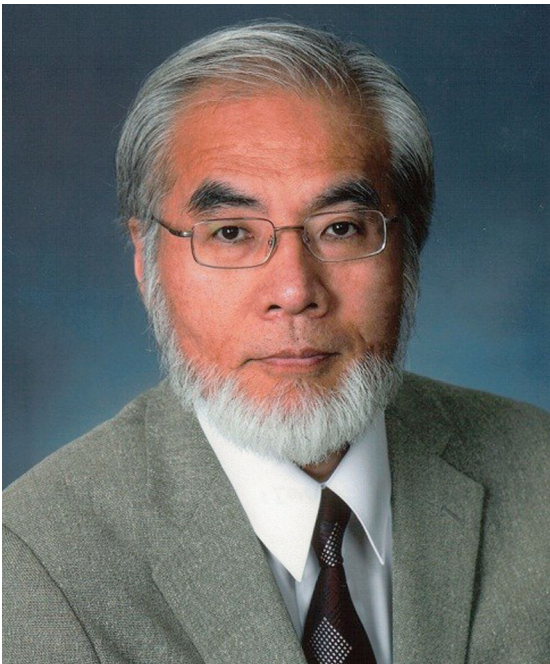


Research News

160 Convent Avenue, Steinman Hall, New York, NY 10031 | Main 212-650-5435 | Email contact: camp@ccny.cuny.edu

FALL / WINTER 2017



Dr. Masahiro Kawaji, Professor, Mechanical Engineering, Awarded \$5.2 million National Science Foundation Grant

The National Science Foundation (NSF) provides grants for research in the fields of science and engineering, and the 2017 Partnership for International Research and Education (PIRE) awards will fund 14 lead U.S. institutions for collaborative projects involving international partners in 24 countries: Argentina, Australia, Bolivia, Brazil, Canada, China, Colombia, Cuba, France, Germany, Italy, Japan, Malawi, Malaysia, Mexico, Netherlands, Norway, Peru, Philippines, Switzerland, Taiwan, United Kingdom, Zambia and Zimbabwe. By linking together researchers from around the world, PIRE allows U.S. dollars to be leveraged, and improve scientific outcomes. Dr. Kawaji 's areas of research include thermodynamics, phase change, along with other areas of mechanical engineering. For more information about Professor Kawaji's background and research interests, please click this [link](#).



Dr. Prathap Ramamurthy, Mechanical Engineering, is the project's director

CUNY Professors Receive a \$2.3 Million, Five-year Grant to Educate the Next Generation of Hispanic Professors in Environmental Sciences and Engineering

Under the direction of [Dr. Prathap Ramamurthy](#), Professor [Jorge Gonzalez](#) and colleagues, Fred Moshary, Joseph Barba, Kyle McDonald and Ellen E. Smiley, are among a group of researchers awarded a five year, \$2.3 million grant to educate the next generation of Hispanic professors in Environmental Sciences and Engineering.



Dr. Jorge Gonzalez, Professor, Mechanical Engineering

Subsequently, Dr. Gonzalez was also awarded a Grant of \$174,895 from the National Science Foundation's (NSF) **RAPID GRANT PROGRAM** to gain insight into how storms develop and intensify in the Caribbean region. Dr. Prathap Ramamurthy and professors Jorge E. Gonzalez, Fred Moshary, and post-doctoral fellow Nathan Hossanah, are all affiliated with City College's [NOAA-CREST](#), and have been conducting summer field studies in Puerto Rico for the past three years.



Associate Dean Rosemarie Wesson Elected Treasurer and Member of the Board of Directors of the American Institute of Chemical Engineers

Dr. Rosemarie D. Wesson, P.E. is the Associate Dean for Research and Professor of Chemical Engineering. Her professional experience includes Director and Program Director at the National Science Foundation in the Directorate for Engineering; faculty member in the Department of Chemical Engineering at Louisiana State University; and Senior Research Leader in the Corporate Materials Science Research and Development Lab of The Dow Chemical Company. Dr. Wesson is also an invited contributing author for the American Society of Engineering Education (ASEE) PRISM magazine and a Fellow in the American Institute of Chemical Engineers (AIChE). She is also a member of the American Chemical Society (ACS) and the American Society for Engineering Education (ASEE).



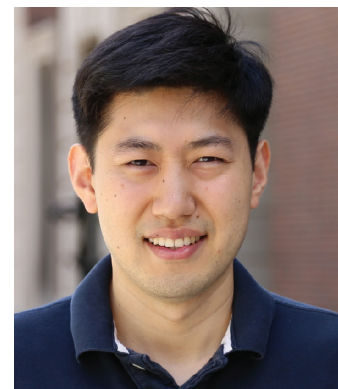
Naresh Devineni, Recipient of the US Department of Energy's Early Career Research Program Award

Named one of 59 recipients of the US Department of Energy's Early Career Research Program Award, Dr. Devineni, Assistant Professor, Civil Engineering, is the first professor from CCNY/CUNY to receive this distinctive DOE award in the eight years since it was initiated. Dr. Devineni's proposal entitled "*Multi-scale Modeling of Extreme Events and Impact Information*" was awarded a 5-year \$760,000 grant. His contributions cover innovations in modeling spatiotemporal dependence in hydro-meteorological fields, new algorithms for the assessment of water stress, tree-ring based reconstruction, and optimization to address water stress. For more information about Dr. Devineni's research interests, click [here](#).



