2015 Withrow Awards

March 24, 2015

The 25th anniversary of the Engineering Awards Luncheon celebrated teachers, scholars and service on March 19 at the University Club of Michigan State University.

Leo Kempel, dean of the College of Engineering, welcomed all of the guests and congratulated the winners of some of the college’s most prestigious awards.

Withrow Teaching Excellence Awards honor faculty teaching, advising and mentoring skills. One faculty member is selected from each academic unit, based primarily on nominations from students.

Recipients of the 2015 Withrow Teaching Excellence Awards are:

A. Pouyan Nejadhashemi, an associate professor of the Department of Biosystems and Agricultural Engineering, is recognized at both the graduate and undergraduate levels for his high quality instruction. Most notably, students appreciate his knowledge, and especially his passion for ecohydrology, which is highly contagious. He additionally is recognized for his dedication to ensuring that each student builds upon his or her educational ambitions and succeeds in meeting individual learning goals. Student comments focus on his talent for teaching, passion for the subject matter, and deep caring for students. As one student notes, “Dr. Pouyan has been one of the best professors that I have had my whole BAE academic career. He truly cares that all of his students are successful, and is also so passionate about hydrology.” Another added, “He truly cares about the success of his students and ensures everyone is reaching his/her potential.” A number of students noted that his love of teaching and sense of humor contributes to the learning environment. Nejadhashemi often has perfect or near perfect SIRS scores, as students complete his classes feeling comfortable, excited, and confident in what they have learned. They often comment how they come away from his classes with an incredibly high understanding, a thirst to learn more, and a high level of respect for the resource of
water, which indicates a deep level of learning. Nejadhashemi’s dedication to students, and highly effective teaching style and personality, make him an extremely valuable asset in educating and inspiring young professionals and future engineers.

Thomas Bieler, a professor of materials science and engineering, is an inspiring educator that is devoted to student learning. It is demonstrated in his availability to students outside of the classroom and how he incorporates real world examples to help students grasp the material. He was previously recognized with the Withrow Distinguished Scholar - Junior Award for distinguished scholarship in the college. Student comments shared a theme - Bieler’s teaching style was inspirational, relevant, and challenged them to think differently. As one student notes, “Dr. Bieler proved to be one of the best teachers I have had in my life. He is incredibly efficient and competent in communication of ideas, but above all else, inspired me (and my classmates, I know for certain) to think about things in a fascinating and unconventional way.” Time and again students mentioned how his course pack and real world examples allowed them to grasp the material. Students deeply appreciated his open door policy and his commitment to their success outside of the classroom. “Dr. Bieler is very knowledgeable of the material and creates a very timely course that still challenges and educates students. Creating his own textbook of notes made available to students helps create an even better learning environment. He is always open to visits from students or very responsive to emails whether they are topics of course material or professional career development.”

Rigoberto Burgueño is an associate professor and associate chair of the Department of Civil and Environmental Engineering. A three-time recipient of the Withrow Teaching Excellence Award, he is a dedicated and passionate teacher who cares about student learning and strives hard to relate “real” life structural engineering to classroom
instructions. He has high standards, expects students to work hard, and yet gives his time generously to facilitate learning. Students respond very well to his challenging style. As one student notes: “Dr. Burgueño challenges the students to go above and beyond what is taught in class.” Another student notes in the nomination form that Dr. Burgueño is, “one of the few instructors that demand not adequacy but excellence from his students.”

Abdol-Hossein Esfahanian, associate professor in the Department of Computer Science and Engineering, is a dedicated and passionate teacher to students of wide-ranging backgrounds, including students who require basic, introductory computer science material, as well as students with advanced computer science degrees who are investigating challenging theoretical issues. He creates an exceptional learning environment through interactive lecture sessions, welcoming students to ask questions and providing opportunities to solve problems in class. Based on his deep knowledge of the subject areas, he creates experiences of practical problem solving that are extremely helpful in gaining a deeper understanding of the course material. While his assignments are challenging, they are often entertaining. Esfahanian gives students a broad set of problem-solving skills and new ways of thinking about difficult problems.

