included management of four Ph.D. programs, undergraduate and graduate catalogs, admission applications, lab space, and program accreditation support.

“Lorenzo worked closely with the faculty to advance SECS academic and research programs,” Dean Chamra said. “He was very committed to working with our graduate and undergraduate students, together with colleagues across Oakland University, to ensure that the school remains on its forward trajectory.”

While working for OU, Smith was also a mentor to students. His service included serving as faculty advisor for the National Society of Black Engineers, in addition to hosting Grad Connection’s first public forum and an engineering student bonfire, to name a few. ■

FACULTY UPDATES



DR. BRIAN SANGEORZAN

Appointed chair of mechanical engineering

Dr. Brian Sangeorzan has been appointed interim chair of the Mechanical Engineering Department as Dr. Zissimos Mourelatos steps down to dedicate more time to research and teaching.

Dr. Mourelatos decided not to seek reappointment but rather, “stay on as a professor, doing exactly what professors do — putting all my efforts into teaching, research and service.”

As the new chair, Dr. Sangeorzan comes with considerable experience, having been an OU faculty member since 1984.

“I’ve seen OU grow from a fairly small university, in an almost-rural area, into the current 20,000-student campus and vibrant surrounding community that we have today — quite a remarkable growth in a short period, especially the growth in professional schools and the new medical school,” Sangeorzan said.

Before coming to OU, Dr. Sangeorzan earned his BSME at the University

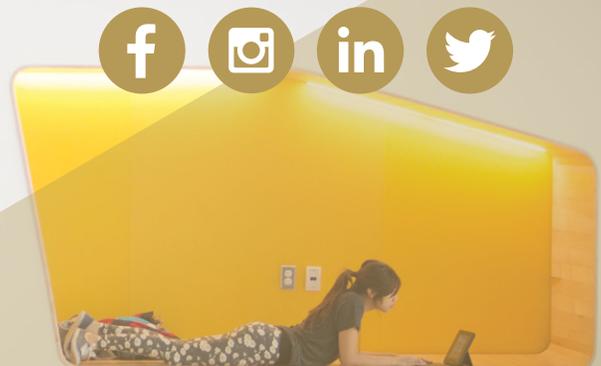
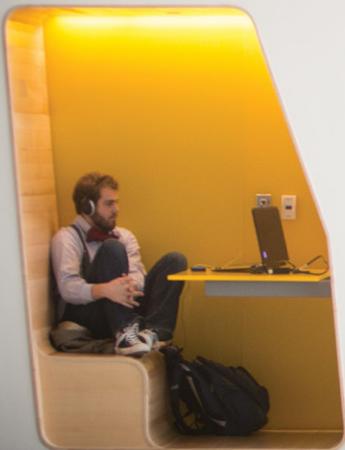
of Detroit, while working as a co-op student at Ford Motor Company (Engine Division), and stayed at U of D as a teaching assistant. For graduate studies, he attended the University of Wisconsin-Madison, focusing on engine research. He has also worked at the US Army TACOM, General Motors Research Labs, FEV Engine Technology, Chrysler and conducted research for other organizations, including the EPA. During his time at OU, Dr. Sangeorzan recalls many enjoyable experiences.

“I have a lot of favorite moments — watching the ‘lights go on’ in a student who’s been struggling with something, sharing the sense of accomplishment in one of my graduate students when they’ve completed their thesis or dissertation, meeting with former students who are now accomplished in their careers, and watching our SAE Formula team grow into a world-class contender,” he said.

Dr. Sangeorzan said that serving as chair for various committees within SAE, including serving as chair of the 10,000 member SAE Detroit Section in 2012, was an important part of his experience. While he has big shoes to fill after the excellent work of previous chairs Dr. Mourelatos and Dr. Gary Barber, Dr. Sangeorzan knows he has their support to further make a difference at OU as he takes on this position.

“It will be an exciting time for the school as we move into the new Engineering Center,” Dr. Sangeorzan said. “Our students will benefit from state-of-the-art laboratories and new equipment and machine shop facilities. I think the new space will also invigorate the faculty and bring recognition from the professional community. For me personally, every new role brings new challenges and opportunities.” ■

STAY CONNECTED WITH THE SCHOOL OF ENGINEERING AND COMPUTER SCIENCE



ALUMNI PROFILES



Patrick Hillberg may not have started out at Oakland University, but working at the school and earning his Ph.D. through the Industrial and Systems Engineering Department was a choice the professor is proud of.

"It's a more personal experience at Oakland University," Hillberg said. "I won't say you don't get personal attention at other schools, but my own experience was that the personal attention at Oakland was the greatest."

His studies began at Michigan Technical University, where he earned his undergrad in computer science.

Hillberg then received his masters from University of Michigan in systems engineering, and shortly after, chose OU for his doctorate.

Getting his Ph.D. in systems engineering gave him broader knowledge of factories and industry, which was his career goal when starting the program in 1999.

For the first 17 years of Hillberg's career, he focused on writing software for robots and robotic systems. After jobs at small computing companies, he knew he wanted to do more, which is when he got involved at OU.

