BIOGRAPHIES OF FESAC MEMBERS

Troy Carter is a Professor of Physics at the University of California, Los Angeles (UCLA). He is a Co-Principal Investigator of the Basic Plasma Science Facility at UCLA, a user facility for studies of basic plasma physics, and served as chair of the FESAC Long-Range Planning Subcommittee in 2020. His research focuses on fundamental processes in magnetized plasmas and is motivated by current issues in magnetic confinement fusion energy research and in space and astrophysical plasmas. He has addressed topics including magnetic reconnection, turbulence and transport in magnetized plasmas, and the nonlinear physics of Alfvén waves. Along with colleagues at Princeton Plasma Physics Laboratory, he was the recipient of the 2002 American Physical Society (APS) Division of Plasma Physics (DPP) Excellence in Plasma Physics Research Award for his work on the role of turbulence in magnetic reconnection. He has an extensive record of service to the plasma physics research community, including serving on: APS committees (DPP Executive Committee, Program Committee, and Rosenbluth and Dawson Award Selection committees); the U.S. Burning Plasma Organization Council; the 2004 FESAC Workforce Panel; the 2009 DOE Committee of Visitors; Program Advisory Committees for the DIII-D and Alcator C-Mod tokamaks and for the Center for Magnetic Self Organization; the University Fusion Association Executive Committee; and the DOE Edge Coordinating Committee. Additionally, he was selected as an APS DPP Distinguished Lecturer for the 2012-2013 academic year. He received B.S. degrees in Physics and in Nuclear Engineering from North Carolina State University and received a Ph.D. in Astrophysical Sciences from Princeton University. He spent one year as a DOE Fusion Energy Sciences Postdoctoral Fellow (at UCLA) prior to joining the UCLA faculty in 2002.

Stephanie B. Hansen is a Distinguished Member of the Technical Staff in the Inertial Confinement Fusion target design group at Sandia National Laboratories, where she studies the atomic-scale behavior of atoms in extreme environments and develops atomic, spectroscopic, equation-of-state, and transport models to help predict and diagnose the behavior of high energy-density plasmas. She is the author and developer of the SCRAM non-equilibrium spectroscopic modeling code and MUZE, a self-consistent field code used for equation-of-state, scattering, and transport calculations. She received an Early Career Award from the Department of Energy (DOE) Office of Fusion Energy Sciences in 2014, was awarded the Presidential Early Career Award for Scientists and Engineers in 2016, and was elected a Fellow of the American Physical Society's Division of Plasma Physics (APS-DPP) in 2019. She serves on the Editorial Boards of Physical Review Research and Physics of Plasmas and chaired the APS-DPP Women in Plasma Physics Committee from 2018 to 2020. She holds BS and BA degrees in Physics and Philosophy, respectively, and a PhD in Physics from the University of Nevada, Reno and has been a Visiting Associate Professor at Cornell University since 2012.

Paul W. Humrickhouse is a Distinguished Scientist at Idaho National Laboratory (INL), where he leads the Fusion Safety Program in the Nuclear Science and Technology Directorate. He received his PhD in Nuclear Engineering and Engineering Physics from the University of Wisconsin, where he specialized in the analysis of activated dust transport following a MS focused on neutronics. He joined the INL staff and the Fusion Safety Program in 2009. Since that time, his research has focused primarily on the development and application of the MELCOR and TMAP codes for safety analysis and tritium transport, the application of these in

design studies including ARIES and FNSF as well as to ITER and its Test Blanket Modules, and occasionally on the design, execution, or analysis of tritium or aerosol transport experiments that inform these. He has also frequently engaged in synergistic analyses of tritium and radionuclide transport in fission reactors, including high-temperature gas-cooled and molten salt reactors. Dr. Humrickhouse is a member of the American Nuclear Society (ANS) and Institute of Electrical and Electronics Engineers (IEEE), and has served in the ANS Fusion Energy Division as both an executive committee member (2010-2013) and secretary (2014-2016), on the IEEE Fusion Technology Standing Committee (2015-2020), and on the International Standing Committee for the International Symposium on Fusion Nuclear Technology (2017-present). He was a participant in FES strategic planning efforts in 2019-2020, first as a member of the program committee for the APS Division of Plasma Physics (APS-DPP) Community Planning Process (CPP), and subsequently as a member of the FESAC Long Range Planning Subcommittee. He received a 2020 DOE FES Early Career Award, which supports his ongoing research and development of multiphysics modeling tools for application to fusion reactor blankets.

