#AIIC17

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Tour Host

Georgia Tech Institute for Electronics and Nanotechnology (IEN) provides fully integrated inorganic and organic/biological cleanrooms, supporting labs, equipment, technical expertise, office, and meeting space that enable users to carry out pioneering research in nanoengineering and nanoscience. The micro/nano-fabrication facility enables users to conduct research and development in many areas of nanoscale science and engineering. Fabrication and processing capabilities include lithography, wet processing, plasma etching, diffusion processes, chemical vapor deposition processes, nanostructure growth and synthesis, and characterization, testing, and metrology. In addition, IEN contains a unique design of adjacent physical and biological cleanrooms which enables a fusion of the top-down (physical) directed assembly approach and the bottom-up (biological) self -assembly approach to nanotechnology. The fabrication facilities are complemented by a comprehensive materials characterization facility. These hands-on, fee-based laboratories are available to Georgia Tech faculty and students, and non-Georgia Tech users from academic, industry, and government, offering a unique and complete laboratory and teaming environment. *A one-hour (approximate) guided tour will provide participants an opportunity to explore the toolset employed in electronics and nanotechnology research and enhance their understanding of applications of nanotechnology in the real world.*

2017 Speaker Biographies

Neil Gomes, BSc, MBA/MMS, MEd, CSM, CSPO, is the Chief Digital Officer and Senior Vice President for Technology Innovation and Consumer Experience at Thomas Jefferson University and Jefferson Health System. Gomes worked for the Fortune 500 Tata Group of Companies where he played a leadership role in building the intrapreneurial startup, Tata Interactive Systems, from 60 employees to the world's largest custom e-learning development firm with 650+ employees in less than two years. Gomes left the Tata Group to complete his MEd in Instructional Design at the University of South Florida (USF) whilst progressively working towards the position of Director of eTeaching and Technology and then the Director of Instructional Design and Training at USF Health. While at USF, Gomes' leadership and entrepreneurial acumen helped grow a strategic team of application developers, instructional and multimedia designers, and project managers that generated over $1.5 million in annual auxiliary revenue from research and external development projects while growing online student enrollment from approximately 200 enrollments in 2002 to 60,000+ enrollments a semester by 2012. While at USF, Gomes also began working toward his PhD, is currently a PhD candidate (ABD), has authored research articles, a book chapter, and delivered several formal research presentations.

At Jefferson, Gomes drives digital innovation in healthcare, consumer experience and engagement, training, and education via teams of application and Web/mobile developers, portal solutions developers, simulation and UI/UX designers, trainers, documentation and digital consumer experience specialists, instructional designers, e-learning developers, and IT support specialists. Gomes also helps define innovation strategy and design innovation development programs via Jefferson's Innovation Team. Recently, he helped secure a $15+ million donor grant from the Bernie Marcus Foundation to develop a high-tech, consumer-centric, integrative health center at Jefferson and also launched a pioneering collaboration with the IBM Watson IoT team on developing "cognitive concierges" for hospitals. Gomes serves as Associate Editor of the Journal for Healthcare Transformation and is a contributor toward the book: We CAN fix Healthcare, the Future is NOW. Gomes is also a speaker, agile aficionado, and digital innovation evangelist.

Gari Clifford, PhD, is Interim Chair and Associate Professor in the Department of Biomedical Informatics at Emory University, Associate Professor of Biomedical Engineering at Georgia Institute of Technology-Emory University, and Adjunct Faculty at Morehouse School of Medicine. Clifford is an Honorary Professor and Founder of the Sleep & Circadian Neuroscience Institute at the University of Oxford, Distinguished Guest Professor of Tsinghua University in Beijing, China, and Deputy Editor of the Institute of Physics and Engineering's Journal Physiological Measurement.

Clifford is trained as a PhD in Neural Networks and Biomedical Engineering from the University of Oxford, United Kingdom. He has an international reputation in mHealth informatics, critical care data analysis and the application of signal processing, and machine learning to medicine. Clifford received postdoctoral research training from the Massachusetts Institute of Technology when he later became a Principal Research Scientist, managing the development of the world's largest open access critical care database (MIMIC II). From 2009 to 2014, he served as Associate Professor and Fellow of Kellogg College at the University of Oxford in the Department of Engineering Science, including leading the Intelligent Patient Monitoring Group, the Director of the Centre for Doctoral Training in Healthcare Innovation at the Institute of Biomedical Engineering (IBME), and the Founding Director of the Centre for Affordable Healthcare Technology at Kellogg College. Since moving to Atlanta in 2014, he has established Emory's Department of Biomedical Informatics as a leading center for mHealth informatics, underpinning the mobile data analytics for several research projects including the Emory Healthy Aging Study. Research interests include scalable and affordable healthcare and finding ways to use state-of-the-art signal processing, machine learning, and physiological modeling to reduce costs, increase accuracy, and improve access in healthcare using enormous data streams through data fusion, prediction, and developing confidence intervals and trust metrics.

