Seventeenth Annual Engineering Awards Luncheon

Welcome
Satish S. Udpa
Dean of Engineering

Introductions
Satish S. Udpa

Presentation of Certificates to Student Group Advisers
Thomas F. Wolff
Associate Dean

Presentation of Withrow and Stragier Awards
Satish S. Udpa
Withrow Teaching Excellence Awards
Withrow Distinguished Researcher/Scholar Awards
Withrow Student Service Award
Stragier Award for Dedicated and Creative Service

Presentation of Faculty/Staff Community Service-Learning Award
Amy Smitter
Executive Director,
Michigan Campus Compact

Concluding Remarks
Robert P. Hubbard
Professor Emeritus, ME

The University Club
Lansing, Michigan
Every year, each department in the College of Engineering selects one faculty member to receive the Withrow Award for Teaching Excellence. Selection of the recipient is based primarily on nominations from students. A department selection committee composed of a majority of students, along with alumni, faculty, or advisers, reviews the nominations and makes a recommendation to the department chairperson. The following criteria are considered:

- Command of course content
- Creation of an effective learning environment
- Delivery of course materials
- Availability to students
- Ability to elicit enthusiastic learning
- Guidance of student organizations and projects
- Effective advising and mentoring

Bradley P. Marks, professor of biosystems and agricultural engineering and a second-time recipient of this award, excels as a leader in undergraduate and graduate education. He is broadly engaged in, and dedicated to, enhancement of the undergraduate experience. This includes curriculum management, recruiting, incorporating students into his research, and helping students solidify their career objectives through mentoring and advising. His BE 130 introductory class has been key in initiating student interest in and enthusiasm toward engineering and is a model for the college. He has received a university-level Teacher-Scholar Award and a Young Educator Award from the American Society for Agricultural and Biological Engineering. One student states, “He develops innovative and interactive classes.” Another says, “Not only is he an amazing teacher, but he has a great passion for what he does that becomes contagious to his students.”

Carl J. Boehlert, assistant professor of chemical engineering and materials science, is regarded as an enthusiastic, approachable, and dedicated teacher who creates a comfortable and positive learning environment. Students appreciate his caring and friendly attitude, his sense of humor, and his willingness to provide extra help and guidance beyond office hours. He is praised for engaging students in classroom discussion, relating coursework to real-life situations, and involving undergraduates in research projects. One student says, “Dr. Boehlert has helped me grow as a researcher, offering advice and helping me present my findings at the national level.” Boehlert is also active in promoting materials science to local high school students and in supporting the MSE Society by helping to plan programs and field trips. He encourages students to develop their leadership skills through participation in the MSE Society and community outreach activities.
Neeraj Buch, associate professor of civil and environmental engineering, is a third-time recipient of this award. An outstanding instructor who constantly takes on greater challenges, he is known for his passionate, organized, and skillful instruction. When he assumed responsibility for the college-wide sophomore-level statics class in 2004, he developed PowerPoint slides for his lectures and used a personal response system to facilitate engagement of the 220–230 students in the class. He received SIRS ratings of 3.90 or higher in this course—ratings that are almost impossible to achieve in a large, lower-level class that is required for civil and environmental engineering students, and elective for others. He receives outstanding ratings in his other classes as well. Student nominations include comments such as: "structures his courses so that students are motivated to learn"; "well organized, easy to contact, entertaining lecturer"; "applies course material to real-world use"; "invokes proper thought process in class."

Mark H. McCullen, academic specialist in computer science and engineering, is a fourth-time recipient of the Withrow Teaching Excellence Award. His students describe him as an approachable instructor who will go out of his way to help and encourage them. His engaging teaching style and extensive knowledge of the subject matter complement his ability to deliver complex course material in a manner that is easy to understand. McCullen's class projects inspire students to fully explore the relevance and applications of course content. In addition to praising his sense of fairness and his talent for creating a positive learning environment, students frequently name him as one of their favorite instructors: "He is an enthusiastic teacher, very concerned with ensuring that his students understand the material. A model instructor." "Mark McCullen is by a long shot the best teacher I have ever had."

Shanker Balasubramaniam, associate professor of electrical and computer engineering, teaches both undergraduate and graduate courses in electromagnetics. Students have found him to be extremely effective in conveying the practical importance of the subject matter without compromising any of the depth or rigor. His innovative, often Socratic, teaching methodology deserves special commendation. His classrooms are always alive and active. His exams and homework are truly challenging, yet rewarding enough to make students want to work hard. His friendly demeanor and relaxed approach encourage students to go to him with questions outside of class. One student said, "This professor is willing to help and explain everything." Other students stated that he is "always willing to meet with students and hold review sessions." Still others noted: "His energy and zeal are infectious and help to transform each lecture into a true learning experience."