Ralph Izzo was elected chairman and chief executive officer of Public Service Enterprise Group Inc. (PSEG) in April 2007. He was named the company's president and chief operating officer and a member of the board of directors of PSEG in October 2006. Previously, Mr. Izzo was president and chief operating officer of Public Service Electric and Gas Company (PSE&G). Since joining PSE&G in 1992, Mr. Izzo was elected to several executive positions within PSEG's family of companies. He is a well-known leader within the utility industry, as well as the public policy arena. He is frequently asked to testify before Congress and speak to organizations on matters pertaining to national energy policy. Mr. Izzo's career began as a research scientist at the Princeton Plasma Physics Laboratory, performing numerical simulations of fusion energy experiments. He has published or presented more than 35 papers on magnetohydrodynamic modeling. Mr. Izzo received a BS and MS in mechanical engineering and a PhD in applied physics from Columbia University. He also received an MBA, with a concentration in finance, from the Rutgers Graduate School of Management. He is listed in numerous editions of Who's Who and has been the recipient of national fellowships and awards. Mr. Izzo has received honorary degrees from the New Jersey Institute of Technology (Doctor of Science), Thomas Edison State University (Doctor of Humane Letters), Bloomfield College (Doctor of Humane Letters), Rutgers University (Doctor of Humane Letters), and Raritan Valley Community College (Associate of Science). Mr. Izzo is on the board of directors for the New Jersey Chamber of Commerce, the Edison Electric Institute, the Nuclear Energy Institute, and the New Jersey Performing Arts Center. He also is on the advisory board for the University of Pennsylvania's School of Engineering and Applied Sciences Mechanical Engineering and Applied Mechanics Department, a member of the Board of Trustees of the Peddie School and Princeton University's Andlinger Center for Energy and the Environment Advisory Council, as well as a member of the Visiting Committee for the Department of Nuclear Engineering at MIT. Mr. Izzo is a former member of the Columbia University School of Engineering Board of Visitors. In addition, he is a former chair of the Rutgers University Board of Governors and the New Jersey Chamber of Commerce.

Charles E. Kessel, Jr is a Distinguished R&D Staff Member at Oak Ridge National Laboratory, leading the Fusion Energy Systems Studies and the Fusion Blanket and Fuel Cycle Programs. He serves as the director of the Virtual Laboratory for Technology. He was formerly a Principal Engineer at the Princeton Plasma Physics Laboratory from 1987 to 2018. He received his PhD in Fusion Engineering and Applied Plasma Physics from UCLA. Dr. Kessel has worked in integrated simulation of tokamak plasmas, heating and current drive, ideal MHD, plasma equilibrium, and plasma control. He has also worked in systems studies, including tritium analysis, neutronics, plasma scenario design, PF coil design, and plasma engineering. Dr. Kessel has worked in a wide range of magnetic fusion energy programs, including design studies for ITER, KSTAR, FIRE, ITER-EDA, TPX, SST, and CIT/BPX; experimental activities on Alcator C-Mod, NSTX, DIII-D, ASDEX-U, and PBX-M; and long-term design studies, such as ARIES, Korean-DEMO, CFETR, ARIES-ACT, and FNSF. He has had leadership roles in a wide range of program activities, including a PPPL/C-Mod collaboration, Whole Device Modeling and PFC/PMI sub-panels in Fusion Program Planning, and the ITER Design Review for the PF Coils. He has received a number of awards, including the David J. Rose Excellence in Engineering award, a PPPL Distinguished Engineering Fellow designation, the PPPL Kaul Foundation Prize, and the IEEE Fusion Technology award. His research interests include fusion nuclear science and technology, systems engineering, plasma/material and plasma engineering interface issues, integrated plasma simulations and scenario development, and advanced tokamak configurations.