Subir Biswas, a professor in the Department of Electrical and Computer Engineering, has demonstrated exemplary dedication to undergraduate and graduate education. His reputation as an excellent instructor is well known; his SIRS evaluations by students are among the best in the department. Student evaluations include: “Professor Biswas was more willing to help than any professor in the program. He was fair with grading and helpful with homework/project questions students had. He also used detailed description and useful analogies in class.” “Amazing lecturer. He knows what he’s talking about and answers students’ questions very accurately and precisely. He was very interesting.” “Dr. Biswas is genuinely interested in teaching students and creating a stimulating learning environment. He’s extremely good at fostering a conversation around subject matter while keeping the whole classroom involved. I definitely think he deserves this award.”

Neil Wright, an associate professor in the Department of Mechanical Engineering, has been described by students as, “everything a teacher should be.” Outside the classroom, Wright is just as effective and engaged. His impact in department has been tremendous. He has been instrumental in the establishment of a Biomedical Engineering Department, served as associate chair for the Undergraduate Program, and has always been a leader in curriculum development. His connection to students and to the course material is critical. Student evaluations include: “He genuinely wants his students to learn”; “He is passionate about heat transfer”; “He is engaging and funny and reminds students that learning shouldn’t be a burden.” Comment after comment such as these can be found in a thick pile of contributions from students supporting his nomination. “He always puts his students first! He creates an excellent class environment. He convinces students that his subject is worthwhile and interesting.” Even after the semester ends, “he still remembers his students after the class.”

Distinguished Scholar Junior Award

Lixin Dong, assistant professor of electrical and computer engineering, is recognized internationally as one of the top researchers in nanorobotics in the world. Since joining MSU in 2008, following a very successful research appointment at the Swiss Federal Institute of Technology (ETH) in Zurich, he has established a top-notch and vibrant research group, which has become a crucial part of the international nanorobotic network. As the head of the nanorobotics group at ETH, he directed the team that invented the first nanoscale linear servomotor. His outstanding research combines expertise in a number of diverse fields of nanotechnology, microsystem technology, physics, microscopy, and robotics, and addresses the most difficult problems of characterization and handling at the nanoscale level. His team made some fundamental contributions, including the first nanoscale linear servomotor, and received the best new application award from the IEEE Transactions on Automation Science and Engineering in 2008.

He has a very strong international reputation, and has collaborated with researchers from around the world. As one letter of support notes, “What puts Dr. Dong above most of his peers is his ability to direct large collaborative research projects, and especially his open mind for visionary research work across different disciplines and with high potential impact on society.”

His awards include the prestigious NSF CAREER Award in 2011, and the IEEE Transactions on Automation Science and Engineering Googol Best New Application Paper Award in 2007. He has published 80 journal papers, including 32
since coming to MSU, many of which are in high-impact factor journals. He has also written 18 book chapters, 65 reviewed conference papers and 54 reviewed conference abstracts. He was described in a 2005 survey paper as being responsible for a significant portion of publications in the field of robotic nanomanipulation. His papers have received over 1500 ISI citations (with h-index of 20) and more than 3,000 Google Scholar citations (with h-index of 25). His work has also received extensive attention in the popular press, including BBC News, Scientific American, Science News, and other media. He has taught both undergraduate and graduate level courses, and has mentored three PhD students at MSU. One of his doctoral students received first place in the 2014 Fitch H. Beach Awards for outstanding graduate research in the College of Engineering, as well as the 2014 Outstanding Graduate Achievement Award in the ECE department.

