

AGENDA

Committee on Pathways to Doctoral Degrees in Computing

Meeting 8

May 23, 2023

Virtual

<https://vimeo.com/event/3394978>

MEETING OBJECTIVES

- Discuss recruitment and hiring trends, as well as demand for computer science PhDs in national security research and at national laboratories

Tuesday, May 23, 2023

OPEN SESSION

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| 6:00 pm | National Laboratory Hiring in Scientific Computing and Computer Science
→ Jeff Hittinger, Lawrence Livermore National Laboratory, Director of the Center for Applied Scientific Computing |
| 6:30 pm | Hiring for National Security Research
→ James Hudgens, Senior Vice President of Georgia Institute of Technology, Director of the Georgia Tech Research Institute |
| 7:00 pm | National Laboratory Recruitment of Faculty, Staff, and Students
→ Joan Bienvenue, Oak Ridge National Laboratory, Director of the University of Tennessee Oak Ridge Innovation Institute |

CLOSED SESSION

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| 7:30 pm | Closed Session Begins |
| 8:00 pm | Adjourn Meeting |

SPEAKER BIOGRAPHIES

Jeff Hittinger is the Director of the Center for Applied Scientific Computing (CASC) at Lawrence Livermore National Laboratory (LLNL), the nexus of research in computational mathematics, computer science, and data science in the Computation Directorate. Prior to this, he was the Group Leader for and a Computational Scientist in the Scientific Computing Group in CASC. Jeff works primarily on the application of advanced discretization methods and techniques to plasma physics simulation. He currently leads the Variable Precision Computing Strategic Initiative research project. His research interests include computational plasma physics, computational fluid dynamics, higher-order finite-difference and finite-volume methods, parallel computing, adaptive mesh refinement, error estimation, and variable precision computing. Jeff joined CASC in October 2000 as a postdoctoral researcher. Prior to this, he attended the University of Michigan where he received his Ph.D. in Aerospace Engineering and Scientific Computing (2000), his M.S. in Mathematics (1997), and his M.S.E. in Aerospace Engineering (1994). Jeff received his B.S. in Mechanical Engineering from Lehigh University (1993).

James J. Hudgens has led national security research for over 25 years. As the current director of the Georgia Tech Research Institute (GTRI) and senior vice president of the Georgia Institute of Technology (Georgia Tech), Hudgens leads over 2,900 employees conducting \$833 million in research across a variety of disciplines, including autonomous systems, cybersecurity, electromagnetics, electronic warfare, modeling and simulation, sensors, systems engineering, test and evaluation, and threat systems. GTRI's renowned researchers combine science, engineering, economics, policy and technical expertise to address challenges facing national security, state, and industry. Before joining Georgia Tech, Hudgens directed the \$265 million-per-year Threat Intelligence Center (TIC) at Sandia National Laboratories, where he led the Information Operations and Proliferation Assessments programs for the National Security Program Division. Prior to his promotion to director of TIC, Hudgens served in several leadership positions across the organization, including director the Information Systems Analysis Center (ISAC), senior manager of the Airborne Intelligence, Surveillance, and Reconnaissance Systems department where he won the Department of Energy Secretary's Honor Award for Achievement for leading the Copperhead counter-IED program; deputy director of the Surveillance and Reconnaissance program, manager of Photonic Microsystems Technologies, and principal member of Technical Staff. Hudgens earned a Ph.D. in Ceramic Engineering and a B.S. in Ceramic Engineering from Iowa State University, and has authored numerous publications and presentations.

Joan Bienvenue serves as UT-ORII's executive director and vice provost. Dr. Joan Bienvenue joined the University of Tennessee-Oak Ridge Innovation Institute as its first executive director and vice provost in March 2021. Bienvenue leads UT-ORII's efforts to leverage UT and Oak Ridge National Laboratory's resources to establish a hub for world-class discovery and innovation, interdisciplinary graduate education and talent development. Before joining UT-ORII, Bienvenue spent nearly eight years at the Applied Research Institute at the University of Virginia in Charlottesville. As that agency's first executive director, she worked to grow research, education, and training, with an emphasis on global and national security. Prior to that, she was program manager and chief scientist for the development of Lockheed Martin's rapid DNA analysis platform. Bienvenue also worked as the supervisor of validation and quality control for the Armed Forces DNA Identification Laboratory in Rockville, Md.; and was an ORISE Postdoctoral Research Fellow at the FBI. She holds a Ph.D. in chemistry from the University of

Virginia, a master's in forensic science from the University of New Haven in Connecticut, an MBA from the University of Mary Washington in Virginia and a bachelor's in chemistry from Rivier University in New Hampshire. She was a National Institute of Justice Research Fellow while at UVA, where her work focused on the development of microfluidic systems. This work was summarized in over 15 peer-reviewed papers and book chapters and presented at many conferences; she is an inventor on five US patents. Bienvenue is a American Academy of Forensic Sciences fellow. She was appointed to the National Academies of Sciences, Engineering and Medicine board on Army Research and Development in 2019, where she has co-chaired several NASEM efforts. She is a member of the advisory boards for the Tickle College of Engineering at UT Knoxville and the UT One Health Initiative. She also serves on the East Tennessee Economic Council's board of directors.