Hillberg was named by Professor Robert Van Til to receive the DaimlerChrysler

GIVING BACK TO HIS SCHOOL AND HIS COMMUNITY

ISE alum shares his success

Patrick Hillberg may not have started out at Oakland University, but working at the school and earning his Ph.D. through the Industrial Systems Department was a choice the professor is proud of.

doctoral fellowship. They then spent three years working on his dissertation, which fit into the relatively new field of Product Lifecycle Management, or PLM. Upon receiving his degree he moved on to DELMIA, and later to Siemens PLM,

When asked of his interest in PLM, Hillberg said "The tools create a 3-dimensional information model that reflects what exists in the real world. With these tools, you can not only create virtual products, but also the virtual factories that will build these products. I tell my students that it is so much easier to move a virtual robot with your mouse, than a real robot with a forklift."

Working in PLM allowed him to take a larger view, which he found very beneficial.

After jobs at small computing companies, Hillberg knew he wanted to do more, which is when he got involved at OU.

"I realized that I wanted to expand my view beyond the robot space," Hillberg said. "By deepening my knowledge in systems engineering, I developed a broader view of everything a business does that leads to why are they making a product, how they design, manufacture and help a customer keep the product working throughout the course of its life."

After earning his Ph.D. and settling into positions of solutions architect at Siemens and adjunct professor at OU, Hillberg has continued to give back, to both the university and the community.

"Since graduating in 2004, Pat has been a solid contributor to the ISE Dept," Dr. Van Til said. "He serves on our ISE Industrial Advisory Board. Pat and I have worked closely together over the past few years to develop a Product Lifecycle Management (PLM) curriculum within our ISE and Engineering Management degree programs. He has been crucial in helping us obtain a high level of support in this effort from Siemens PLM Inc. He also developed and teaches our keystone course in PLM in his roll as an OU Adjunct Professor."

In addition to ISE boards, Hillberg is on the leadership board for Automation Alley's PLM Center, and is chair of the Technical Product Design steering committee for the Michigan Apprentice Technician Training (MAT2) program.

Hillberg's service stemmed from seeing how important it was to teach up-and-coming engineers necessary skills, and draw them back into the field, starting with education.

Through this, he continues making a difference in the field of industrial engineering.

"I try giving back to the university and what I see with the school of Engineering is that it can provide a significant role in PLM, a valuable skill and it deals with creating virtual products," Hillberg said.

"It's important to build knowledge of not just yourself, but the team you're working with. Engineering is a very collaborative field." ■

ALUMNI PROFILES

MECHANICAL ENGINEERING ALUM TAKES SKILLS OVERSEAS

Charon Morgan never thought about moving away from Michigan — the place where she grew up, started her family and began her career.

Now, the 1996 Oakland University mechanical engineering graduate lives and works in Shanghai, China, where she took an executive job with General Motors over a year ago — and she said it was one of the best life choices she ever made.

“It’s important for people to really stretch themselves and get out of their comfort zone to experience something they never thought they’d do, because that’s been the best experience for me,” Morgan said. “I never thought two years ago that I’d even be here.”

Growing up in Romeo, and going to school in the area, Morgan lived in Michigan her whole life.

Immediately following her graduation from OU, she began her career at General Motors in technology and validation.

“Oakland was such a great experience,” Morgan said. “I recall working very, very hard, spending many hours every day in the library with teams — I remember working in a lot of teams. The one thing that sets OU apart from discussions I’ve had with my colleagues and experiences with other schools, is spending a lot of time in the labs. The fortunate part of that was you had the theoretical message in the lecture, but then you really got the hands-on experience when applying it in the lab, and that also taught you to work very effectively with teams, which is really what you do in the real world.”

What started as a primarily technical and chassis career led to more design and management work.

Morgan’s current position focuses on

“optimizing the way engineering functions are run” at General Motors, working to boost efficiency with the company there.

Morgan was with the company for nearly 20 years. Her experience made her a good fit for the job. She works to improve the market’s needs, which vary in countries based on fuel economy regulations, among other criteria.

“As a global company, GM has engineering centers located around the world, and China is where the industry has high growth projected,” Morgan said. “There’s growth now, but there will be an even more rapid pace of growth in the future. With that in mind, understanding how we can operate the business on the other side of the world to be as efficient as in the U.S. where we have such a mature automotive industry, is great for us as a global company. Being able to collaboratively spread regional knowledge and apply it to our emerging countries is key.”

The move to China wasn’t easy, however. Morgan has three sons, and nobody in the family spoke Chinese. Professionally, verbal communication wasn’t an issue, since most of her Chinese peers speak English, but interacting in society was a bit more of a challenge.



However, Morgan said communication goes beyond speaking, both in the professional world and through personal interactions.

