



Center for Wireless Integrated MicroSensing & Systems

Fall 2014

Partnering With Industry in Microsystems Research

SPOTLIGHT

New WIMS² Member Partners



[\[More\]](#)

Khalil Najafi to Receive 2015 IEEE Daniel E. Noble Award for Emerging Technologies

Professor Khalil Najafi, a co-founder of WIMS, has received the 2015 IEEE Daniel E. Noble Award for Emerging Technologies, "For leadership in micro-electro-mechanical systems (MEMS), technologies, and devices and for seminal contributions to inertial devices and hermetic wafer-level packaging.

The IEEE Daniel E. Noble Award for Emerging Technologies is one of IEEE's Technical Field Awards, which are among the highest awards given by IEEE. Khalil is being recognized as a worldwide leader for nearly 30 years in the research and development of micromachined sensors, microelectromechanical systems (MEMS) and integrated microsystems. His research has translated into 2 startup companies, which he also co-founded. [\[More\]](#)



New WIMS² Faculty



Jianping Fu
Assistant Professor
Mechanical
Engineering

Research Interest: Our group's interests lie at the nexus of micro/ nanoengineering, biophysics, biology, and biotechnology. Currently, we focus on developing integrated systems for high throughput quantitative micro/ nanoscale analysis of molecular and cellular functions. [\[More\]](#)



Kenn Oldham
Assistant Professor
Mechanical
Engineering

Research Interest: MEMS and micro-mechatronic systems; design for controllability; optimal and robust control; micro-robotics; low-power servo

Fall 2014 Industrial Advisory Board Meeting Highlights

On September 24, the Fall WIMS² Industrial Advisory Board (IAB) Meeting was held in Ann Arbor, Michigan, and also was broadcast via live, interactive webcast to US and international members. The Research Review presentations were recorded and are being made available on the member-only section of the WIMS² website. The next IAB meeting will be in May 2015.



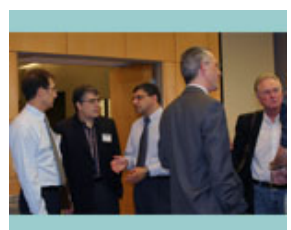
WIMS² Participates at Hilton Head

The sixteenth in the series of Hilton Head Workshops on the science and technology of solid-state sensors, actuators, and microsystems was held on June 8 - 12, 2014. WIMS² faculty and students presented seven papers. [\[More\]](#)



Spring 2014 Industrial Advisory Board Meeting Highlights

On May 28, the Spring WIMS² Industrial Advisory Board meeting was held in Ann Arbor, Michigan. Seventeen industrial members and guests, from 8 companies, joined 15 faculty and 45 graduate students at the semiannual event. [\[More\]](#)
[Login to view IAB presentations.](#)



control; vibration control; smart structures. [\[More\]](#)



Zhaohui Zhong
Assistant Professor
Electrical Engineering
and Computer Science

Research Interest: Carbon nanotube, graphene, and semiconductor nanowire synthesis; Nanoelectronic and nanophotonic device fabrication; DC and AC electrical measurement; THz time domain electrical measurement; Optoelectronic device characterization. [\[More\]](#)

Seminar Series Speakers

Nanoscale Processes and Applications in Plasmonics, Electronics, and Nanoenergetics
April 17, 2014



Shubhra Gangopadhyay
Electrical Engineering
and Computer Science
University of Missouri
[\[Download flyer to read abstract and bios\]](#)

Research and Development at Robert Bosch North America
May 5, 2014



Seow Yuen Yee
MEMS Research Engineer



Gary Yama
Senior Research Engineer

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MEMS and NEMS Resonators: Sensors and Actuators for Microsystems
August 18, 2014



Roozbeh Tabrizan
Postdoctoral Fellow
Integrated MEMS Lab
Georgia Inst. of Tech.
[\[Download flyer to read abstract and bios\]](#)

Conference Publications

Journal Articles

Bringing Batteryless Sensors to Market

PsiKick, an ultra-low-power wireless sensor company co-founded by Prof. David Wentzloff, has completed first-round, funding. The financing, led by New Enterprise Associates, will be used to accelerate PsiKick's growth and product development to meet the increasing demand for energy-efficient system-on-a-chip technology. [\[More\]](#)



Powering the Internet of Things

Prof. David Wentzloff describes the future Internet of Things, a world that he and his colleagues in the Michigan Integrated Circuits Laboratory are enabling with their ultra low power circuits and systems. These sensing systems can detect air quality, bodily health, and whether you forgot to turn off your stove and send that information to your phone. [\[Video\]](#)



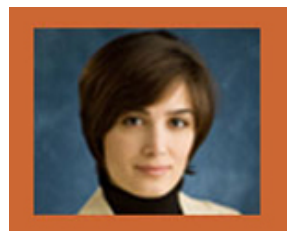
Leaders in Ultra Low Power Circuits and Systems Presenting at VLSI Circuits Symposium

Michigan faculty and students will present seven papers at the 2014 Symposium on VLSI Circuits, a number that exceeds any other academic institution or company. The seven papers range from a millimeter-scale wireless imaging system, to a chip that can decipher an image in a manner similar to the human brain, to continued optimization of the circuits we use every day, as well as circuits that will fuel the future Internet of Things. One of the papers, *Low Power Battery Supervisory Circuit with Adaptive Battery Health Monitor*, has been selected as a Symposium Technical Highlight. [\[More\]](#)



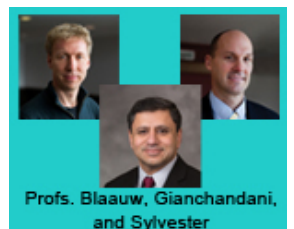
Mina Rais-Zadeh Receives 2014 ONR Young Investigator Program (YIP) Award

Prof. Mina Rais-Zadeh received a 2014 Young Investigator Award from the Office of Naval Research (ONR) for her research project, *Acoustic Phonons and Their Interactions with Electrons in Gallium Nitride Ultra-fast Ultra-scaled Resonators*. [\[More\]](#)



Six ECE Faculty Recognized for Excellence

The College of Engineering recognized David Blaauw (WIMS²) and Dennis Sylvester (WIMS²) for Innovation Excellence, Yogesh Gianchandani (WIMS²) for Research Excellence, Stéphane Lafortune for Education Excellence, Herbert Winful for Service Excellence, and Anatoly Maksimchuk as Outstanding Research Scientist. [\[More\]](#)



Prof. Blaauw, Gianchandani, and Sylvester

Silicon Valley to Get a Cellular Network, Just for Things

Prof. David Blaauw comments on What's Next - which in this article means the Internet of Things, and the need for a wireless network for "things" rather than person-to-person communication.

[\[More\]](#)

**MIT
Technology
Review**

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