Stephen Knowlton is Professor Emeritus from Auburn University in Auburn, Alabama. He received his Ph.D. in experimental plasma physics from the Massachusetts Institute of Technology (MIT), and joined the Sponsored Research Staff at MIT's Plasma Fusion Center where he worked primarily on radio-frequency heating and current drive experiments on the Alcator C tokamak. While employed by MIT, he was an academic visitor to the Joint European Torus (JET) Joint Undertaking in the United Kingdom for 2 years (1986-1988). In 1989, he joined the Physics Department faculty at Auburn University, ultimately reaching the position of Full Professor. At Auburn, he led the laboratory of experimental fusion energy research, hosting researchers from Ukraine and Japan, and also conducted research in Nagoya, Japan as an invited visitor to the National Institute of Fusion Sciences (1999). While at Auburn, he was active in the University Fusion Association, becoming its treasurer, vice-president and then president, concluding his terms in 2008. He has served on the Program Advisory Committees of the National Compact Stellarator Experiment (NCSX) and Alcator C-Mod, the Executive Board of the American Physical Society's Division of Plasma Physics, and on two recent FESAC planning panels. His research interests include the stability and confinement of plasmas in stellarator devices for magnetic fusion energy research, radio-frequency heating and current-drive in toroidal plasma devices, and plasma diagnostic techniques. Officially retired from Auburn University, he continues to carry out experimental fusion research centered at the stellarator facility at Auburn. He is also a member of the Board of Directors of the Washington Electric Co-operative utility in Vermont.

Carolyn C. Kuranz is an Associate Professor of Nuclear Engineering and Radiological Sciences at the University of Michigan where she directs the Center for Laboratory Astrophysics. She received her A.B. in Physics from Bryn Mawr College and her PhD in Applied Physics from the University of Michigan, where she specialized in experimental high-energy-density plasmas. Dr. Kuranz was an ex-officio member of the Executive Committee, American Physical Society, Division of Plasma Physics (2014-2017) and served as the Chair of the Subcommittee for High Energy Density Physics for the Division of Plasma Physics Program Committee (2016). She

was the Founding Chair of the Jupiter Laser User Group Committee (2012-2016) and is a member of the Steering Committees for the International Conference on High Energy Density and High Energy Density Laboratory Astrophysics. She also serves on the Executive Committee for the Michigan Institute of Plasma Science and Engineering. She was a Co-Chair and the High Energy Density Lead for the Long-Range Strategic Planning for FES. In 2019, Dr. Kuranz became a Fellow of the American Physical Society and has also been awarded the American Astronomical Society Laboratory Astrophysics Division Early Career Award (2017), the National Ignition Facility and Photon Science Award (2016), and the Ted Kennedy Family Faculty Team Excellence Award (2014). Her current research includes hydrodynamic instabilities, radiation hydrodynamics, and magnetized plasmas in the high-energy-density regime. She performs her research on high-energy lasers and pulsed-power machines around the world and has more than 100 publications.

Tammy Ma is an experimental plasma physicist in Inertial Confinement Fusion (ICF) and High Energy Density Physics at the National Ignition Facility (NIF) at the Lawrence Livermore National Laboratory (LLNL). She graduated from Caltech with a B.S. in Aeronautics, then received her M.S. and Ph.D. from the University of California, San Diego, where she studied Fast Ignition and electron acceleration with high-intensity short-pulse lasers. Tammy subsequently completed a postdoc at LLNL before transitioning to a staff scientist, where she now leads a number of the ignition experiments at the NIF and currently heads the X-Ray Analysis Group for the ICF program. Additionally, she is currently serving as the Chair for the Lab-Wide Laboratory Directed Research and Development (LDRD) Program. Dr. Ma previously served on the High Energy Density Science Association (HEDSA) as a student council member and represented young researchers on both the Omega Laser User Group and National Ignition Facility User Group Executive Committees, and has served on numerous National Science Foundation (NSF) and Office of Science reviews and panels. She is currently a Member-at-Large on the American Physical Society Division of Plasma Physics (APS DPP) Executive Committee. Dr. Ma has authored or co-authored over 140 refereed journal publications and is strongly committed to education and scientific outreach. Dr. Ma was recently awarded the Presidential Early Career Award for Science and Engineering (PECASE), the highest honor bestowed by the United States government on science and engineering professionals in the early stages of their independent research careers, as well as the 2016 Stix Award for Outstanding Early Career Contributions to Plasma Research from the DPP for her work in quantifying hydrodynamic instability mix in ICF implosions and for contributions to experiments demonstration fusion fuel gains exceeding unity. She is also one of 40 early career scientists around the world appointed to a 2-year term as a Young Scientist of the World Economic Forum.

