**IEEE Standards Association Workshop**
**Standards for Digital Data in Ehealth**
**9 AM-12 PM, 11 September**
**Georgia Tech Research Institute**
*Supported by the IEEE-SA Corporate Advisory Group*

9-9:20      ***Introduction to IEEE Standards Association***
*Robby Simpson, Chair, IEEE-SA Corporate Advisory Group; System Architect, GE Grid Solutions*

9:20-9:50      ***IEEE P2673, Standard for Patient Digital Biomedical Data Files with 3D Topological Mapping of Macroanatomy and Microanatomy for Use in Big Data and Augmented Intelligence Systems***
*Immanuel Freedman, IEEE P2673 Working Group Vice-Chair; Owner, Freedman Patent*

9:50-10:20      ***IEEE P2791, Standard for Bioinformatics Computations and Analyses Generated by High-Throughput Sequencing (HTS) to Facilitate Communication***
*Jonathon Keeney, IEEE P2791 Working Group Chair; Senior Program Manager, R&D at The George Washington University*

10:20-10:45      ***Break***

10:45-11:15      ***IEEE P2510, Standard for Establishing Quality of Data Sensor Parameters in the Internet of Things Environment***
*Gerard James Hayes, member, IEEE 2510 Working Group; President & CEO, Wireless Research Center of North Carolina*

11:15-11:45      ***IEEE P7002, Data Privacy Process***
*Matthew Silveira, IEEE P7002 Working Group Chair; President and Owner, Objective Business Solutions*

11:45-12      ***QA and Wrap-up***

**Immanuel Freedman**

Immanuel Freedman earned a Ph. D. in Physics from the University of Durham, England. An independent consultant focused on imaging, modeling, and simulation, he leverages the knowledge he gained in image processing, scanning and digital cartography in the remote sensing industry and in real-time digital video compression in the interactive television industry into translational pharmacometric modeling and quantitative systems pharmacology in the pharmaceutical industry.

He is qualified as Senior Member of The Institute of Electrical and Electronic Engineers, Chartered Physicist and Registered Patent Agent. He has chaired the American Association of Pharmaceutical Scientists Pharmaco-Imaging Focus Group and currently chairs the Philadelphia Section of the Institute of Electrical and Electronic Engineers Communications and Information Theory Societies.

**Gerard Hayes**

Dr. Hayes has nearly three decades of experience in government and commercial electromagnetic research and design. Prior to working with the Town of Wake Forest to establish the WRCNC in 2010, Dr. Hayes was the Director of Engineering at GreenWave Scientific where he led the development of antenna and RF circuit designs for a diverse range of DoD applications. At Sony Ericsson Mobile Communications (USA) Inc., Dr.Hayes provided global technical leadership in the Technology and Research organization with contributions to handset antenna design, technology, and radiated performance optimization. At Lockheed Martin (formerly Lockheed Missiles and Space Co.), Dr. Hayes supported research and development efforts for space-based, phased array applications. The scope of his experience encompasses electromagnetic theory, bioelectromagnetics, antenna design, RF circuit analysis, and material engineering. He has participated in the development of international standards for OTA, HAC, and SAR evaluation (including IEEE, IEC, CTIA, and C63 standards). With over 70 US patents, Dr. Hayes has maintained a prominent technical role in the wireless industry.

**Jonathon Keeney**

Jonathon Keeney is the Senior Program Manager for R&D at The George Washington University (GWU), in the School of Medicine and Health Sciences. Dr. Keeney's Ph.D. in neuroscience was earned under Jim Sikela at the University of Colorado, Anschutz Medical Campus. His work was cross disciplinary with genomics and investigated the copy number genomics of primate brain development and evolutionary expansion. After graduate school, Dr. Keeney served as a Subject Matter Expert for a patent law firm, and Director of Complex Visualization for a medical device company that develops spinal implants.