“You can learn a lot about people and how they feel based on their emotional and physical mannerisms, so you learn how to communicate with them without speaking as much,” Morgan said. “Chinese culture is very different. But China ultimately wants the same thing as the U.S., Germany, Brazil and other countries. Globally, at GM we all want to design, build and sell the world’s best vehicles. We’re really focused

CONTINUED ON PAGE 33

ALUMNI PROFILES



ECE ALUM USES OU EXPERIENCE

Changing the world of engineering

Kristen Siemen is making global differences in the world of engineering. As executive director for Global Thermal/HVAC Engineering at General Motors, the Oakland University electrical engineering graduate's work affects vehicles around the world.

Chris Kobus, associate professor and OU School of Engineering and Computer Science outreach director, knew Siemen from their time spent together in TBP, in addition to serving as her teaching assistant for thermodynamics in 1992. Kobus said they were both very involved with TBP as students. He described her as "driven" and "ambitious."

"Kristen was driven not just as a student but as a leader," Kobus said. "She took naturally to leadership positions in her classes and in student organizations. It is those natural leadership skills in combination with her scholarship that makes for a potent combination, qualifying her above many others for an executive position out in industry."

After graduation, Siemen was hired at Chrysler.

Along with a new career, Siemen began her graduate education, and earned her master's degree in 1994 while working full-time. She said her time at OU brought many opportunities that enhanced her engineering skills.

"The experience was great," Siemen said. "One of the things I loved most about OU was not only the class size and feeling like you had a direct connection to the professors, but also the great tie to the industry based on the location and the interaction that they have with the automotive industry and other companies in the area. I thought it really made what we were studying very applicable and brought theory to reality."

After two successful years at Chrysler, Siemen began a career at General Motors, where she worked in various positions in electrical, manufacturing and interior engineering before her current role as executive director for Global Thermal/HVAC Engineering.

One of her favorite assignments was leading the Safety Electronics team, which was responsible for technologies such as adaptive cruise control, side blind zone detection, and park assist. This team also began, and continues, the work on GM's new semi-autonomous driving feature known as "Super Cruise," which is planned for introduction in model year 2017. Siemen enjoyed her experience with the safety electronics area.

"As you go into the industry you learn that it's not necessarily that you need to remember the exact equation or formula, it's that you've prepared yourself how to think and to approach things with an engineering perspective, and OU did an excellent job of really teaching that—very hands on, more lab and project based than what I've seen as I tour other universities—it was extremely valuable," Siemen said.

"I think as students, if you take advantage of any opportunity you have to learn, and take on the challenging assignments, and really enhance your education with those extracurricular activities, they not only give you a different perspective and exposure, but they help build that network of people that you count on, whether it be through your studies, or later in your career." ■

"The things that we have to think about aren't necessarily what we were brought up to see or know," Siemen said. "Not only do we need to consider different road and environmental conditions, but we also need to understand how customers use their vehicles around the world. In China, for example, many customers have personal drivers, so the features and comfort expected in the rear seat are almost more important than the front. Different regions prefer airflow and fan speed for their air conditioning to be higher or lower. The diversity of thought and perspective that we have with a global team really makes the job fun and exciting."

Growing up in Warren, Mich. — the site of General Motors Technical Center — Siemen dreamed of working for GM. She earned her bachelor's degree in electrical engineering in 1992, which put her closer toward that goal.

During her undergraduate studies, Siemen was constantly involved on campus through Phi Sigma Sigma, Eta Kappa Nu and Tau Beta Pi (TBP).

ALUMNI PROFILES

ITCS ALUM FINDS SUCCESS AT CHRYSLER

Continues grad studies at OU

For Information Technology alum Trpko Blazeovski, undergraduate studies at Oakland University were a time of growth that provided him with the tools needed to be a leader.

The recent graduate has returned to campus to pursue a master's in information technology management. He credits the skills he honed as an undergrad as the reason for landing a job as an ICT business systems support analyst at Fiat Chrysler Automobiles immediately after graduating.

"The great professors within the School of Engineering and Computer Science have broadened my knowledge through hands-on interactive labs," Blazeovski said. "This allowed me to have the competitive edge when I entered the job market."

Blazeovski started working for Chrysler in June 2014, and works directly with business partners for application enhancements and bug fixes. His primary focus is to support Chrysler's custom SAP solution, PentaSAP within the Investment Management (IM) and Project Systems (PS) modules, in addition to being the IM/PS lead for prioritization, coordination, planning, strategy, and design. Blazeovski is also responsible for program maintenance and support functions.

"The technical knowledge gained throughout my courses greatly prepared me for this position alongside having an understanding of IT processes, concepts, and principles," Blazeovski said. "The most value and preparation, however, came from project-oriented courses such as Sophomore Project and Senior Capstone alongside involvement with student organizations. Throughout these courses and by leading a student organization, I realized (I'm passionate about) leading a team and discovered a desire for project management. The leadership ability has helped me tremendously in leading program enhancements at Chrysler."

As a student, Blazeovski was very involved on campus. His list of student organization memberships include the Association for Computing Machinery, the Association for Information Systems, Golden Key International Honour Society, Alpha Lambda Delta National Honor Society, Technology and Leadership Keys (TALK), College Republicans and the Cyber Security Club of Oakland University (CyberOU).

