



STEM PANEL

ISSUES FACING UNDERREPRESENTED GROUPS IN THE STEM FIELDS

Monday, July 16, 2012, Noon-2 PM

Illinois Institute of Technology

IIT will host a panel discussion with researchers in engineering on issues facing women and minorities in research careers in engineering and the sciences.

PANELISTS

- **Herek Clack, Ph.D.** Associate Professor, Department of Mechanical and Aerospace Engineering, Illinois Institute of Technology
- **Megan Francis-Sedlak, Ph.D.** Research Scientist, Baxter Healthcare
- **Monica Moya, Ph.D.** Post doctoral researcher, B University of California, Irvine.
- **Nancy Wangechi Karuri, Ph.D.** Assistant Professor, Department of Chemical and Biological Engineering, Illinois Institute of Technology

Moderators: Alyssa Appel and Marcella Vaicik

RSVP: Lunch is provided so please RSVP to Eric Brey (brey@iit.edu)

This panel is supported by funding from the National Science Foundation (NSF) through the Illinois Louis Stokes Alliance for Minority Participation (Grant No. HRD 0904024) and REU Site: Summer Engineering Research Experiences in Diabetes for Undergraduates (Grant No. EEC 1157041).

Herek Clack, Ph.D. Dr. Clack is an Associate Professor of Mechanical and Aerospace Engineering and he directs the Advanced Thermal and Environmental Systems Research Laboratory (ATESR Lab) at the Illinois Institute of Technology. ATESR Lab activities (http://mmae.iit.edu/atesr_lab) center on fundamental studies and enhancement of transport processes within multi-phase flows, primarily those associated with combustion, combustion emissions, and toxic air pollutants. ATESR Lab activities include federal and state grant-funded research, industrial contracts, and collaborations with groups in Italy, Poland, and Kenya. Prof. Clack received his S.B. in Aeronautical and Astronautical Engineering from MIT (1987) and his M.S. (1997) and Ph.D. (1998) in Mechanical Engineering from the University of California, Berkeley. Prior to joining the IIT faculty in 1999, Prof. Clack was an NRC Postdoctoral Fellow in residence at the National Institute of Standards and Technology in Gaithersburg, Maryland (1998-1999) and a Member of the Technical Staff at the Rocketdyne Division of Boeing Corporation (1987-1992). Prof. Clack was named one of sixteen distinguished young alumni/ae by the MIT Department of Aeronautical and Astronautical Engineering (2000) and received an NSF Faculty Early Development (CAREER) Award (2004). He has served on several committees of the National Academies' National Research Council addressing topics ranging from changes in environmental regulation to the thermal destruction of mustard and nerve agent chemical weapons stockpiles. He currently serves as a member of the Global Mercury Partnership (GMP) sponsored by the United Nations Environmental Programme (UNEP) and the standing oversight committee for the U.S. Army's chemical demilitarization program.

Megan Francis-Sedlak, Ph.D. Dr. Francis-Sedlak is a Research Scientist in the Cellular Therapies R&D team at Baxter Healthcare. She was raised in Granite City, IL before receiving a bachelor's degree in biomedical engineering from Saint Louis University. She was the first in her family to receive a doctoral degree when she completed her PhD in biomedical engineering at the Illinois Institute of Technology under the mentorship of Dr. Eric Brey. In her graduate studies, Dr. Francis-Sedlak was committed to mentoring undergraduate students in engineering and science research. Following graduate school, Megan worked as a post-doctoral researcher in the laboratory of Dr. Vincent Turitto at IIT. She then joined Baxter Healthcare and has worked there for two years. Dr. Francis-Sedlak's expertise are in biomaterial and cell-based therapies in regenerative medicine. She has presented at numerous national and international meetings and published a number of high impact research articles. Her publication in *Tissue Engineering Reviews* is one of the most cited manuscripts in the history of the journal.

Nancy Wangechi Karuri, Ph.D. Dr. Karuri is an Assistant Professor in the Department of Chemical and Biological Engineering (ChBE) at IIT. She was born and raised in Kenya. Nancy received a BEng from the University of New South Wales in Kensington, Australia, and her PhD from University of Wisconsin-Madison in Chemical Engineering. After finishing her dissertation, Nancy spent four years as a research associate at Princeton University as a member of Jean Schwarzbauer's research group in Molecular Biology before joining IIT's faculty in 2009. Her research is focused on engineering therapeutic materials for chronic wound care that are based on an understanding of the wound environment. She has taught several courses in the ChBE department, including an introductory biology course for engineers (CHE 311), Heat and Mass Transfer (CHE 302), and a graduate-level tissue engineering course (CHE 584).

Monica Moya, Ph.D. Dr. Moya is a first-generation college graduate. She was a recipient of the Bill and Melinda Gates Millennium Scholarship which allowed her to attend Northwestern University where she double majored in biomedical engineering and psychology. After receiving her BS, she went on to pursue her PhD in biomedical Engineering at the Illinois Institute of Technology. While completing her PhD thesis, Monica was a visiting research fellow at the Department of Plastic Surgery in Chang Gung Memorial Hospital, Taiwan. Upon completion of her thesis, Dr. Moya returned to her home state of California where she is currently a post doctoral researcher at the University of California, Irvine. Her work has been published in numerous national and international scientific journals. Her more recent research involves developing and using micro fabricated devices to study vessel development. She currently has one patent pending. Dr. Moya is very involved in her community. She currently serves on the advisory council of the Gates Millennium Scholars Alumni Association as well as being a mentor and ambassador for the Gates Millennium Scholarship program aimed at promoting academic excellence among minority students. Dr. Moya also participates and helps lead Rocket Science Tutors, a non-profit, all-volunteer organization comprised of technical professionals and engineering graduate students dedicated to exciting students about STEM.