He actively engages in professional services within the international research community. He has chaired, co-chaired, and been a committee member on numerous symposia, conferences and workshops focusing on nanotechnology and devices. He is a senior member of IEEE, and serves on several IEEE committees focusing on robotics, nanotechnology and automation. He is also a representative of the IEEE Robotics and Automation Society, a member of the executive board of the 3M-NANO International Society, and an active member of several professional societies. Internationally recognized as a leader in the field of nanorobotics, his innovative research has increased the stature of nanosystems researchers at MSU, and he is a worthy recipient of the Withrow Distinguished Scholar Award.

Distinguished Scholar Senior Award

Hayder Radha, professor of electrical and computer engineering, is an international leader in the broad field of signal processing, including video, image, and social network processing. He is especially known for his pioneering work in scalable video coding, with broad applications for Internet streaming. He is also the founder and director of the Wireless and Video Communications (WAVE) lab at MSU.

He joined MSU in 2000, following an outstanding career at AT&T Bell Laboratories, where he was accorded the rank of Distinguished Member of Technical Staff; and Philips Research, where he held the rank of Consulting Scientist and Fellow. He was elected as a Philips Research Fellow for his contributions, an honor accorded to less than 1 percent of researchers at Philips worldwide. Among more than 300 members of the research staff at Philips, only four individuals held this position.

During this period, he led two separate research teams. The first team developed video communications technologies that enabled the rollout of digital HDTV services in the U.S. The second team developed an MPEG-4 compliant Internet video streaming system and scalable video coding methods that became part of the MPEG-4 video standard. While at Philips Research, many of Radha’s inventions ended up in key Philips patents.

Since joining MSU, he has had a very distinguished career. He has more than 200 refereed technical publications to his credit, has graduated 16 PhD students from MSU, and has had a solid funding record throughout his career. Among his publications, several have received best paper awards. Radha has brought in nearly $3.6 million in external funding over the course of 10 years, the majority of which has come from the National Science Foundation. He holds 38 patents, more than 20 of which are based on his work at MSU.

“Professor Radha’s most recent record has been especially impressive,” notes a former academic advisor and professional colleague. “In 2014 alone, he published two papers in the IEEE Transactions on Image Processing, one paper in the IEEE Signal Processing Letters, and seven conference papers. During 2014, he also had three simultaneously active multi-year grants from NSF that are staggered over the period from 2010 through 2016. These grants alone total nearly $2 million. Thus we gain the impression of a researcher who is really hitting his stride at this point in his career.”

Radha’s research profile is both outstanding and diverse. In his research career he has worked on image processing, multimedia communication, network congestion control, information/coding theory, wireless networks, information security, and social network analysis. He has published more than 150 research articles in some of the most competitive and prestigious journals and conferences. While diversifying his research interests every few years, he has been able to publish his work in the top conferences and journals in every domain in which he has been involved.
Withrow Student Service Award

**Carmellia Davis-King**, curricular director of the Cornerstone and Residential Experience (CoRe) living-learning program, has worked with the majority of the college’s first-year students since the inception of CoRe in 2009, and within the ROSES residential program in Bailey Hall even before that. Every day she brings a strong, genuine interest in helping prepare students for a successful future – not only in their careers, but also as human beings – to her work. As coordinator of the co-curricular activities in the residential program, Davis-King helps students acclimate to the university experience and engage with one another in a positive manner. She develops both academic and social programming, oversees peer leaders and tutors, and provides personalized service to many students who come to her with specific needs. She has devised and led numerous activities seeking to ensure students’ academic, professional, and personal growth, including programs that help students navigate the College of Engineering admission requirements, and programs offering tips on how best to prepare for final exams.

A number of her program activities coordinate closely with The Center, making clear to students that their paths to future careers begin in their first year. Career-related activities include events such as the Energy, Biomedical, and Transportation Showcases, as well as first-year student engagement in E-Week activities. Recognizing that students must succeed both in and out of the classroom, she was inspired to initiate “Wacky Tuesdays,” purely social events that provide a study break and opportunity to connect with fellow engineering students. She has made a concerted effort to connect all students with the college - including providing targeted support opportunities to our growing international student population, through CoRe programming linked to the Extended AOP activities for international students.

