



REGIONAL JUDGE BIOS

2017 New York Tech Valley Regional
Rensselaer Polytechnic Institute | Troy, NY
March 16-18, 2017

REGION CO-SPONSOR



REGION LEADER IN TECHNOLOGY



REGION CAPTAIN OF INNOVATION



REGION FRIEND OF THE FUTURE



REGION CONTRIBUTOR



REGION ROBOT BOOSTER



JUDGE ADVISOR

Thomas Barone, PE recently retired as the Senior Director of Energy and Sustainability at the NYS Office of Parks, Recreation, and Historic Preservation where he managed the energy efficiency and renewable energy programs for the Agency's 5,000 buildings. Previously, Tom was the Acting Vice President for Energy Services at the New York State Energy Research and Development Authority (NYSERDA) where he oversaw NYSEDA's operations and energy efficiency and renewable energy deployment and services programs. Tom has over 30 years of experience in the energy efficiency industry in various roles within the commercial/industrial, residential, and multi-family sectors. Tom is a licensed professional engineer in New York State and received a bachelor's degree and master's degree in Civil Engineering from Rensselaer Polytechnic Institute (RPI) in Troy, NY.

JUDGE MANAGER

John Neun recently retired as a Staff Engineer for Albany International Corp., where he determined how to make paper machines run more efficiently all over the world. During his career, he has worked for manufacturing companies and consultants as a technical contributor and manager, and has developed proficiencies in machine design, structures, machine and structural vibration, experimental design and statistical analysis, project management, and paper manufacture. He is a past mentor and chairman of a founding FIRST robotics team, and has been involved in educational robotics since 1999. He has a bachelor's and master's degree in mechanical engineering from RPI, has six US Patents, and is a registered Professional Engineer in New York State.

JUDGES

Peter Altenburger has been with National Grid since 1992 in a number of engineering and operations roles. He currently holds the position of Director – Transmission Planning and Asset Management and leads a team of engineers responsible for performing studies and sponsoring capital projects to maintain the reliability of the transmission system in National Grid's upstate New York service territory. He received a Master of Science in Electrical Engineering from Rensselaer Polytechnic Institute and a Bachelor of Engineering in Electrical Engineering from Manhattan College.

Rick Avila is a Computer Scientist and CEO of Accumetra, a high performance imaging services company focused on advancing the science of image-based decision making. Rick has extensive experience developing healthcare software solutions in academic, government, and commercial settings including at Howard Hughes Medical Institute, General Electric Global Research, Kitware, and the US Department of Veterans Affairs. Throughout his 20 year career, he has contributed to and supported several open source projects including VTK, ITK, and OSEHRA. Rick received a Bachelor of Science and Master of Science in Computer Science from the State University of New York at Stony Brook, specializing in 3D biomedical imaging and visualization.

Ross Battaglia is a veteran of the United States Navy and a resident of Malta, NY. Ross served as an electrical operator on board two nuclear powered vessels and completed his education in Nuclear Engineering Technologies. After leaving the Navy, Ross joined KLA-Tencor as a field service engineer supporting leading edge inspection and metrology equipment. Over the past 15 years, Ross has held various engineering, operations and leadership roles within KLA-Tencor and he is currently serving as the Operations Director supporting GLOBALFOUNDRIES and IBM Microelectronics.

Lynn DeRose has worked at General Electric's Global Research Center for 27 years and is a member of the Robotics and Machine to Machine Lab. She is currently working on developing technologies to enable the Industrial Internet of Things and Inspection as a Service. Her work is helping machines to become self and environmentally aware to enable GE's Brilliant Factories. She is currently working on the development of a robotics system for inspection of Oil and Gas refineries. She is the project leader for RFID implementation at various GE businesses. Her formal education is in Chemistry, but she has been working in the field of asset tracking, locating and condition monitoring for the past 15 years. Lynn has been the guest speaker at multiple international conferences, published several papers and filed more than 25 U.S. Patents. Lynn has been a volunteer for the FIRST Technology Challenge and the FIRST Robotics Challenge in the Greater Albany, New York area for the past 4 years.

Isabelle Ferain is Senior Manager, Deputy Director of Metal Thin Films Deposition (PVD) at GLOBALFOUNDRIES. In her role, she oversees process development & control for high volume manufacturing. Prior to joining GLOBALFOUNDRIES located in Malta in 2012, she led a career in semiconductor R&D for 10+ years and was the leader on several EU-sponsored projects. She has published 100+ scientific contributions in the field of semiconductor devices engineering, to international peer-reviewed journals and conferences, and has co-authored 6 books dedicated to FinFET engineering and Wafer Bonding. She holds a Master of Science in Electrical Engineering and in Civil Engineering Summa Cum Laude, and a Ph.D. in Electrical Engineering (Katholieke Universiteit Leuven, Belgium).