Richard M. Magee is a Lead Scientist at Tri Alpha Energy, heading the Fast Ion and Campaign Planning groups. He did his PhD research studying impulsive ion heating and acceleration from tearing mode reconnection on the Madison Symmetric Torus reversed-field pinch at the University of Wisconsin. He then completed a post doc at West Virginia University where he developed a two-photon absorption laser induced fluorescence (TALIF) diagnostic for measuring neutral densities in the edge of fusion plasmas. He joined Tri Alpha in 2013 as a Research Scientist in the Neutral Beams group. He was promoted to Senior Scientist in 2016 and to Lead Scientist in 2019 where he continues to pursue his research interests in energetic particles and alternative magnetic confinement concepts for fusion energy. In addition to being the author or co-author of over 35 peer reviewed publications, Dr. Magee has served the plasma physics

community in a variety of capacities. He was the Chair of the American Physical Society, Division of Plasma Physics (APS-DPP) Committee on the Concerns of Junior Scientists from 2014 to 2016. He also served on the Program Committee for the APS-DPP annual meeting in 2016. More recently, he was a Program Committee Member for the Fusion Energy Sciences Community Planning Process (CPP) and co-Chair of the Energetic Particles Topical Group in 2019.

Rajesh Maingi is the Division Head of Boundary Physics and Plasma Facing Component (PFC) Research at the Princeton Plasma Physics Laboratory (PPPL), and also holds the appointment of Adjunct Professor of Nuclear Engineering at the University of Tennessee - Knoxville. From 1997-2012, he worked on the research staff at Oak Ridge National Laboratory (ORNL), culminating with the title of Distinguished R&D Staff. From 1992-1997, he worked as a postdoctoral fellowship, under the supervision of ORNL staff. He received his Ph.D. in Nuclear Engineering from North Carolina State University. Dr. Maingi has conducted research on many fusion devices throughout the world, including NSTX, DIII-D, Alcator C-Mod, MAST, ASDEX-Upgrade, and EAST. He is the first author on more than 30 refereed journal articles, and is a contributing author to more than 700 articles. He received the Distinguished Research Fellow award at PPPL in 2014, and he was inducted as a Fellow of the American Physical Society in 2009. His recent committee service includes Chairman of the 2015 FES Workshop on Plasma-Materials Interactions, Chairman of the International Tokamak Physics Activity (ITPA) Pedestal and Edge Physics Topical Group, member of the ITPA Coordinating Committee (2013-present), member of the International Advisory Committee for the H-mode Workshop (2015-present), participation in the APS Distinguished Lecturer in Plasma Physics Program (2013-2015), and as the technical Program Co-chair, TOFE meeting, Anaheim CA, 2014. His present research interests include H-mode pedestal physics, scrape-off layer and divertor physics, and plasma-materials interactions in fusion devices.

Lorin Swint Matthews is a Professor of Physics at Baylor University where she is the Associate Director of the Center for Astrophysics, Space Physics, and Engineering Research. She received her PhD in Physics from Baylor University. She worked for Raytheon Aircraft Integration Systems from 1998 to 2000 as a multi-disciplined engineer in the Flight Sciences Department, where she was the lead vibroacoustics analyst on projects such as NASA's SOFIA (Stratospheric Observatory for Infrared Astronomy) aircraft. In 2000, she joined the faculty at Baylor University. Dr. Matthews received an NSF CAREER Award in 2009 and is a Kavli Fellow. Her service to the American Physical Society's Division of Plasma Physics includes serving on the Executive Committee (2015-2018), as Chair of the Committee on Women in Plasma Physics (2015-2017), and as Chair of the Subcommittee for Low Temperature and Dusty Plasmas (2019). Her areas of research include numerical modeling and experimental investigations of the charging and dynamics of dust in astrophysical and laboratory plasma environments, including processes which influence the early stages of planet formation in protoplanetary disks; the evolution of dusty structures in planetary rings; and dynamics, stability, and phase transitions in self-assembling systems, such as dust crystals and dust strings.

