Ten receive top honors during 2016 Engineering Awards Luncheon

Members of the Michigan State University College of Engineering gathered in the University Club March 17 to celebrate accomplishments in teaching, scholarship, and service at the 26th Engineering Awards Luncheon.

Leo Kempel, dean of the College of Engineering, greeted more than 100 guests, along with the winners of the prestigious awards during the annual spring ceremony.

The Withrow Endowed Teacher/Scholar/Service Award Program was established by the Withrow family to recognize faculty of the MSU College of Engineering who have demonstrated excellence in instructional and scholarly activities and rendered distinguished service to the university and the student body. Jack Withrow earned a bachelor’s degree in mechanical engineering from MSU in 1954 and an MBA in 1971. He retired as executive vice president at Chrysler Corp. in 1988, and then served as president and chief operating officer at Lectron Products Inc., from 1989 to 1995. He received the MSU Distinguished Alumni Award in 1984. Dottie Withrow earned a bachelor’s degree in speech therapy and elementary education from MSU in 1955 and a master’s degree in teaching from Oakland University. She was a special education teacher in West Bloomfield Schools for many years and published a children’s book that promotes responsible pet care and a second book that teaches children about opera.

Recipients of the 2016 Withrow Teaching Excellence Awards are:

Truman Surbrook, a professor of biosystems and agricultural engineering, is recognized as one of the top teachers in the BAE program by current students and alumni alike. At the core of his teaching is his respect for students and his sincere interest in ensuring they have absorbed the material and knowledge tools he is attempting to instill in them. Alumni comments note: “Truman truly wants every one of his students to excel in the future, and will do what it takes to aid in the process”; “Dr. Surbrook was truly passionate about his subject and tried to bring it to life”; and “He would always go above and beyond his duties to ensure that every student had been given all the tools they need to
One current senior student said: “Dr. Surbrook is incredibly dedicated to teaching and his passion for helping students succeed.”

Daina Briedis, an associate professor of chemical engineering and materials science and assistant dean of Student Advancement, is both a mentor for students and gifted educator. Students repeatedly cited her ability to teach complex ideas in memorable ways, her willingness to provide assistance, her dedication to ensuring that material is understood and her incredible sense of humor. As one student noted: “her engaging teaching style seems to be fueled her genuine interest in the material...and the prospect of our understanding.” “Dr. Briedis had the most impact on my life both inside and outside of the classroom. She had gone out of her way to meet with me and guide me toward a successful future. She is understanding and can also teach in an effective way. Her classroom is always enthusiastic and an open learning environment.” While students acknowledge her class is tough, they also know she goes above and beyond to ensure they learn. “Her methods of teaching are easy to follow while still being challenging. Her assessments are hard but fair.” “Her class is one of those milestone classes that cut all your bad habits.”

Alison Cupples, an associate professor of civil and environmental engineering, was chosen for the Withrow Award by a student selection committee that cited her excellence across all classes - from a 200-level class of more than 100 students, to 400-level and graduate classes in the major. Among the many positive comments included in student nomination forms, four qualities were consistently stated: caring for students and their learning, ability to clearly explain complex principles, excellent organization of her courses and course materials, and promoting an atmosphere of professionalism and respect. As one student noted, “This was a great intro to environmental engineering, and Dr. Cupples loves what she teaches.”

Charles Owen, an associate professor of computer science and engineering, is a three-time recipient of the Withrow Teaching Excellence Award, and a 2003 recipient of the MSU Teacher-Scholar Award. Known as an excellent instructor who is enthusiastic about teaching, Owen’s students said he does a remarkable job at keeping his classes and projects entertaining and interesting. He has created innovative tools for learning, made his courses' web sites interactive, and he puts incredible effort into teaching and helping students learn how to design software and program effectively. As one student put it, “Dr. Owen is the best professor in the department...You learn a ridiculous amount without realizing it until the end. I would take a class just because he is teaching it.”