Bill Fosnight, P.E. is Co-Founder and Chief Development Officer at Alert Innovation, a Boston-based robotics start-up with a mission to improve people's lives through innovation. He was previously Senior Director of Manufacturing Technology at GLOBALFOUNDRIES where he was responsible for the design and deployment of manufacturing automation and software systems worldwide. Prior to joining GLOBALFOUNDRIES, Bill was Senior Vice President of Engineering at Brooks Automation. In this position, he led the development and commercialization of factory automation and semiconductor process equipment. Prior to Brooks, Bill worked with Asyst Technologies where he managed product development and IBM where he conducted semiconductor manufacturing research. Bill has been awarded 52 patents in manufacturing automation over the course of his 28 year career. He holds a Master of Science in Mechanical Engineering from Rensselaer Polytechnic Institute and an MBA from Cornell University.

Wayne Gannett recently retired as the Principal Hydraulic Engineer with the New York State Department of Transportation (NYSDOT). He supervised the Hydraulic Engineering Unit in the Structures Division since 2005, where he was responsible for stream hydraulic and scour analysis for new and rehabilitated bridges, as well as special projects in stream stability and highway protection, and climate change adaptation for NYSDOT. Wayne is currently performing hydraulic engineering with the Albany office of Bergmann Associates, PC. He is a member of the Transportation Research Board (TRB) Committee AFB60 on Hydraulics and Hydrology, and the American Society of Civil Engineers (ASCE). Mr. Gannett holds a Bachelor of Science in Civil Engineering from the University of Massachusetts and an MBA from Rensselaer Polytechnic Institute.



Jeffrey Goldmeer has worked at GE for more than 15 years. Currently he is the Director of Gas Turbine Combustion & Fuel Solutions at GE Power. Jeffrey has more than 18 years of experience in developing technologies related to fuels and combustion systems. He currently holds 11 patents on a range of combustion, propulsion and measurement technologies. In his current role, Jeffrey is responsible for the strategic development of gas turbine technologies supporting the use of alternative power generation fuels around the globe. Prior to this role, he was the manager of the Combustion Laboratory at GE's Global Research in Niskayuna, NY. Jeffrey received his Ph.D. in Mechanical Engineering from Case Western Reserve University; as part of his dissertation, he performed combustion experiments on board NASA's low-gravity research aircraft (aka the Vomit Comet). He received a Bachelor of Science and Master of Science degrees in Mechanical Engineering from Worcester Polytechnic Institute.

David Gross is a Manufacturing and IT Systems Executive providing and delivering automated manufacturing solutions for customers. David is currently President of Automated Manufacturing Solutions, LLC leveraging his broad experience designing emerging manufacturing and automation system technology. He previously was Director of Manufacturing Technology at GLOBALFOUNDRIES where led an international effort to deliver advanced manufacturing solutions capability worldwide. In a career spanning 30+ years in semiconductor manufacturing, he led numerous start up teams in the US, Europe and Asia. His expertise is engineering management, including leadership of business integration through mergers/acquisitions, automation of manufacturing systems, and equipment controls for manufacturing. Prior to his role at GLOBALFOUNDRIES, David held various engineering and management positions at Advanced Micro Devices (AMD). In addition, David has been active with the following professional affiliations: Industry Board of Advisors, Rensselaer Polytechnic Institute (RPI) Center for Automation Technology and Systems, 2010-2016; Industry Chair, IEEE Robotics and Automation Society, 2009-2013; Steering Committee, Advanced Semiconductor Manufacturing Committee IEEE, 2000 – present. FIRST Robotics Volunteer, and Competition Judge 2015-2016.

Pradeep Haldar holds many positions at SUNY Polytechnic Institute's Colleges of Nanoscale Science and Engineering (CNSE) located in Albany, New York and is currently the Vice President of Entrepreneurship Innovation and Clean Energy Programs; Interim Dean of Nanoscale Engineering and Technology Innovation; Professor and Director of the CNSE Energy and Environmental Technology Applications Center (E2TAC); Executive Director of New Energy New York (NENY); and Chief Operating and Technology Officer of the U.S. Photovoltaic Manufacturing Consortium (PVMC). He holds a Ph.D., in Materials Science and Engineering and Solid State Chemistry from Northeastern University, A B. Tech Metallurgical Engineering from the Institute of Technology, BHU, Varanasi, India and an Executive MBA at Rensselaer Polytechnic Institute. Pradeep has done extensive research to support energy and environmental technology deployment through accelerated commercialization by leveraging partnerships between industry, government and university. In addition, he has received numerous awards for his outstanding work.