Simona Hunyadi Murph is a Fellow Scientist at Savannah River National Laboratory and the Program Manager Select for SRNL's Laboratory Directed Research and Development program. She holds an Adjunct Professor appointment in the Department of Physics and Astronomy at the University of Georgia. Dr. Murph's R&D efforts have focused on basic and applied research devoted to the production and uses of plasmonic nanomaterials. She has received nearly $10

million in grants leading to pioneering technologies, and has 15 patents/invention disclosures and 98 technical publications, and made nearly 170 invited and contributed presentations. She is the recipient of the LDRD's Most Valuable Project Award, SRNL's Director's Award for Exceptional Scientific and Engineering Achievements, was a U.S. Clean Energy Education and Empowerment Award Finalist in Research, SRNL's Exceptional Leadership Award, and the Principal Investigator of the Year at the National Nuclear Security Administration NA-42 Program. Dr. Murph was named Inspirational Woman in STEM by the DOE and was recognized as one of the Women at the Forefront of their Fields at SRNL and NNSA. She is also the recipient of Augusta University's Distinguished Alumna and Presidential Alumna Awards. She has been an active board member in the American Chemical Society, the Mineral, Metals and Materials Society, the American Association of University Women, the SC Science Academy, and the International Advisory Board – ROCAM. She is the Chair of the TMS, Composite Technical Committee, the Functional Materials Division Council Representative, Past Awards Chair for the Regional ACS, and an International Leadership Board Member of AAUW. She is a Review Editor for Frontiers in Nanotechnology - NanoEnergy Technologies and Materials, and an Advisor and Editor for the Journal of Metals. Dr. Murph received a PhD in Chemistry/Nanotechnology from the University of South Carolina, an Education Specialist (EdS) in Educational Leadership from Augusta University, and an MS in Chemistry and a BS in Chemistry and Physics from Babes-Bolyai University in Cluj, Romania.

Scott E. Parker is a Professor of Physics at the University of Colorado at Boulder (UCB). His expertise is in theoretical and computational plasma physics and magnetic fusion theory. He received a PhD in Engineering Science at the University of California at Berkeley. He received a BS in Nuclear Engineering and a BS in Mathematics at the University of Wisconsin at Madison. Professor Parker's PhD thesis research focused on multiscale particle-simulation methods for bounded plasmas. He is a member of the Tau Beta Pi Engineering Honor Society and was awarded a Regent's Fellowship at UC Berkeley in 1985. In 1990, he was awarded the DOE Fusion Postdoctoral Fellowship, then later promoted to Staff Research Physicist, in the Theoretical Division at the Princeton Plasma Physics Laboratory. While at Princeton, Professor Parker developed the first low-noise, massively-parallel gyrokinetic simulation to show streamer eigenmode structure in turbulence driven by temperature gradients in toroidal geometry. In 1997, he won a DOE Office of Fusion Energy Sciences Junior Faculty award. In 2008, he became a Fellow of the American Physical Society. He won the Oscar Buneman Award for Scientific Visualization of Plasmas in 2015. Professor Parker has published over 80 journal articles. He is currently on the Editorial Board of the MDPI Plasma journal. He has served as Director of the Center of Integrated Plasma Studies at UCB. He is currently the Chair of the Fusion Energy Sciences Edge Coordinating Committee and the Chair of the APS Dawson Award Selection Committee. He serves on the Executive Committee of the Department of Physics, UCB and recently chaired the long-range hiring plan for the entire department, which has over 50 tenured/tenure-track faculty. The focus of his current research is multiscale kinetic simulation methods and extreme-scale computing applied to tokamak-edge turbulence and transport. Additionally, he is working on problems in quantum information science relevant to fusion plasma science, including the impact of quantum computing on nonlinear computational mathematics and direct numerical simulation of ultra-cold ion crystals.