Ranjan Mukherjee, professor of mechanical engineering, is respected by his students as being truly passionate about the material he teaches and caring that his students understand it. He is known for his ability to communicate complex ideas in a form that is readily understood by everyone. Students remark, "His manner in the classroom makes concepts easy to understand and also establishes him as a 'teacher' and not just a 'teller'." "Dr. Mukherjee gives excellent notes and lectures, excellent explanations of concepts, very good and informative real-life examples of material covered in class, and he's pretty funny." Students say, "He is very approachable and is always willing to answer questions." Mukherjee epitomizes the researcher who has not left teaching and his students behind. One of his students put it this way: "I've never had a teacher break down complicated material so well. He is an awesome teacher!"

2007 Withrow Distinguished Researcher/Scholar Awards

These awards recognize faculty members who have demonstrated excellence in scholarship. Department chairpersons submit nominations to the associate dean for research and graduate studies, who makes final selections in consultation with the Engineering Research and Graduate Studies Committee. Each nomination must be supported by letters of endorsement from professional peers and former and current students, including at least two letters from eminent external professional peers.

Withrow Distinguished Researcher Award
(Nominees have been in service to the university for more than five years and hold the rank of professor.)

Edward J. Rothwell, professor of electrical and computer engineering, is an internationally recognized contributor in the area of transient electromagnetic theory. Two of his most significant accomplishments are: (1) the E-pulse technique for radar target discrimination and (2) self-structuring antennas with radiating systems that can dynamically adapt to the environment. The impact of these techniques is such that they represent the state of the art more than a decade after they were first introduced. One colleague says, "His work is characterized, to a degree seldom seen, by analytical rigor and experiment-based validity." Rothwell is said to have an ability to rethink standard paradigms and arrive at truly novel solutions to problems. An IEEE fellow, he has published 75 journal papers, 150 conference papers, and a textbook on electromagnetics.

Rothwell's students are highly sought after, an indication of the high regard in which his research is held. He has taught 17 courses during his career, developing extensive course materials for many of them. He has been honored for teaching excellence numerous times. He has been an Honors College adviser for 15 years and served on the ECE Curriculum Committee for 17 years. He has been a strong mentor to students at all levels. His research grants have totaled over $3.2 million, originating from such diverse institutions as Boeing, the Office of Naval Research, the Electric Power Research Institute, the National Science Foundation, Mission Research Corporation, NASA, and Dow.
**Withrow Distinguished Scholar Award**

(Nominees have been in service to the university as an instructor, assistant professor, or associate professor for not more than seven years.)

**Syed A. Hashsham**, Edwin Willits Associate Professor of civil and environmental engineering, is an emerging research leader in the area of molecular biology and drinking water quality, developing powerful, yet cost-effective tools to address the problem of safe water on a global scale. His work on microchips for parallel microbial detection is of critical importance to federal agencies, including DOE, NSF, EPA, DOD, and NIH. He has helped attract $9.5 million as PI, co-PI, or collaborator on 26 grants and has developed excellent collaborations at MSU, around the United States, and internationally. One collaborator says, "He is knowledgeable in emerging technology and able to translate his knowledge to work in interdisciplinary areas." Another colleague says, "I will be looking to collaborate with him at every opportunity."

Selected as a Lilly Teaching Fellow in 2004, Hashsham developed MOBEE (Molecular Biology Explorer for Engineers), an on-line module for the learning of microbiological topics by a wide variety of audiences including children, administra-tors, practicing engineers, and experts. A former grad student says, "Dr. Hashsham's creativity, astuteness, and enthusiasm for new thinking served as the catalyst for my experimental designs. He helped me organize my research so it was unambiguous to those reading my dissertation." Hashsham has published 27 peer-reviewed papers in prestigious journals, 6 invited book sections, and 9 conference papers. Sought after at the national and international levels for his technical expertise, he has served as a proposal reviewer for six agencies. He shows the promise of sustained excellence.

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**2007 Withrow Student Service Award**

This award is presented to an adviser, 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.

**Teresa Isela VanderSloot**, academic specialist in computer science and engineering, shepherds CSE undergraduates from first year to last with caring vigor. In this past year, she has embarked on new initiatives in advising and career development. She organizes the freshman (291) and senior (491) seminars, and in both contexts introduces students to speakers from industry. In fall 2006, she created a new project assigning senior mentors to groups of undergraduates in CSE 291. At the urging of David Hollister, she took responsibility for a quick thrust in developing industrial partners, which was successful in linking CSE and our students with local companies interested in hiring our grads and in working with our faculty. She also applies significant effort in working with student organizations—the Association for Computing Machinery (ACM) and MSU Women in Computing (WIC), and has taken the lead in organizing and obtaining funding for the Michigan Celebration of Women in Computing regional conference to be held at Kellogg Biological Station this spring. She is a strong catalyst in the overall experience of undergraduates.