Darin Hart is currently the operations manager for Turner Construction Company for Eastern New York. Darin has over 28 years of construction experience mainly focused on very large and complex projects. Darin has worked in over 30 countries on projects ranging from laboratories to very complex Semiconductor clean rooms. Darin's primary responsibility is the operations at Turner Construction which encompasses the day to day execution of construction projects as well as staffing in the capital region. Turner Construction is ranked #1 by ENR in the U.S. for the following categories: General Building, Commercial Offices, Hotels-Motels and Convention Centers, Health Care, Education, Entertainment-Casinos, Pharmaceuticals and Data Center. Turner is responsible for over \$10B of construction annually.

Yesenia Herarte is the Lead Supplier Quality Engineer at GE Power. A native of the Dominican Republic, Yesenia graduated with a Bachelor of Science in Mechanical Engineering and a Masters in Mechanical Engineering from City College, CUNY. She is a former Internal Vice President of the Latin American Engineering Students Association-Society of Hispanic Professional Engineers at City College, and currently an active member of General Electric Hispanic Forum (GEHF). A strong advocate for the advancement of the Hispanic Community, Yesenia has championed numerous FIRST activities and teams in New York City and Capital Region, inspiring hundreds of students into science and technology, particularly in South Bronx, Amsterdam, and Schenectady schools. Yesenia is an accomplished athlete, and a terrific volleyball player.

John Kent spends his career focused upon the design, development and manufacturing of semiconductors. He joined GLOBALFOUNDRIES quite recently, having moved to NY from Palo Alto, California. John has had executive technology roles at GLOBALFOUNDRIES, KLA-Tencor, Rambus and AMI Semiconductor. His early career years were spent at IBM Burlington, Vermont and East Fishkill, New York. John has worked on both logic and memory development over the years and currently heads the worldwide program management office at GLOBALFOUNDRIES. John holds a Bachelor's of Science in Chemical Engineering from Michigan State University.

Julia Merritt is currently a Computer Information System/Computer Science Instructor at Fulton Montgomery Community College (FMCC) and brings six years of teaching and twenty plus years of software experience to the classroom. Prior to FMCC, she was a Staff Software Engineer for Lockheed Martin delivering software for real time I&C (Instrumentation and Control) Simulators for Naval Power Systems Training. She has also held software engineering positions at General Electric, General Dynamics, Orbital Sciences and Motorola. Throughout her career, Julia has always found time and energy to mentor and guide young minds. Her accomplishments include judging high school software competitions at Kansas State College of Engineering, STEM (Science Technology Engineering and Math) competitions through the University Women Association. She also held leadership roles in National Engineers Week Train the Trainer, Toastmasters International, and is a member of IEEE/WIE (Institute of Electrical and Electronic Engineers/Women in Engineering). Julia's education includes FMCC, PPCC (Pikes Peak Community College), Kansas State College and Keller Graduate School where she graduated with a Master of Science in Information Systems with Distinction.

Philip Mueller is the Site Director of the Knolls Atomic Power Laboratory and has over 30 years experience in the Naval Nuclear Propulsion Program. He brings 34 years of professional experience to the field. Previously, he was the Test Operations Manager and the Prototype Operations Manager at the Knolls Atomic Power Laboratory. He was the Plant Manager for Lockheed Martin Information Technology for six years. Mr. Mueller has a degree from the US Merchant Marine Academy.



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Ryan Oldaker has been with ASML for more than 10 years, first as a support engineer for photolithography systems and currently as Project Lead. ASML is the world leader in photolithography, arguably the most expensive and complex step in creating semiconductors. Several years ago Ryan moved to Project Management, preparing and leading installations, performing upgrades, complex repairs and system relocations. His latest project is to prepare GLOBALFOUNDRIES for installation of ASML's latest and most complex system of extreme ultraviolet light, the NXE 3400. Ryan has a Bachelor of Science in Electronic Engineering from DeVry University.

John Prybylowski is Technology Director for the Naval Nuclear Laboratory operated by Bechtel Marine Propulsion Corporation. He has been at Knolls Atomic Power Lab in Niskayuna, NY since 1987. In his current role, he is responsible for developing reactor design technology, core and structural materials, and component and chemistry technologies in support of our Nation's Naval Fleet. He previously served as Materials Development Operation Manager, responsible for the support of manufacturing critical materials, managing corrosion science and testing programs and developing advanced materials to enable advanced propulsion systems. John is the executive sponsor for KAPL's Women in Nuclear affinity group and KAPL's Health and Wellness Initiative. He earned Ph.D. and Master of Science degrees in Metallurgy from the Massachusetts Institute of Technology and also a Bachelor of Science in Materials Science and Engineering from MIT.