Thomas Sunn Pedersen was born in Roskilde, Denmark and studied applied physics engineering at the Technical University of Denmark (DTU) in Lyngby. He graduated with an M. Sc. degree having completed his Master's thesis at Risø National Laboratory in computational plasma physics and spent a semester at JET in England working on the LIDAR Thomson scattering system. He then went to MIT (Cambridge, MA, USA) and graduated with a PhD in plasma physics. His thesis work focused on soft x-ray measurements and modelling of impurities in the Alcator C-Mod tokamak. After a brief postdoctoral position on the Levitated Dipole Experiment, he started as an assistant professor in the Department of Applied Physics and Applied Mathematics at Columbia University in New York, also in 2000. At Columbia, he designed and built a remarkably-simple stellarator, the Columbia Non-neutral Torus, which he used to study pure electron plasmas and partially-neutralized plasmas. He also taught a number of courses, including plasma physics and quantum mechanics. In 2005, he was promoted to associate professor, and in 2007 he received tenure. In 2011, he relocated to Germany and started as Director of the Stellarator Edge and Divertor Physics Division at the Greifswald branch of the Max-Planck Institute of Plasma Physics.

Don Rej is currently an Active Affiliate in the Office of the Deputy Laboratory Director for Science, Technology, and Engineering at Los Alamos National Laboratory (LANL). Previously, he was the Program Director for research LANL conducts for the DOE Office of Science. Prior to this assignment, he has been a Project Director on large DOE scientific construction projects such as the National Compact Stellarator Experiment at the Princeton Plasma Physics Laboratory, and the Los Alamos contribution to the construction of the Spallation Neutron Source at Oak Ridge National Laboratory. His other leadership positions included Program Director for LANL Science & Technology Base Programs, and the Deputy Director and Acting Director of the LANL Physics Division. Dr. Rej received his Ph.D. in Applied Physics from Cornell University. His research career has included work in magnetic fusion, including the design, construction, operation, diagnostic measurements, and theoretical analysis of compact torus plasmas. Dr. Rej also built and managed an interdisciplinary program in advance materials synthesis with plasma and particle beam technologies. He has co-authored over 70 peer-reviewed publications, 3 book chapters, and holds 2 patents. Dr. Rej is the recipient of a LANL Distinguished Performance Award, the Federal Laboratory Consortia Award for Excellence in Technology Transfer, an R&D 100 Award, and a DOE Defense Programs Award of Excellence.

Susana Reyes is a nuclear engineer at SLAC National Accelerator Laboratory in California with over 18 years of experience in international fusion projects. Dr. Reyes earned an M.Sci. in Power Engineering from the Polytechnic University of Madrid, and a Ph.D. in Nuclear Engineering from the UNED University in Madrid. Dr. Reyes joined Lawrence Livermore National Laboratory's Fusion Energy Program in 1999 to work on the safety analysis of inertial fusion energy power plant designs. Since then, she has participated in the design, construction, and operation of a variety of fusion research projects, including the National Ignition Facility at Lawrence Livermore National Laboratory, and the ITER Organization in Cadarache (France), where she supported the project through the coordination of safety analyses and associated documentation in preparation for ITER licensing. She joined SLAC National Accelerator Laboratory in 2018 as the LCLS-II High Energy Project Manager. Dr. Reyes is the recipient of the 2012 American Nuclear Society (ANS) Mary Jane Oestmann Professional Women's Achievement Award, and the 2015 Fusion Power Associates Excellence in Fusion Engineering Award, for her contributions to the safety and environmental aspects of both magnetic fusion energy (MFE) and inertial fusion energy (IFE) facilities. She is also recognized for her roles on

the National Academy's panel on Prospects for Inertial Confinement Fusion Energy Systems, and as recent Chair of the American Nuclear Society's Fusion Energy Division.

Frederick N. Skiff is a Professor of Physics and Chair of the Department of Physics and Astronomy at the University of Iowa. He received his Bachelor's degree in applied and engineering physics from Cornell University. As a Hertz Fellow, he received his PhD degree in physics from Princeton University. From 1985 to 1988, Dr. Skiff was a Research Scientist at the Plasma Physics Research Center at the Ecole Polytechnique in Lausanne Switzerland. In 1989, he moved to the University of Maryland with a joint appointment in the Department of Physics and the Institute for Plasma Research. In 1998, he joined the University of Iowa. He is a Fellow of the American Physical Society and has served as Chair of the APS Division of Plasma Physics. Other recent service to the community includes leading the Frontiers of Plasma Science Review for the DOE Office of Fusion Energy Sciences**.** Dr. Skiff's research interests include both experimental and theoretical fundamental plasma physics with a focus on plasma waves and diagnostics. Using data from advanced diagnostics, he studies the kinetic degrees of freedom of electrons and ions.

