

DEPARTMENT OF ELECTRICAL  
& COMPUTER ENGINEERING



2015-16 **DISTINGUISHED**  
LECTURE SERIES

**03/09/16**  
TRABANT THEATER  
**3:30<sup>PM</sup>**

Reception to follow in Trabant



## DAVID C. MUNSON, JR.

*Robert J. Vlasic Dean of Engineering  
University of Michigan*

### **Engineering Education: Preparing Students to Change the World**

In the aftermath of World War II, engineering education became less experiential, with a heavier grounding in science, mathematics, and rigorous analysis. Nearly all learning occurred through the curriculum, with traditional lectures, homework problem sets, and predefined labs. This approach provided the nation decades of leadership in technology sectors such as energy, defense, space, communications, microelectronics, and computing. The world has evolved. Today, we see a more competitive landscape, with start-up companies and a global economy, and we are faced with pressing grand challenges, many of which are not amenable to purely technological solutions. This new era demands a broader mix of talents from our graduates. And, our students, themselves, are changing. Freshmen entering our programs are expressly seeking to make a difference. In response, engineering schools nationwide are ramping up their experiential offerings in multidisciplinary design, entrepreneurship, international programs, and student groups

and societies. Students are developing impressive skills in creation, communication, teamwork, leadership and global competency. This seminar will offer a brief history of engineering education and describe recent progress that universities are making in the experiential direction. We then will proceed to think about how increased diversity and digital learning will become much stronger parts of the fabric of engineering education.

#### **BIOGRAPHY**

David Munson is the Robert J. Vlasic Dean of Engineering at the University of Michigan. He received the B.S. degree in electrical engineering from the University of Delaware and the M.S., M.A., and Ph.D. degrees in electrical engineering from Princeton University. Prior to Michigan, he was on the electrical and computer engineering faculty at the University of Illinois.

Professor Munson's research is focused on signal processing issues in imaging systems,

especially synthetic aperture radar. He is co-founder of InstaRecon, Inc., which is commercializing fast algorithms for image formation in computer tomography. He is co-author of the Infinity Project textbook on the digital world, which has been used in about 400 high schools nationwide.

Professor Munson is a Fellow of the IEEE, a past president of the IEEE Signal Processing Society, founding editor-in-chief of the IEEE Transactions on Image Processing, and co-founder of the IEEE International Conference on Image Processing. In addition to multiple teaching awards and other honors, he was presented the Society Award of the IEEE Signal Processing Society, he served as a Distinguished Lecturer of the IEEE Signal Processing Society, he received an IEEE Third Millennium Medal, and he was the Texas Instruments Distinguished Visiting Professor at Rice University.



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