Prem Chahal, an associate professor of electrical and computer engineering, is an excellent educator dedicated to ensuring that his students understand the concepts of his course. His reputation as an excellent instructor is supported by strong student evaluations through SIRS (including written feedback) and Students’ Opinion Course and Teaching (SOCT) evaluations over a broad spectrum of courses. Student evaluations included: “Dr. Chahal inspires students every day and really wants his students to learn the concept and to contribute to society through innovation.” “Makes great connections with students and instills a desire to learn in the classroom.” “I took the 405 final project way over the edge and he helped push. I spent countless hours on a project that could have been done in a couple days, but he had ideas and suggestions that led me to understanding the material in a way that I otherwise wouldn't have.”

Rebecca Anthony, an assistant professor of mechanical engineering, is described as a professor who cares immensely for her students. She works to make sure that her students succeed and learn the material. Students remarked that she understands the way they think, and she actively guides them in their understanding of concepts. One student explained her dedication to teaching this way: “She takes time explaining concepts with passion and patience.” She is known for creating a learning environment where questions are welcomed; she is always ready to answer the questions that open the doors to further learning. This approachable nature makes her a remarkable teacher. One student added: “She brought excitement back to class!”
Richard R. Lunt, an assistant professor of chemical engineering and materials science (CHEMS), is a rising star internationally in the field of excitonic materials for energy applications. He earned his bachelor's degree in chemical engineering from the University of Delaware (2004), and a doctorate in chemical engineering from Princeton University (2010). Just prior to arriving at MSU he worked as a postdoctoral associate in the organic and nanostructured lab at the Massachusetts Institute of Technology (MIT).

Since joining the MSU faculty in August 2011, in the departments of CHEMS and physics, he has built an impressive body of work. Lunt's most well known research exploits the excitonic character of molecular semiconductors to produce lightweight flexible transparent solar cells. Additionally, he has pioneered advances in accurate methods for characterizing energy migration in excitonic semiconductors; in-situ real-time diffraction methods for understanding crystalline growth, and the design of nanocrystal blends for solar concentrators. Lunt has attracted funding of more than $2.5 million dollars over the past four years.

He has authored more than 40 papers in leading journals (> 2000 citations with 41 total publications and 13 publications having > 50 citations) and has already garnered an h-index of 20, an unusually high metric for such a young faculty member. Many of his articles have been identified as “most accessed” or “most downloaded.” Applied Physics Letters named his work to its list of “50th Anniversary Editor’s Picks” as one of the most important articles published in recent years. Three recent articles have been featured as cover stories in advanced materials journals. His work has also been covered in the popular press, including Nature, the New York Times, CBS News, and Forbes.

Distinguished Scholar—Senior Award

Charles Ofria, a professor of computer science and engineering, director of the Digital Evolution Laboratory, and deputy director of the BEACON Center for the Study of Evolution in Action, is a world leader in the field of artificial life. He joined MSU in 1999, as a research associate under Richard Lenski in the Center for Microbial Ecology and Center for Biological Modeling. He used this postdoc experience to develop a better understanding of the state of the field of evolutionary biology, with the long-term goal of applying these concepts to the evolution of computational intelligence.
His work explores the connections between “ordinary” organic life and artificial life in the form of self-replicating computer programs that live in virtual worlds, mutate, compete for resources, and evolve surprisingly rich and complex behaviors. This work is deeply conceptual, enriching both the computational and biological sciences. His research to date has examined such issues as the evolutionary origins of complexity, the division of labor, the dynamics of information in evolving systems, the optimization of mutation rates, the evolution of sex, and more. His work also has tremendous potential for applications in such areas as artificial intelligence.

Early in his career, Ofria developed the AVIDA platform (in collaboration with Chris Adami and Titus Brown). In AVIDA, self-replicating computer programs function as a population of organisms that evolves over time. Given automated data collection of the evolving population, AVIDA is an extremely tractable, flexible, and open-ended system to study real-time evolution.

Today, as director of the Digital Evolution Laboratory, he conducts research on evolution in artificial systems and applies the results to problems in computer science and evolutionary biology.