Philip B. Snyder is the Section Head of Burning Plasma Foundations in the Fusion Energy Division at Oak Ridge National Laboratory. Previously, he was the Director of the Theory and Computational Science Department at General Atomics, site of the DIII-D national fusion facility. He received his PhD in plasma physics at Princeton University, where he studied electromagnetic turbulence and transport in plasmas. His recent research has focused on the stability and nonlinear dynamics of the edge plasma in fusion devices, aimed at developing an understanding of edge localized modes, and the H-mode pedestal. Dr. Snyder is the lead developer of the ELITE magnetohydrodynamics code and the EPED pedestal structure model, and has developed kinetic-fluid formalisms for efficient treatment of electromagnetic turbulence. He served as principal investigator of the Edge Simulation Laboratory project, Pedestal Structure group leader for the ITPA Pedestal Group, and as a member of the 2017-2018 National Academies Burning Plasma Research panel. He has previously chaired the Edge Coordinating Committee and the Sherwood Executive Committee, and served on the USBPO council, the TTF executive committee, the DIII-D research council, and the Alcator C-Mod program advisory committee. He is a Fellow of the APS and has received the Rosenbluth Award for Fusion Theory (2004), the APS Dawson Award for Excellence in Plasma Physics Research (2013), and the Nuclear Fusion Award (2014).

Paul Terry is a Professor of Physics at the University of Wisconsin-Madison. He was Co-PI of the Center for Magnetic Self-Organization in Laboratory and Astrophysical Plasmas, an NSF Physics Frontier Center operating from 2003 to 2016. His primary field is theoretical plasma physics with emphasis on turbulence in fusion and astrophysical plasmas. He is co-discoverer of turbulence suppression and regulation by shear flows, and maintains active research interests in a range of problems including anomalous pinches, stable modes in turbulence saturation, magnetic turbulence and its effect on zonal flows, dissipation range turbulence, intermittency in turbulence, and verification and validation. He has served in a wide variety of capacities in the U.S. fusion program and plasma physics communities, including Chair of the Transport Task Force; Chair of the selection committee for the APS John Dawson Award for Excellence in

Plasma Physics; Chair of the Multiscale Transport Behavior Working Group; FESAC Priorities Panel member; Leader of Confinement and Transport Topical Group, Task Leader of Verification and Validation, Burning Plasma Organization; NSTX, C-Mod, and DIII-D PAC member; APS-DPP Fellowship Committee member; Fusion Sherwood Theory Executive Committee member; Associate Editor, Physics of Fluids B; and various DOE review panels. He is a fellow of the American Physical Society and recipient of the University of Wisconsin Postdoctoral Mentoring Award. He received his B.S. in Physics from the Massachusetts Institute of Technology and his Ph.D. from the University of Texas. He has held visiting positions at the Free University of Brussels and the Culham Plasma Physics Laboratory of the U.K. Atomic Energy Authority.

Mitchell L. R. Walker is a Professor of Aerospace Engineering at the Georgia Institute of Technology where he directs the High-Power Electric Propulsion Laboratory. He received his Ph.D. in Aerospace Engineering from the University of Michigan, where he specialized in experimental plasma physics and advanced space propulsion. His training includes rotations at Lockheed Martin and NASA Glenn Research Center. In 2005, he founded the electric propulsion program at the Georgia Institute of Technology. Dr. Walker has served as an Associate Editor of the American Institute of Aeronautics and Astronautics (AIAA) and on the Editorial Board of Frontiers in Physics and Astronomy and Space Sciences – Plasma Physics since 2015. He was a participant in the 2014 US National Academy of Engineering US Frontiers of Engineering Symposium, and in 2015 was the co-organizer for a focus session at the symposium. Dr. Walker is also a recipient of the AIAA Lawrence Sperry Award (2010) and the Air Force Office of Scientific Research Young Investigator Program Award (2006). He is an Associate Fellow of the AIAA and serves as Vice Chair of the AIAA Electric Propulsion Technical Committee. Dr. Walker's service to the American Physical Society's Division of Plasma Physics includes Local Coordinator of the Conference (2015) and Chair of the Subcommittee for Low Temperature and Dusty Plasmas (2016). He also served on the National Research Council Aeronautics and Space Engineering Board for the Air Force Reusable Booster System Study (2011-2012). Dr. Walker's primary research interests include both experimental and theoretical studies of advanced plasma propulsion concepts for spacecraft and fundamental plasma physics. His research activities include plasma-material interactions, diagnostics for plasma interrogation and thruster characterization, vacuum facility effects, helicon plasma sources, electron emission from carbon nanotubes, Hall effect thrusters, gridded ion engines, and magnetoplasmadynamic thrusters.