Xi Chen Participates in STS International Conference and Dialogs with Future Leaders and Nobel Laureates

Dr. Xi Chen, Assistant Professor in the Nano Initiative at the CUNY Advanced Science Research Center and the Chemical Engineering Department at CCNY, was one of only five young researchers nationwide to have the honor of being selected to participate in the **Dialogue between Future Leaders and Nobel Laureates** at the 14th Annual Meeting of Science and Technology in Society (STS) forum, held in Kyoto, Japan. The STS aims to create a global network and provide a framework for open discussions addressing ways of advancing science and technology for the benefit of humankind.



Dr. Charles J.
Vörösmarty

PhD candidate
Ariel Miara

Climate Change Meets Power Grid: A Silver Lining?

A closer look at how climate change could impact our power supply shows that America's infrastructure might be more adaptable than scientists anticipated. The findings of their study were recently published by CCNY Grove School of Engineering PhD candidate Ariel Miara and Dr. Charles J. Vörösmarty, Presidential Professor of Civil Engineering in the Grove School and founding director of the CUNY Advanced Science Research Center (ASRC).

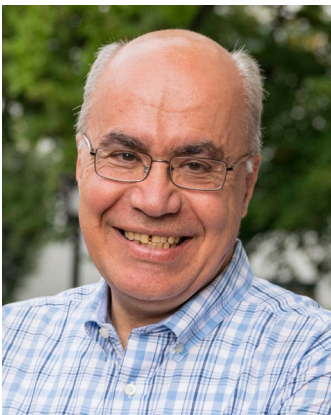
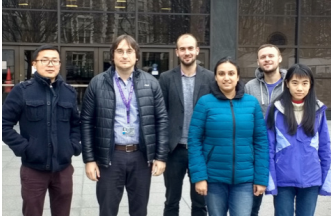


Alexander B. Khanikaev and Team Selected by the Optical Society of America as One of the Top 30 Breakthroughs in the Field of Photonics

Dr. Alexander B. Khanikaev, Associate Professor, Electrical Engineering, with researchers, Alexey Slobozhanyuk, ITMO University, St. Petersburg, Russia and Yuri S. Kivshar, Australian National University, Canberra, Australia, have been selected for their work by the Optical Society of America as one of the top 30 breakthroughs in the field of photonics.

The research of Dr. Khanikaev and his colleagues was published earlier this year in *Nature Photonics*, then selected later for a special issue of *Optics and Photonics News*, a publication exclusively for the top 30 works in the photonics research community.

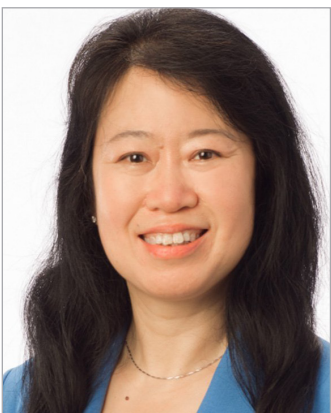
The findings of their work have potential practical applications in optics, supporting helical electromagnetic excitations which can tolerate sharp bends and propagate without reflection, potentially enabling electromagnetic radiation flows unimpeded along arbitrary contours defined by the synthetic gauge field of topological surface modes. A full summary can be found [here](#).



Michel Ghosn, Winner of the 2017 International Association for Structural Safety and Reliability Award

Dr. Michel Ghosn, Professor, Civil Engineering, is the winner of the 2017 International Association for Structural Safety and Reliability (IASSAR) Award for enrichment to the field of research and education.

The IASSAR Research Award is the latest honor for Dr. Ghosn's outstanding research. In addition, Dr. Ghosn received the CCNY President's 2016 Award for Outstanding Faculty Service in the Grove School of Engineering. Professor Ghosn is an expert in the areas of structural reliability and system safety, with a particular emphasis on bridge structures. For additional information, click [here](#).



Yingli Tian Elected IEEE Fellow

Yingli Tian, Professor, Electrical Engineering, has been elevated to Fellow, effective 2018, by the Institute of Electrical and Electronics Engineers (IEEE).

Globally four hundred thousand professionals are members of IEEE. Each year, the organization elevates less than one-tenth of one percent of them to Fellow. Only three percent of that one-tenth of one percent are women.

Dr. Tian's research on automatic facial expression analysis has had significant impact on the academic research community and in industry. Her work has garnered nearly 200 publications with 12,400 citations worldwide, and more than \$6 million in research grants.