Leanne West, MS, is the Chief Engineer for Pediatric Technologies for Georgia Tech, a Principal Research Scientist for the Georgia Tech Research Institute (GTRI), and the Chief Innovation Officer for the Children's Healthcare of Atlanta Pediatric Technology Center. As Chief Engineer, she coordinates all research activities related to pediatrics across campus. She helps manage the formal relationship with Children's Healthcare of Atlanta and is Director of the Quick Wins funding program. Her research background focuses on mobile and wireless health system and sensor development, user interfaces, system integration, and diagnostic devices.

West serves on the executive management team of the Parker H. Petit Institute for Bioengineering & Bioscience and is a member of the Institute for People and Technology Health Council, with the goal of creating large-scale, interdisciplinary collaborations across campus in the area of healthcare.

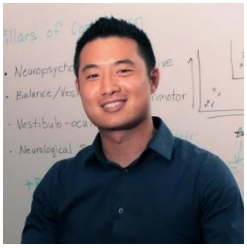
She is author of a book chapter in Technology for Aging, Disability and Independence: Computer and Engineering for Design and Applications (John Wiley & Sons) and has written a number of papers and given several presentations on wireless technology device development and remote sensing systems. West has seen her invention of a wireless personal captioning system installed at commercial venues through her start-up Intelligent Access, LLC. She was a GTRI Innovative Research Award team member in 2014 and received the following awards: Georgia Tech's Outstanding Achievement in Research

Enterprise Enhancement Award in 2014, the Woman of the Year by Women in Technology in 2014, and the Optical Society's 2012 Paul Forman Engineering Excellence Award as a Lidar Team member.

West also was named one of Georgia's "40 Under 40" by Georgia Trend magazine in 2004. In addition, she participated in the 2008 class of Leadership Georgia. She is an active participant at her organization and was twice elected Chair of the Georgia Tech Executive Board, the faculty governance body of Georgia Tech.

Samantha Hodgkins is Founder and Chief FireStarter of SparkFire Active, a new line of performance activewear clothing designed exclusively for teen girls in just-right styles, colors, and custom-sizing to fit and flatter their developing bodies and to support life in motion. SparkFire is a for-profit, for-good social enterprise business to support girls' education globally, with a donation from every purchase going directly to empower and elevate girls around the world. For every SparkFire Active shirt sold, they donate to Girls' Education partners, believing that Strong Girls=Strong World! This means every 500 shirts sold equals a full year of education for a first-generation girl scholar. Each small action — a tiny spark — can make a BIG impact, igniting opportunity, growth and empowerment for girls everywhere.

Hodgkins leads all entrepreneurial aspects of the start-up, including brand positioning, product development, consumer marketing, digital engagement, and partnership development. She is a seasoned senior marketing executive in the consumer products industry, leading both Fortune 500 brands and high-growth entrepreneurial B2C start-ups. She has a passion for elevating and empowering girls, a love of adventure and exploration, and a deep expertise in consumer branding and engagement. Beyond all else, SparkFire is passionate about and deeply committed to helping girls grow strong, confident, and bold in knowing her strength, owning her power, and using her voice to help elevate today's girls to become tomorrow's leaders.



Brian Liu works as an electronics, software, and systems engineer performing design, development, production, and testing on a number of platforms and projects – from aircraft flight-line maintenance test suites, to embedded radar warning receiver applications, and in recent years with a focus on work in the wearable sensor systems arena. He joined the Georgia Tech Research Institute (GTRI) in 2008, where he manages and leads a team of researchers as the Head of the Advanced Human Integration Branch – a multi-disciplinary engineering team focused on sensor integration and analysis for the purpose of enhancing and evaluating human health and performance. Some of Liu's most recent work includes a lead engineering role on the Integrated Blast Effects Sensor Suite Project, where an integrated soldier/vehicle sensing suite (1,000 soldier systems and 50 armored vehicle kits) was designed, developed, produced, and deployed to Operation Enduring Freedom in Afghanistan in under a year. Success on this project led to follow-on wearable sensor system work in the Integrated Soldier Sensor System Program under PEO Soldier, where his team integrated wearable physiological/environmental monitoring capabilities into a fully custom developed ecosystem. Liu is also the Lead Systems Engineer on the iDETECT Project, a R&D collaboration with Emory University focused on the development of a novel multi-modal tool for concussion assessment that can be deployed on the sidelines of military/athletic environments. Although the projects Liu and his team tackle may have varied aims/objectives, a consistent theme is the design, development, and

deployment of robust human-centric systems into complex operational environments.

Felipe Lobelo, **MD, PhD, FAHA**, is an Associate Professor in the Hubert Department of Global Health at Emory's Rollins School of Public Health. His interests are in chronic disease prevention, physical activity, obesity, and cardio-metabolic diseases in high and low-to-middle income countries. He has authored more than 80 peer-reviewed scientific publications and is a member of ACSM's Exercise is Medicine Initiative advisory board, Directing their Global Research and Collaboration Center. Lobelo has a special interest in global health and health disparities in both non-communicable and infectious diseases and the application of mobile health interventions.