Davis-King manages a team of student employees that include Peer Leaders and tutors. She invests considerable time and energy to ensure that they are well-trained and dedicated to their roles in supporting CoRe students. She is as committed to their professional development as she is to the success of the students they serve. She gives them opportunities to plan and implement activities that develop their leadership and management skills. She developed and implemented a student leadership conference that helped students to grow as leaders. Moreover, it is common for her to host these students in her home as a way of building team cohesion. Her student employees often return to campus to assist with programs – even after graduating. She values input from colleagues and impresses them with her willingness to go the extra mile to make sure her programs are meeting the needs of the group. She can often be found after-hours, working side-by-side with her students to ensure that an event goes off without a hitch. She always puts emphasis on connecting with each student and continuous improvement of the program.

A former CoRe Peer Leader who worked with Davis-King, perhaps best sums up her qualifications for the Withrow Student Service Award: “Experiencing Ms. Davis-King’s service, personally and through the residential side of the CoRe program, I confidently say she is an ideal candidate for this award. Her hard work is what makes the CoRe residential experience operate. The success of the program has proven impact on student retention and graduation. Her academic advising also supports students’ academic success on an individual basis. She is a credit to the College of Engineering, and our student body is extremely fortunate to have her. She deserves recognition for all of her hard work.”

Gloria Stragier Award for Dedicated and Creative Service

**Lindsay Niesen**, office supervisor for the Department of Mechanical Engineering (ME), has for the past 10 years been the go-to person within the department. At a time when ME was experiencing unprecedented growth in its undergraduate student population and a surge of new faculty hires and retirements, it was also losing several key office staff members to other opportunities. Throughout an extended period of being short-staffed, Lindsay stepped in to the work of three or four people at a time and kept the department operating efficiently.

“These have been critical positions, some requiring complex knowledge of procedures, a light touch with students and faculty, and a caring concern for everyone,” noted her department chair. “Graduate secretary? Lindsay can become one overnight. Accounting? No problem, Lindsay can take on that role too. Appointments and hiring? Call Lindsay. Budgets? Training and managing office staff? Go to Lindsay, she will do it. And, she will do it well, and she will do it with a smile.”
A co-worker adds, “Lindsay handled an enormous workload, taking on the responsibilities of three staff positions in addition to her own, while going through the process of interviewing, hiring and training new staff. That she was able to accomplish this at all is remarkable - and it is noteworthy that she did this with aplomb.”

“Lindsay’s rapport with department faculty, staff and students is tremendous, and this is due in large part because they know they are in capable hands,” a faculty member relates. “Her knowledge of departmental, college and university procedures amazes me, and reflects her contribution to elevating the performance of all those around her. A common phrase heard in our office is, ‘ask Lindsay.’ The steady stream of students with problems at the beginning of each semester find that the buck stops at Lindsay’s desk, where they get answers and reassurance.”

Her contributions to the program have been described as extraordinary. The shear breadth of faculty and staff members who wrote letters of support - from clerical staff to department chair - attest to both her work ethic and pleasant demeanor.

“It should be no surprise that Lindsay is highly respected and trusted by all within the department,” said another faculty member. “Additionally, her friendly personality and calm working style contribute very positively to the department culture.”

“Rarely have I worked with someone whose good humor transcends any challenge,” adds a coworker. “Lindsay is quick to smile and laugh, and this sets an invaluable, contagious tone in the department office. Her focus and sense of capability also translates to her staff, providing an environment for growth.”

Her department chair sums up the sentiment that ran through every endorsement, “Lindsay is remarkable. I remember when Gloria Stragier was with the College and I can say without hesitation that Lindsay Niesen embodies the characteristics that give meaning to this award: dedication, creativity, exceptional work ethics, and genuine concern for her staff, her colleagues, the students, and the faculty. She not only does the right things right. She does many right things right.”

The Withrow Endowed Teacher/Scholar/Service Award Program was established 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.

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