"The technical knowledge gained throughout my courses greatly prepared me for this position alongside having an understanding of IT processes, concepts, and principles."

Though he has graduated, his involvement continues — the co-founder of CyberOU remains a mentor to current members.

"My best memory and experience at OU was helping to start the Cyber Security Club at Oakland University (CyberOU) alongside my peers," Blazeovski said. "We recognized that a spurred worsening barrage of online attacks against companies and government agencies were occurring and wanted to educate Oakland University on the topic of cyber-security. Being part of the Board of this organization, I grew intellectually from a



leadership standpoint and expanded my knowledge.

CyberOU has helped educate the OU community on (such topics as) cyber-attacks, password cracking, Wi-Fi cracking, Google Glass, BitCoin and encryption," he continued. "Alongside this, I have been able to build relationships and partnerships with Chrysler, Ford Motor Company, Auto-Owners Insurance, RIIS, VioPoint Inc., RazorThreat, the FBI, Oakland County Government, the State of Michigan, and others."

At the root of Blazeovski's experience was his coursework, which he said was an important factor for his success. Blazeovski understands the importance of persistence, hard work and making the most out of the OU experience.

"Get involved on campus and stay involved," Blazeovski said. "Don't just come to OU to take your courses and then leave. Join student organizations and/or start student organizations." ■



Alan Pinnick, 1981 OU mechanical engineering alumnus, accepts the aeronautic pioneer's highest honor, the Robert J. Collier Trophy. He works as a mechanical engineer specializing in aircraft mechanical systems for the Skunk Works® division of Lockheed Martin Aeronautics.

ENGINEERING ALUM EARNS HIGHEST AWARD IN AERONAUTICS

Alan Pinnick's career has really taken off since he graduated from Oakland University in 1981 with a degree in mechanical engineering.

Now at the pinnacle of a highly successful career, he has joined an elite group of aeronautic pioneers who have earned his field's highest honor, the Robert J. Collier Trophy.

The National Aeronautics Association presented this year's award to Pinnick, as part of the X-47B Unmanned Combat Air System Demonstration (UCAS-D) industry team. He works as a mechanical engineer specializing in aircraft mechanical systems for the Skunk Works® division of Lockheed Martin Aeronautics.

In May 2013, the group successfully launched the X-47B, the first unmanned, tailless aircraft to catapult launch from an aircraft carrier. Three days later, the aircraft made the first carrier-based touch-and-go landings.

Then, on July 10, 2013, the X-47B made history again by being the first unmanned, tailless aircraft to make an arrested landing aboard a carrier. This was Pinnick's main role in the project. He served as the lead design engineer of the arresting hook system and structure that made the historic landing possible.

EACH PIECE PLAYS ITS PART

"Our Skunk Works® team was part of a partnership that included the U.S. Navy, Northrop Grumman and several other sub-contractors. We worked together to make the X-47B a reality," Pinnick said in a phone interview from his home in suburban Atlanta. "Our arresting hook system played a key role in the success of landing an unmanned aircraft on the aircraft carrier at speeds of 140 knots."

Conferred annually, the Collier Trophy is named for Robert J. Collier, publisher of *Collier's Weekly* magazine, air sports pioneer and former president of the Aero Club of America. The award recognizes an individual or team who has made "the greatest achievement in aeronautics or astronautics in America" during the previous year. Past recipients of the trophy include: Orville Wright (1913), Howard Hughes (1938), Neil Armstrong (1969), Dick Rutan (1986) and the B-2 Stealth bomber (1991).

"It is humbling to know you have joined the list of aviation's most recognizable names and projects," Pinnick said. "For me, it was a thrill to meet and talk to the legendary Dick Rutan, who flew his Voyager aircraft

around the world non-stop and unrefueled in 1986."

EARLY INFLUENCERS AT OU

Pinnick also recalled fond memories of his time at Oakland University. He remembers learning about internal combustion engines and hydraulics while on campus.

He said his early influencers, like professor Bhushan Bhatt, left a lasting impression on him that helped guide his career.

Pinnick was a standout student during his time at Oakland, according to current School of Engineering and Computer Science Dean Louay M. Chamra. "Alan earned OU's Professional Development award as a graduating senior by demonstrating personal initiative and the greatest technical development in his studies."

That award plaque bearing Pinnick's name is on permanent display in the Dean's suite.

"Now, Alan is part of Collier Trophy history. That is a crowning professional achievement for him and something we can all be proud of at Oakland University," Chamra added. ■

STUDENT RECEIVES OU'S MOST PRESTIGIOUS HONOR

Caymen Novak, a mechanical engineering alum and former track and field athlete, was named the recipient of the 2014 Matilda R. Wilson Award by the Board of Trustees. The award is the most prestigious honor Oakland University presents to students.

"I'm very honored to receive this recognition," Novak said. "I really love Oakland and have always been amazed at the opportunities afforded to its students. As a student-athlete, it was challenging, at times, to work out practice schedules and classes, but my professors and coaches were always willing to work with me and were very understanding, allowing me to benefit in both academics and athletics."