**Withrow Student Service Award**

*This award is presented to an advisor, academic specialist, or non-tenure-track instructor for outstanding service to students in the college. Nominations are submitted to the dean, and selection of the winner is made by the Engineering Undergraduate Studies Committee.*

**Judith ‘Judy’ Cordes**, director of Student Success for Women in Engineering, is passionate about student success, especially success of women in engineering. The persistence of our female students to graduation and the growth of the services that are available to women in engineering at Michigan State University are directly attributable to her efforts.

She arrived at MSU a little more than 28 years ago, as an academic advisor within the College of Engineering. She has since helped guide generations of students through the academic programs, anxieties and stressors of college life. Over time, she became a special advocate for the growing group of young women who chose to enter this male-dominated field. Early on, she recognized the barriers that women face in both the academic environment of engineering and the workplace. She has put into place and supported several organizations to assist women in overcoming those barriers and achieving their goals.

As the advisor for the MSU Chapter of the Society of Women in Engineering (SWE), she has played an active role in the developmental needs of women in the field.

Former student and current colleague Sandra Christlieb noted: “As an undergraduate and member of SWE, I experienced firsthand Judy’s commitment to students. She devoted countless hours to guiding our student organization and took the time to know each of the members... I now have the privilege of working with Judy as part of the Women in Engineering Program...Not a day goes by without a student dropping into her office to talk... Judy doesn’t blink, drops what she is doing and devotes her full attention to the student. Her ability to provide caring and guidance is beyond compare... I feel fortunate to have a wonderful mentor.”

Betty Shanahan, a College of Engineering Alumni Board member and former national executive director & CEO of the Society of Women Engineers, concluded, “As the College of Engineering celebrates more than one thousand female students, I cannot think of anyone more deserving of the Withrow Student Service Award than the key individual who has been driven the recruitment and success of female engineering students at MSU for 25+ years - Judy Cordes.”

**Gloria Stragier Award for Dedicated and Creative Service**

*The Gloria Stragier Award for Dedicated and Creative Service is presented annually to a staff member in the College of Engineering to recognize exceptional and creative job performance and/or concerned and creative leadership.*
When the administrative assistant in charge of your ‘front office’ comes armed with an MBA, it’s no wonder that the unit operates as efficiently and effectively as the Department of Chemical Engineering and Materials Science (CHEMS) does. Administrative assistant Nicole ‘Nikki’ Shook runs the business operation of the department and supervises a staff that performs the important functions of research accounting, graduate and undergraduate program support, department budgeting and administration. She brings not only tremendous organizational skills, but also people skills and tremendous creativity to the department.

She arrived at MSU as a student, earning bachelor’s degree in hospitality business in 2001, and an MBA in Integrative Management in 2006. Her professional career at Michigan State began in 2002, when she served as manager of the State Room restaurant inside the Kellogg Center. She joined CHEMS in 2008, where she continues to serve as an administrative assistant and supervisor.

As former CHEMS Department Chair Martin Hawley noted: she is the “key person” in the department – stepping into roles such as “graduate secretary” when that position was vacant and ensuing that those activities continued without a hitch. She came up with creative solutions to address budget constraints for the department so that the research and teaching activities continued with few problems.

Faculty members praise her invaluable work. Richard Lunt observed: “I have worked at Princeton, the University of Michigan, and Massachusetts Institute of Technology (MIT), and I can tell you without reservation that she rivals the best staff that I have met or worked with anywhere.” Patrick Walton added that her creativity, organizational and communication skills were central to the success of the annual CHEMS Research Forum showcasing research achievements of the department.

Acting Chair Don Morelli reflected the sentiment of every endorsement, “I have never worked with anyone more dedicated, efficient, supportive, and knowledgeable than Nikki. She is the leader and guiding light of the entire CHEMS department support staff, and without her constant encouragement, support, and direction I am quite sure we as a department would not be able to function.”

Read more on the award winners. (.pdf)