Emily Reilly is the Director of Human Resources at Global Foundries. She is responsible for human resources management from resource planning and hiring to working with the business leadership team to develop a culture of engagement and high-performing teams. She enjoys collaborating with the community on work force development and education initiatives and sharing the opportunities and challenges of the rapidly evolving semi-conductor industry. Ms. Reilly is a graduate of Cornell University and holds a degree in operations research and industrial engineering.

Tobi Saulnier serves as the Chief Executive Officer of 1st Playables Productions. Ms. Saulnier has been Treasurer of The Museum of Innovation and Science (Alternative Name: The Friends Of The Schenectady Museum) since January 29, 2013. She served as Vice President of Product Development at Vicarious Visions, Inc. She served in R&D in embedded and distributed systems at GE R&D. She has been Director at The Daily Gazette Co since February 2016. Ms. Saulnier holds Ph.D., M.S., and B.S. in Electrical Engineering from Rensselaer Polytechnic Institute.

Andrea Schmitz has 28 years of R&D experience, with 25 of them at General Electric's Global Research Center. She's currently working on advanced sensors and electronics for medical and industrial applications as a Sensor Electronics Engineer. Andrea has worked in a variety of research areas including polymer modeling, X-ray, ultrasonic and infra-red inspection systems for aviation and industrial applications, as well X-ray systems for healthcare. Andrea was the PI and Project Leader on several government sponsored healthcare and detector development programs. Some applications for these technologies include Breast Cancer detection research using Digital Breast Tomosynthesis with the University of Michigan at Ann Arbor, increasing imaging access by developing a portable x-ray system for military or rural hospital use and bringing portable, digital technology to the industrial world through the modification and development of new x-ray detectors for Industrial and security inspection. Andrea earned her Bachelor of Science and Master of Science degrees in Computer Science from Rensselaer Polytechnic Institute. She is a co-inventor on 5 patents and has over 15 publications and several conference presentations to her credit. Andrea has been a volunteer for the FIRST Technology Challenge and FIRST Robotics Challenge judge for the past 2 years. She is active and passionate about being involved with STEM mentoring activities.

William ("Mac") Sudduth is currently the President of the Museum of Innovation and Science located in Schenectady, New York. Sudduth has more than 30 years of science museum leadership experience and has led several museums through significant transformations. He provided a long-range plan, conducted a capital fund drive, and oversaw the construction and opening that transformed the Louisville Museum of History and Science into what is now the Louisville Science Center. He developed the North Carolina Museum of Life and Science from a nature center into a hands-on science center, and led the efforts to transform the Oklahoma City Science and Arts Foundation into what is now the Science Museum of Oklahoma. As president and CEO of the Science Place in Dallas (now the Perot Museum of Nature and Science), he led a successful \$18 million fund drive to build a new wing housing an IMAX theatre. He also served as Director of the Fernbank Science Center in Atlanta, which includes a 500-seat planetarium and an extensive aerospace education program recognized by NASA as one of the best in the country. Sudduth received his B.S. in Chemistry, M.A. and Ph.D. in History of Science from the University of Oklahoma. In addition to serving as a grant reviewer for the National Endowment for the Humanities, the Institute of Museum and Library Services, the National Science Foundation and NASA, Mac has served as an adjunct professor at the University of Oklahoma and Duke University and President of the Association of Science and Technology Centers. At miSci, Mac has overseen a revitalization program including renovations, exhibits and programs that has recorded record attendance and membership for the past two years and earned grants from NASA, the Institute of Museum and Library Services, and the Sloan Foundation.

Esther Vargas joined Rensselaer Polytechnic Institute in 2014 as the Director of the Emerging Ventures Ecosystem (EVE), the Institute's venture development program. She was previously Assistant Director of Research and Commercialization and Incubator Site Manager at the University of Central Florida since 2007. Prior to becoming a business incubation professional, Esther spent 12 years in the corporate pharmaceutical and hospitality industries, and 12 years in the entrepreneurial domain as a founder and/or co-founder of four startup ventures in the for-profit and not-for-profit sectors. Her areas of expertise include strategy, commercialization, business and resource development, systems and processes, and project management. Esther holds an MBA in New Venture Development and Marketing from the Kelley School of Business at Indiana University-Bloomington, and a BBA in Managerial Economics from the Interamerican University of Puerto Rico.