The Wilson Awards have recognized the university's top male and female scholars and leaders since 1965. They commemorate the Wilson family, who donated land and financial support to help found the University in 1957.

A committee that reviews nominations from faculty and staff members selects award recipients each spring.

"Caymen represents the best of the (School of Engineering and Computer Science) — a student, scholar and athlete, who gives of her time and talents," Mechanical Engineering Chair Brian Sangeorzan said of Novak, who graduated in 2014. "It's not just that she excels at whatever she does, but she also (showed) up smiling in an 8:00 am class."

Recommended candidates are ultimately approved as honorees by the vice president for academic affairs and the president.

Novak acquired a remarkable breadth of academic, volunteer and community engagement experiences during her time at OU. A student in the Honors College, she maintained a 3.95 GPA, won a Provost Undergraduate Research Award and was recognized as a Dean's Scholar and Presidential Scholar. As a student, she was a member of the Alpha Lambda Delta, Golden Key International and Tau Beta Pi



Caymen Novak earned the 2014 Matilda R. Wilson Award from Oakland University (OU) with her family. From left, Glen Novak, Caymen, Lynelle Novak and Kendal Novak.

Engineering honor societies. "Throughout my time, I truly appreciated the support of my teammates as well," Novak said. "They worked as a safety net for me. I knew I could always study with my roommate or a teammate and we would help each other succeed."

Novak was a member of numerous engineering research groups and activities, as well as in the Engineering Society of Oakland University and the Society of Women Engineers. She served as a teaching assistant, academic peer mentor, Imagers Engineering Program instructor, leadership consultant, math and engineering tutor and student orientation group leader.

"She was a gifted student who combines serious study with a genuine concern for

the OU community and the community that surrounds us," said Carmen Etienne, director of School of Engineering and Computer Science Advising. "Her positive energy is hard to ignore and her drive to always do everything better is evident."

"Caymen's dedication, campus involvement, volunteerism and work ethic are unparalleled and it is clear to me that Caymen should serve as a role model to all OU students," said Dr. Laila Guessous, associate professor of mechanical engineering.

Novak joins eight other Oakland student-athletes that have earned the award since its creation in 1965 and becomes just the second to be recognized from the track and field program. ■

OU INC SPURS GROWTH AND BUSINESS INNOVATION

Talent development ignites regional economic change



OU INC, a part of the School of Engineering and Computer Science, is a state-designated SmartZone business incubator and accelerator. OU INC fosters a healthy environment for the growth of new start-up companies as well as providing support for existing companies by providing entrepreneurial resources and strategic business solutions - accelerating ideas to market in the areas of innovation, acceleration and education.

OU INC provides a pathway for students and entrepreneurs to come to the university and to engage with innovative companies, often leading to internships and job opportunities.

OU INC has grown significantly. Ninety-two companies were served in 2014, raising the total companies evaluated throughout OU INC's tenure to nearly 700. Last year, 16 new companies were formed and \$2,504,000 in state funding assistance and additional follow-on funding was obtained. Growth companies have shown revenue exceeding \$1 million.

Automation Alley, Michigan's largest technology business association, opened

its Technology Center at OU INC. The Automation Alley Product Lifecycle Management (PLM) Center – in partnership with Siemens, the Michigan Economic Development Corporation, Geometric Solutions, solidThinking, Inc. and Oakland University's School of Engineering and Computer Science – offers affordable training and Product Lifecycle Management (PLM) certification using cutting-edge equipment and software, including computer-aided design (CAD), computer-aided engineering (CAE) and computer-aided manufacturing (CAM), as well as other state-of-the-art PLM technologies such as digital factory simulation, 3-D scanning and 3-D printing.

Another feature becoming widely known at OU INC is the technology driven Integrated Resource Center (IRC) and the incorporation of collaboration software to assist companies and organizations in power brainstorming and strategic planning. The IRC has recently been utilized for a variety of programs, including:

- Strategic planning sessions by the Auburn Hills Chamber of Commerce
- Client presentation meetings for investors
- Host of a D-NewTech Meetup
- Site of a recent OU student business plan competition
- And, the location serves as a place for "pitch practice training" for OU INC clients ■

OU INC ENGAGES WITH OAKLAND UNIVERSITY STUDENT ENTREPRENEURS

OU INC collaborated with Oakland's School of Engineering and Computer Science, School of Business Administration, and the School of Education and Human Services to host the first Student Business Plan Competition. The competition encouraged students to develop a new business idea that could be launched in concert with Extraordinary Ventures of Michigan, a collaborative microbusiness center with start-up businesses that employ adults on the autism spectrum. The Microbusiness Competition provided Oakland University students the chance to pitch their business ideas for the new microbusiness center for autism located within OU INC.

One student-client team at OU INC is FoveOR, an image-handling system for the operating room incorporating Google Glass. Its founder, Flo Doo is a second year medical student at Oakland University William Beaumont Medical School. Her innovative use of Google Glass would eliminate distractions in surgery.