Anne E. White is a Professor and Head of the Nuclear Science and Engineering Department at the Massachusetts Institute of Technology (MIT). She received her Ph.D. in experimental plasma physics from UCLA and performed research at the Electric Tokamak (UCLA), NSTX (PPPL) and DIII-D (General Atomics) before becoming an assistant professor at MIT. She received tenure in 2015 and is currently an associate professor in the Nuclear Science and Engineering Department (NSE). Within NSE Professor White has served as Graduate Registration Officer and on the Graduate Committee (2010-2016), the Strategic Planning Committee (2015-2016), the Curriculum Development Committee (2014) and is currently project leader for development of online courses in Nuclear Engineering. Institute-wide at MIT, Professor White has served on the Radiation Protection Committee (2011-2015), the Innovation Deficit Committee (2014), the Faculty Policy Committee (2015-present), and the Faculty Task Force on International Engagements (2016-present) At MIT, Professor White performs fusion energy research at the Plasma Science and Fusion Center (PSFC). At the PSFC, she ran the

Gyrokinetic Simulation Working Group (2010-2015) and the Alcator C-Mod Transport Group (2015-2016), before becoming Assistant Division Head for MFE Collaborations in 2017. Professor White performs research in diagnostic development, turbulence and transport, and model validation at ASDEX Upgrade, DIII-D and NSTX-U. She is involved with projects for diagnostic development at WEST and W7-X, and advises or co-advises undergraduate and graduate students and post docs on a variety of experimental and simulation-based modeling projects. Professor White is active in the fusion community, is a member of APS and ANS, and has served on the executive and program committees of the APS-DPP, Sherwood Fusion Theory (former chair), U.S. BPO, and U.S.-EU Transport Task Force. She is an editorial board member for the journal *Plasma Physics and Controlled Fusion,* is a member of the University Fusion Associates, helped moderate the December 2015 Community Forum, and has participated in and presented at FESAC meetings since 2012. She has won numerous awards for her research, teaching and service to MIT and to the fusion community.

Brian Wirth is Governor's Chair Professor of Computational Nuclear Engineering in the Department of Nuclear Engineering at the University of Tennessee, Knoxville and Oak Ridge National Laboratory. Brian received a B.S. in nuclear engineering from the Georgia Institute of Technology and a Ph.D. in mechanical engineering from the University of California, Santa Barbara, where he was a DOE Nuclear Engineering Graduate Fellow. Dr. Wirth spent four years in the High Performance Computational Materials Science Group at Lawrence Livermore National Laboratory, where he led efforts to investigate the microstructural stability of structural materials in nuclear environments. In 2002, he joined the faculty at the University of California, Berkeley as an Assistant Professor of Nuclear Engineering and was promoted to Associate Professor in 2006. He has received a number of awards, including the 2011 Hochreiter Distinguished Lecture in the Department of Mechanical and Nuclear Engineering at the Pennsylvania State University, the 2007 Fusion Power Associates David J. Rose Excellence in Fusion Engineering Award, and the 2003 Presidential Early Career Award for Scientists and Engineers (PECASE). He has organized numerous conferences and symposia for the American Nuclear Society, the Minerals, Materials and Mining Society, and the Materials Research Society (MRS), including as the General Chair for the 21st Topical Meeting on the Technology of Fusion Energy (TOFE) in November 2014. His research investigates the performance of nuclear fuels and structural materials in nuclear environments, ultimately seeking to improve predictions about the longevity of nuclear reactor components and to develop high-performance, radiation resistant materials for advanced nuclear fission and fusion energy power plants. His research approach involves an integrated and multi-disciplinary combination of computational multiscale materials modeling with experiments to characterize materials structure and properties from the nanometer to component length scale.