BioCompute is a mechanism developed at GWU that is designed to standardize communication of high throughput sequencing (HTS) workflow data in genomics, and which encompasses the entire workflow from sequence reads to result. Inefficiencies in the communication of HTS workflow data between the private sector and the FDA currently cost millions of dollars and add months to the regulatory process, and the rapid expansion of personalized medicine is likely to further exaggerate the need for strong communication. As Senior Program Manager for R&D, Dr. Keeney brings his experience in bridging public and private sectors to build a new public-private partnership that will support and strengthen BioCompute.

**Matthew Silveira**

Mr. Silveira has over 18 years of experience in information security, privacy, and cyber security in healthcare, financial services and State of California agencies such as Franchise Tax and the California Secretary of State. His experience spans staff management and leadership roles as well as technical leadership in security architecture, enterprise architecture, technical program management, and standards development. His experience spans the entire information security and privacy space, with hands-on experience in presenting to boards and senior leadership, policy development, governance, and compliance and risk management. He also has experience in secure network engineering and secure application development from legacy systems to cloud computing in a variety of verticals including healthcare, banking, telecommunications, wireless, state government, federal government, and technology startups. He has worked for companies such as EMC, Cisco Systems and Hewlett-Packard, supporting large-scale enterprise product implementations that include Enterprise Virtualization technologies, Unified Communication integration, legacy software conversion, and database conversion. He has also worked in the role of senior security consultant and senior security architect for VSP, Sutter Health, Health Net, and CalPERS. He has formal training in management, network engineering and design, project management, systems security, systems architecture, and program management. He also performs business security assessments to identify particular gaps, aid in budget analysis and

planning, assist senior leadership in developing roadmaps and future security strategies, and aid in addressing audit findings.

His certifications include Certified Information Systems Security Professional (CISSP), Healthcare Information Security and Privacy Practicioner (HCISSP), Information Systems Security Architecture Professional (ISSAP), and Information Systems Security Management Professional (ISSMP), ISACA's CRISC certification and the Project Management Institute's Professional Project Manager (PMP) certification, and the Open Group's TOGAF architect certification. Mr. Silveira is well-versed in security practices and standards based on the National Institute of Standards and Technology (NIST) Security Assessment Framework, International Standards Organization (ISO), and HIPAA Hi-Tech security regulations. Presently he is the chairman of the IEEE standards committee for the IEEE's Privacy Standards (P7002).

### Robby Simpson

Robby Simpson, PhD, is a System Architect for GE Grid Solutions, where he guides the architectures for GE smart grid systems. Accordingly, Robby divides his time between designing and evaluating GE Grid Solutions' architectures with particular attention to scalability, security, and interoperability and standards bodies' activities.

Robby has been engaged in the smart grid industry for a number of years, particularly in the areas of distributed energy resources, AMI, metering, demand response, and home area networking, and has been heavily involved in accelerating standards for smart grid interoperability. Robby is active in IEEE (he is a member of the IEEE-SA BOG, Chair of the IEEE-SA CAG, and Vice Chair of IEEE 2030.5), ANSI, IEC, IETF, SEPA (he is Vice Chair of OpenFMB), and the ZigBee Alliance. Through these efforts, he not only helps to accelerate standards development, but also ensures the adoption of those standards within GE and the market as a whole.

Robby received his B.S. in Computer Engineering from Clemson University and his M.S.E.C.E. and Ph.D. (Electrical and Computer Engineering) degrees from the Georgia Institute of Technology (Georgia Tech), where he focused on Internet measurements, large-scale simulation, network protocols, and information security. Prior to focusing on smart grid, Robby worked on satellite communications at MIT's Lincoln Labs.

Robby has published several refereed conference and journal papers on topics ranging from network measurements, network security, and network simulation to superconductor behavior. Robby has also received numerous awards for his academic and industry efforts and is an Eagle Scout (and still believes it to be worth mentioning all these years later).

In his spare time, Robby enjoys horseback riding, playing table tennis, traveling, and spending time with his family.