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**2007 Gloria Stragier Award for Dedicated and Creative Service**

The Gloria Stragier Award for Dedicated and Creative Service was initiated in spring 1996 to honor the accomplished career of its namesake and first recipient. The award is presented annually to up to two non-academic staff members in the College of Engineering. Awardees are presented a personal plaque and have their names engraved on the college’s commemorative display located in the east lobby of the Engineering Building. Selection is based on five criteria:

- Has served the College of Engineering for a minimum of five years
- Demonstrates exceptional and creative job performance and/or concerned and creative leadership in his/her department or the college
- Contributes to the college in a positive way, exceeding expectations to better the unit’s ability to fulfill its purpose
- Displays a cordial and supportive attitude and has earned the respect of students, faculty, and colleagues
- Is seen as a role model by peers

**Vanessa L. Mitchner**, an editorial assistant in the Department of Electrical and Computer Engineering, has been with the department for nine years. She takes minutes at faculty and visiting committee meetings and collects/processes/maintains department records—always with the highest level of quality and promptness. She organizes and edits department publications and regularly updates the department’s Web site. With her “can-do” attitude, she cheerfully lends a hand to anyone in need of help. If she cannot answer a question, she investigates until she finds the necessary answers. "Let’s ask Vanessa," is a phrase commonly heard in the office. She is flexible and conscientious, always ready to take on a special project, but also dedicated to carrying out everyday chores with excellence. Of her work on the recent dean search committee, one member said, “She handled things in such a way that each candidate we interacted with could leave campus with a positive impression of us.” Vanessa is always looking for ways to improve the department’s image and often attends student functions to act as the “unofficial” photographer. A student adviser says, “Vanessa shines in her dealings with students. She is proficient, accurate, and accommodating, often initiating new processes and making information accessible.” A faculty member says, “She is so knowledgeable about working aspects of the university that she has become a ‘one-stop shop’ when help is needed.”
Each year, the Michigan Community Service Commission and the Michigan Campus Compact together recognize outstanding contributions to community service-learning activities on college campuses statewide. One award goes to each university in the state. The MSU award for 2006 went to the administrators of the Department of Mechanical Engineering’s Senior Design Humanitarian Projects:

Roy Bailiff
Jill Bielawski
Alan Haddow
Robert Hubbard
Patrick Kwon

Ranjan Mukherjee
Tamara Reid-Bush
Craig Somerton
Brian Thompson

This group was cited by MSU President Lou Anna Simon as “empowering senior ME students to maximize their design and manufacturing skills for the public good, creating adaptive mobility and specialized devices to improve the daily lives of those challenged in navigating or interacting in the community.”

Recognition for Committee Service

The vitality of the college and university arises from the faculty—individually, collectively, and through many committees that are invested with the authority and the responsibility to represent the faculty. Committee work is typically arduous and seldom acclaimed. We are grateful to the engineering faculty for your efforts to sustain the quality of our college and university through your committee service. A special thank-you goes to those who chaired college committees or served on campus and university committees as lead representatives from the college, thereby assuming the greater responsibility of preparing archive reports on the actions of the committees during the 2006-07 academic year.

College Committees
Composite Materials Advisory Committee
Rigoberto Burgueño

Computing Services Advisory Committee
Carl T. Lira

Cooperative Education Advisory Committee
Leslie L. Leone

Diversity Initiatives Advisory Committee
Aurles U. Wiggins

Engineering College Advisory Council
Richard W. Lyles

Engineering Undergraduate Studies Committee
Melissa J. Baumann

Engineering Research and Graduate Studies Committee
Hasan K. Khalil

Safety Advisory Committee
Terence M. Casey

Undergraduate Awards and Financial Aid
Leslie L. Leone

Campus Committees
Liberal Learning Council
Jon H. Sticklen

Retention Strategy and Supportive Services Advisory Committee
Aurles U. Wiggins

University-Wide Minority Graduate Recruiting Advisory Committee
Aurles U. Wiggins

University Committees
Academic Council
David Grummon

Athletic Council
John R. Lloyd

Chemical Hygiene Subcommittee
Carl T. Lira

Committee on Academic Policy
Jon H. Sticklen

Communication and Computer Systems Advisory Committee
Jackie Carlson

Committee on Curriculum
Richard J. Enbody

Committee on Faculty Affairs
Hayder Radha

Committee on Faculty Tenure
Sandeep Kulkarni

Graduate Council
Charles A. Petty

Committee on Honors Programs
Neeraj Buch

Committee on International Studies and Programs
John R. Lloyd

Committee for the Library
Norbert H. Mueller

Committee on Materials Advisory
Lawrence T. Drzal

University Research Council
Ronald C. Rosenberg