Also launching this year, and the winner of the Oakland University "Google Glass Competition" is Vizor Team LLC. Vizor Team is comprised of Oakland University students. Their Google Glass application encourages and assists those that would like to learn to play musical instruments. ■



Pictured are members of Vizor Team LLC. From left to right is Shaun Wassell, a computer science major, Ziyad Al Obaidi, of computer and electrical engineering, and Arnaud Crowther, an Information Technology major.

OU INC CLIENTS CONTINUE TO DISTINGUISH THEMSELVES

Munetrix.com is a web-based government fiscal health and transparency solution that predicts the future fiscal health of local governments. Since its launch at OU INC in 2011, the company has seen compounded growth and a substantial amount of positive feedback from customers.

1st and Goal Recruiting launched into market this year. The company provides advanced statistical analysis and performance prediction for college football recruiting of talented high school players. The company's goal is to find high school football players who can really play the game but who also might not have gotten their fair share of exposure. ■

OU INC PROVIDES A NEXUS BETWEEN HIGH SCHOOL STEM STUDENTS AND FACULTY RESOURCES

OU INC hosted a pilot course for the STEM R&D course – a collaboration between Oakland University and Birmingham Seaholm High School. High school juniors and seniors gathered at the incubator to meet their new mentors from the university and community in a program introducing them to research and data development in STEM – science, technology, engineering, and mathematics. ■

To learn more about OU INC, visit oakland.edu/OUINC.

2014 ENGINEERING GRADUATES

SPRING 2014 UNDERGRADUATES

ARTS AND SCIENCES AND SCHOOL OF ENGINEERING

Bachelor of Science

Julianne Marie Boyle
Chadwick James Downard
Michael Joseph Lambert
Diamond Marie Park
Matthew A. Rizor
Thomas George Wittner II

SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

Bachelor of Science

Jeremy Michael Damore
Marjan Deljosevic
Nicholas R. Dunnigan
Ryan Michael Dwyer
Adam Mark Gamalski
Joseph Michael Horsch
Nan Jiang
Nickolas David King
Thomas M. Kolpasky
Rachel Anne LaHaie
Joshua David McKeivitz
Robert P. O'Connell
Joseph Alexander Sena
Jihad Shehadeh
Nicholas F. Williams
Chenxing Wu

Bachelor of Science

Matthew Paul Adams
Ryan Michael Adams
Shadi Samir Alkhamis
Timothy Patrick Austin II
Collin Daniel Babij
John S. Bajer
Hannah Elizabeth Bender
Rita Benjamin
Trpko Shawn Blazevski
Cortland Miles Blomquist
Anthony Joseph Bogedin
Brian C. Branham
Jameson A. Carle
Brittany Ashley Castillo
Michael Richard Cieslinski Jr.
Ryan M. Clark
Richard A. Cook Jr.
Jacob Michael Creech
Nicholas Michael Dascenza
Steven Andrew Dear
Jonathon Joseph Demick

Joseph M. DiPaola
Robert George Durie
Alex Sergiu Filimon
Richard James Fischer
Andrew Keller Fort
Sandi Louis Gago
Jeremy M. Galazin
Viki Gojcevic
Alexandra Leigh Grodin
Matt Phillip Hover
Jiayin Huang
Sandy Kada
Rita Esho Kashat
Benjamin Karl Kay
Thomas Edward Kocik Jr.
Mitchell Robert Kokko
PhuongChi Thi Le
David James Leduc
Nicholas David Lewallen
Michael James Logar
Bogdan George Maghlar
Daniela Martignani
Asra Usman Master
Timothy Andrew Mayer
Enils Mertika
Roger J. Narlock
Michael Edward Norman
Caymen May Novak
George A. Patsarikas
Flavius Cristian Popan
Nashwan Raban
Waseem Azzam Razzoki
Stefan Ross Reich
Steven J. Reinhard
Fadi Amer Sallan
Todd Robert Sam
Pierce R. Sanderson
Skye Nathan Schneider
Archana Jaswant Sevak
Jeffrey Robert Skarb
Brian J. Smak
Stephen M. Spry
Nicholas James Swan
Tom Szawarski
Renato Tane
Andrew P. Thompson
Bryan Thompson
James Robert VanSickle
Michael Anthony Wojdyla
Ian Andrew Wood
Mateusz Wszedybyl
Curtis Egan Yaggi
Raphy R. Yaldo
Jinbing Ying
Michael A. Zandi
Wessen Zari
Timothy A. Zvekan

Associate Professor Christopher Kobus, director of outreach and recruitment, and Associate Professor Darrin Hanna lead the master's and doctoral students into commencement.