NEW FACULTY



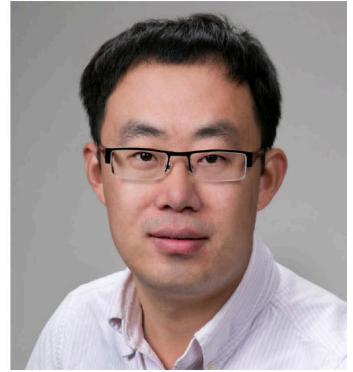
Alessandra Carriero



Ronak Etemadpour



Samah Mohamed Ahmend
Saeed



Hao Su

Alessandra Carriero, Ph.D., Department of Biomedical Engineering

Dr. Carriero was awarded a Ph.D. in Biomechanics from Imperial College London in 2009. She received several national and international recognitions for her innovative and outstanding research in the field of biomedical engineering including the NSF Career Award in 2017. Dr. Carriero received an MSc in Biomedical Engineering from Politecnico di Milano, with a thesis conducted at Trinity College Dublin, where she was the appointed Research Assistant.

Ronak Etemadpour, Ph.D., Assistant Professor, Department of Computer Science

Dr. Etemadpour obtained her Ph.D. in Computer Science from Jacobs University Bremen in Germany. She completed her postdoctoral research at Creative Coding Lab at The University of Arizona. She has presented on similarity-based layouts generated by multi-dimensional projections or other dimension reduction techniques and how they are commonly used to visualize high dimensional data.

Samah Mohamed Ahmend Saeed, Ph.D., Department of Electrical Engineering

Dr. Saeed received her Ph.D. in the Computer Science and Engineering Department of New York University Polytechnic School of Engineering. Dr. Saeed is the winner of the best paper award at IEEE VLSI Test Symposium, as well as the TTTC's E.J. McCluskey Best Doctoral Thesis Award at the IEEE International Test Conference. Her research interests include computer-aided design of VLSI circuits, specifically Design-for-Testability, and hardware security, and the security of emerging technology.

Hao Su, Ph.D., Department of Mechanical Engineering

Dr. Su received his Ph.D. in Mechanical Engineering from the Worcester Polytechnic Institute and his M.S. in Mechanical & Aerospace Engineering from the State University of New York in Buffalo. He was a postdoctoral research fellow at Wyss Institute for Biologically Inspired Engineering at Harvard University. In 2012, Dr. Su received the Best Medical Robotics Paper Finalist Award in the IEEE International Conference on Robotics and Automation. His research interests include surgical robotics, wearable robotics and soft robotics. He is passionate about designing and translating robotic systems to clinical products.

Grove School of Engineering Experts Interviewed for TV Programming



Dean Gilda Barabino

PBS show *SciTech Now* interviewed Dean Gilda Barabino on her experience as a biomedical engineer who utilizes engineering principles to find solutions to health problems. She discussed the rapid pace of evolving technologies and the significance of expanding the talent pool to advance engineering innovation.



Professor
Yiannis Andreopoulos



Professor Emeritus
Sheldon Weinbaum

Russian Television recently interviewed Professors Andreopoulos and Weinbaum regarding their research in a TV segment called “The Wonder of Technology.” Their presentation concerned the use of soft porous materials to produce planar lifting surfaces with dramatically enhanced lift and greatly reduced drag, a new concept in lubrication theory with advanced design applications. Professor Andreopoulos subsequently conducted a demonstration about hydraulics on NBC, which can be seen on [NBC LEARN](#).

ALUMNI NEWS

Three CCNY Engineering Alumni Earn 2017 Townsend Harris Medals

Jacob (Jack) Feinstein, '65EE, PE, Judge Stuart Levy '65EE, J.D. and Dr. Stanley Sandler, '62ChE, Ph.D. were among the 2017 awardees of the prestigious Townsend Harris Medal, established by a gift from the class of 1906 for outstanding postgraduate accomplishments in their fields.



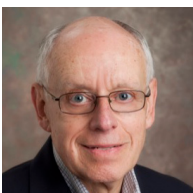
Mr. Jacob Feinstein

Mr. Feinstein worked for Consolidated Edison of NY for 30 years, retiring as Vice President. Later, he held other senior positions in the power industry, did consulting work, and authored operating procedures and articles about protecting the critical infrastructure of America. He is the current chair of the External Advisory Board of the Grove School of Engineering for which he has been a member since 1995.



Judge Stuart S. Levy

Judge Levy is a leading expert in patent law, practice and procedure. For over 35 years, he served at the US Patent and Trademark Office (USPTO), advancing to Administrative Patent Judge. He decided ex parte appeals cases involving electrical and computer technologies, business methods, and some mechanical technologies. Stuart and his team received Vice President Al Gore's Hammer Award for helping create a government that works better and costs less, and he has been recognized for numerous other accomplishments.



Professor Stanley Sandler

Dr. Sandler is the Henry Belin DuPont Chair in Chemical Engineering at the University of Delaware and is recognized as one of the world's leading authorities in the field of Chemical Engineering. He is author or editor of eight books and over 400 publications, and his book “Chemical, Biochemical, and Engineering Thermodynamics,” is one of the most-used textbooks for chemical engineering thermodynamics.