



Dr. Thomas J. Klemas
Principal Engineer, SimSpace Corporation

Dr. Thomas Klemas studied in Cambridge, Massachusetts at the Massachusetts Institute of Technology (MIT), receiving a Bachelors of Science (SB) in Mathematics and Electrical Engineering and a Masters in Engineering (MEng) and Doctorate (PhD), both in Electrical Engineering. Klemas conducted his doctoral research at the Computational Prototyping Group of the Research Laboratory for Electronics, developing acceleration algorithms and model order reduction approaches for computational electromagnetic modeling of complex structures.

After completing his doctorate, Klemas joined the MIT Lincoln Laboratory, where his research interests included applied mathematics, numerical methods, computational modeling and simulation, physics, engineering, and sensor control and signal processing. In addition, Klemas led a large multi-division team to develop a real-time open system architecture (ROSA) to enable rapid prototyping of new capabilities and realization of scalable, distributable, flexible, pluggable, reusable, net-centric sensor systems. Subsequently, Klemas led teams to build numerous specific ROSA-based sensor systems.

In 2012, Klemas was appointed a Visiting Scientist by the MIT Research Laboratory for Electronics (RLE). He led a research collaboration to explore new techniques for high fidelity computational modeling and simulation of Electromagnetics including scaling these approaches for high performance computing (HPC) supercomputers. In 2011 and again in 2012, Klemas won the Campus Collaboration Awards for proposals related to his Computational Modeling Collaboration, and funded MIT graduate scientists to explore related topics.

During this period, Klemas was also a technical advisor for a large Sensors research laboratory, served as the interim technical director of the Maui High Performance Computing Center (MHPCC), conducted technology assessment for the Assistant Secretary of Defense for Research and Engineering (ASD R&E) at the Berlin Electromagnetic Theory symposium, and researched numerical methods as part of the High Performance Computer Modernization Program Office (HPCMO) CREATE RF development team.

In September 2015, Klemas joined SimSpace Corporation, in Boston MA, as a Principal Engineer and is developing scalable approaches to automate cyber security assessment of organizations, defense and attack teams on cyber ranges, and of individuals, as well as developing network complexity measures. Klemas also advises the Director of the Office of Scientific Research of a major research organization, leading a team that augments the expertise of Program Officers of more than 10 basic research programs, the international office, and the plans and budgets office.

Klemas initially attended the 2014 IARIA Data Analytics conference on behalf of the office of the ASD R&E and returned in 2015 to present his research as a Senior Fellow of

the Sensemaking-PACOM Fellowship & AIRS, Swansea University/Hawaii Pacific University, UK/US. Klemas applied community detection algorithms to Ivory Coast cell phone tower records and a technology roadmap for resilience and sustainability of Hawaii, including tsunami early warning systems, enhanced cyber security, improved connectivity, and related topics, winning Best Paper recognition several times. Klemas served on the technical committee for 2015 and 2016 conferences, led multiple sessions as the chairman, reviewed papers for inclusion in the proceedings, was an invited speaker for 2 panels related to application of data analytics to address global health challenges and on application of Big Data technology to drive decision support engines for Smart Cities and overall Sustainment and Resilience, and led a panel on the value of Big Data for Corporate Performance. Klemas hopes to lead new IARIA outreach efforts and collaborations, develop novel special events, and assist the director in strategic planning to pursue emerging science and technologies.