SPRING 2014 GRADUATES

SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

Doctor of Philosophy

Sumera Ibrar Chaudhry
Shamil M. Hadi
Chi Hsin Huang
Ibrahim Suhail Khoury
Pravin Khurana
Ahmad Ratib Nsour
Robert Victor Petrach III
Micho Tomislav Radovnikovich
Maha Sabra

Master of Science

Alain Abboud
Paul Abdo
Oriehi Edisemi Destiny
Anyaiwe
Jeonghyo Bae
Cameron Jay Biery
Jason Robert Borovicka
Matthew Robert Buchman
Nisrine Hadla Charaf
Eileen Ruth Clemens
Colin Matthew Cole
Ajay D. Dagli

Elizabeth Anne Dancy
Ali Dirul-Islam
Julie Ann Dobies
Michael Scott Douglass
Christopher Michael Duncan
Tammy Dvir
Michael Phillip Gebauer
Samuel Edgar Graham
Neeraj Gupta
Salim Kassem Hamam
Sara Marie Heck
Gregory Fitzpatrick Hickman
Harold Alonzo Hill Jr.
Gaurav S. Hiremath
Sean E. Jackson
Anusha Jami
Kyle Benjamin Jones
Mitulkumar Joshi
Maninder Singh Kahlon
Parisa Khousthechin
Sarah Adella Kunka
Katherine Marie LaBelle
Logan Daniel Leslie
Matthew Scott Marcantonio
Michael G. Megiveron
Christopher James Mottaz
Divya Muthyampeta
Harsha Siddharth Nakade
Dev M. Oza

Jeffrey Phillip Page
Dionysios Panagiotopoulos
Krishna Soumya Panditha
Danielle Christina Paniccia
Aditya Parmar
Rachel Lynn Petrach
Jaime Portillo
William Anthony Pranter
Michael Christopher Prechel
Vishnu Priya Raghavan
Peter Joseph Redente
Lei Ren
Michael Ristoski
Michael Allen Rogers
Lisa Nicole Romelhardt
Stephanie Ann Roth
Stanley Samuel
Carl Nunzio Schaub
Grant Collins Scott III
Adam J. Seme
Jonathan Sloane
Anuradha Soman
Smitha Sridhara
Ashley R. Steffes
Chuanlin Tao
Brian Stewart Thompson
Kevin William Thompson

FALL 2014 UNDERGRADUATES

Bachelor of Science in Engineering

Sam Azuz
Marjan Deljosevic
Jonathan Joseph Dittmer
Nicholas R. Dunnigan
Thomas William Garvey
Steven Kenneth Haverstick
Wail Habib Hedow
Patrick Ryan Hoenle
Rachel Anne LaHaie
Xuejing Li
Bolong Ma
Don Napoleon Mikhou
Raphael Parker
Kimberly Ann Romstad
Jason Alan Sutherby
David J. Vigna
Brook R. Wagner
Nicholas F. Williams

Bachelor of Science

Robby Boonen
Kevin Chiu
Gavin Joseph Daubenmeyer
Stephen Dale Durham
Eric James Eldridge
Justin Edward Essian
Christopher Paul Feger
Matthew M. Fillo
Lukas Jeffrey Greib
Zachary Jacob Kobman
Eric Michael Krajewski
Austin James Lalko
Michael Patrick Madej

Benjamin A. Mangliers
Adeline Mae Miller
Arlind Muca
Michael G. Narter-Olaga
Christopher Lowell Edward Powell
David Russell Poynter
Brian Edward Rossman
Ryan Reid Smith
Steven L. Sturgeon
John M. Wesley, Jr.
Mark Ryan Westen
Logan Jeffrey Williams
Jonathan W. Wong
Fan Yang

Bachelor of Science in Engineering

Ali Ragheb Ahmad
Ran Ao
Joseph F. Asbury, Jr.
Christopher A. Basnett
Dalton Addison Blenc
Ian William Bublitz
Marko Capelj
Seth David Carpenter
Joel Isaac Cole
Kurtis Lyle-Justin Craig
Amr Elwy El Sayed
Shaoqing Gong
Minsheng He
Aaron Michael Jakubiec
Nicholas Mouayad Karoumy
Ronnie I. Kashat
Ruwaid Kashat
Ian Jacob Komisak

Paul Michael Kruchko
Michael Russell Laba
Christopher J. LeRay
Collin D. Ludwig
Na Lyu
Jacob Lee Nicholas
Tiffany Paige Ohman
Danial D. Ostheimer
Levi Stewart Parkinson
Wesley Nathaniel Joseph Retka
Russell Edward Rudish
Anthony Joseph Sciuoto
Xinfeng Shi
Shova Byanju Shrestha
Brian Petar Stajninger
Daniel Howard Studt
Mark A. Tarrant
Xiaoang Tong
Lu Wang
Maykil G. Youhanna
Matthew Gregory Young
Elie Youssef
Jing Zhao

ARTS AND SCIENCES AND SCHOOL OF ENGINEERING

Bachelor of Science

Bruce Allen Gentry, Jr.
Edward Matthew Kortez
Spencer James Kovar
Nicholas Alexander Ray
Michael A. Whitney



FALL 2014 GRADUATES

SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

Doctor of Philosophy

Nancy M. Alrajai
Bashar Y. Khasawneh
Jeffrey S. Piasecki

Master of Science

Ghaith Nayef Al-refai
David Leigh Baker
Venita Marie Baker
David A. Beglau
Christopher Allen Buxenstein
Nilanjan Roy Choudhury
Jacob Ryan Doan
Nathan M. Ellis
Yingjian Fu
Neelima Gudem
Seth Adam Hawthorne
Gerald B. Jochum
Eric Andrew Merrill
Dev M. Oza
Kiranmai Paruchuri
Shreyaskumar Bharatbhai Patel
William Anthony Prantera
Lei Ren
Ryan Michael Scully
Devansh Sharma
Justin Michael Syrowik

Doctor of Philosophy

Abuakair M. Khair AlKhateeb
Gurunath Suresh Kedar-Dongarkar
Avinash Konkani
Salahaddin H. Sanusei

Master of Science

Ahmed Adly Abdelmomen
Eldose P. Abraham
Bikal Adhikari
Sathya Balasundaram
Suneeta Ganapathi Barki
Maneesha Reddy Beeravolu
James Alexander Brabbins
Jason Robert Brown
Scott Michael Cardimen
Meghana Channapatna
Timmarayasetty
Adam Jason Dendrinis
Brian Patrick Dwyer
Daniel Scott Engerer
Delia Ioana Galben
Charlie Shawky Goubrial
Elena Ilcheva Ilieva
John J. Katona
Lubna S. Khasawneh
Swathy Kothapalli
Kunpeng Li
Zhuofu Lou
Raul Mihai Maghiar
Arvin Joseph Manni

Taulant Mertiri
Amr I. Mostafa
Stephen Andrew Muller
Suman Nataraj
Ross William Otten
Jeffrey Phillip Page
Anna A. Paul
John Ashley Peterson
Grant Collins Scott III
Matthew J. Toter
Michael Truitt
Prathima Uggappakodi
Mina Wahba
Joydeep Yadav
Manaswi R. Yarradoddi
Hang Zhang
Michael James Zito
Adam Tomas Zoltek



Industrial and Systems Engineering graduates Anthony Sciuto, Jason Sutherby, Nicholas Karoumy and Amr El Sayed.



Jameson Carle, Electrical and Computer Engineering graduate.



Newly graduated Ph.Ds.

MECHANICAL ENGINEERING ALUM — CONTINUED FROM PAGE 25

on utilizing the global capabilities that we have to build our company to be the best it can be.”

From college to the present, Morgan has been involved with the Society of Engineers (SAE), and currently serves on the Board of Directors.

“My transition from student to professional life was seamless because I had great experiences with the OU staff and professors. Plus, with all of the labs that were required, I learned how effective teams can work together,” Morgan said. “I was able to bridge some of the student-to-professional gaps through my involvement with SAE, which was how I met up again with Dr. Brian Sangeorzan, one of my first professors at OU.”

When Charon first became an SAE board member, she ran into a former professor and fellow OU alum, Don Hillebrand, a 1984 mechanical engineering grad and current director of energy systems research at Argonne National Laboratory.

Hillebrand said he remembers Morgan’s ambition and dedication from when he taught her as an undergrad.

“I remembered Charon because she was a very good student,” Hillebrand said. “She stood out as the one who got all her work done and left, as opposed to everyone else who just goofed off, which is why I remembered her. When I saw her on the board, it was clear she had done very well for herself.”

Through SAE, Morgan has done various projects, including leading a group in the reinvention of SAE’s mission, and consistent involvement in the board-sponsored education outreach programs.

While on the board, Morgan has continued to be very involved even after her relocation to China, continuing to attend meetings and participating in calls.

“While (Morgan) was on the board, she was called to go to China on assignment, first temporarily and now permanently,” Hillebrand said. “But she’s continued to

attend all board meetings and all calls. It’s amazing how much she’s doing and she’s a tremendous asset. There’s that saying: if you want to get something done, find a busy person and ask them to do it. That’s the definition of Charon — she has so many things going on but if she volunteered to take something on, it was done quickly, it was done very well and it was done very efficiently, with a really good attitude.”

Though she sometimes misses home, Morgan is enjoying her career in China, and said it was one of the best decisions she’s made. She recommends taking the time to experience something new at least once in life.

“Hard work pays off and it’s so important to step outside of what you’re used to and do something a little different — take a risk, put yourself in an uncomfortable situation, or stretch yourself, because those are the times in your life, and in your career, that you’ll cherish those experiences ... you will cherish them the most and learn the most,” Morgan said. ■

OAKLAND ENGINEER

MAGAZINE



WE INVITE YOU TO VISIT

WE ARE PROUD OF OUR NEW HOME

The 127,000-square-foot, state-of-the-art Engineering Center opened in fall 2014. We love to show off our new building, great programs and impressive student efforts.

CORPORATE PARTNERS

This is an excellent opportunity to visit campus and the School of Engineering and Computer Science. Learn about the workforce development process and discover opportunities for us to work together.

ALUMNI

If you haven't visited the new Engineering Center yet, now is the time. Come walk down memory lane and to see the future of Oakland Engineering.

Whether you are an alum, a member of a corporation or a friend of Oakland University, please contact Rick Rachner, at rachner@oakland.edu or (248) 370-4957, to schedule a visit.

