

Space Technology Industry-Government-University Roundtable (STIGUR)

Committee

Roger M. Myers

Chair

ROGER M. MYERS (NAE) is the owner of R. Myers Consulting. Myers is a senior aerospace consultant with extensive experience in space technology development, flight programs, and in-space mission architecture planning. Myers retired from Aerojet Rocketdyne as executive director of Advanced In-Space Programs. In that role, Myers oversaw programs and strategic planning for next-generation in-space missions and architectures, propulsion systems, power systems, and space vehicles for the Department of Defense, NASA, and the commercial sector. Myers currently provides expertise in space propulsion and power systems (both conventional and nuclear), program management, and strategic planning to multiple clients. Myers is past president of the Electric Rocket Propulsion Society (ERPS) and the Washington State Academy of Sciences, former chair of the Washington State Joint Center for Aerospace Technology Innovation, and a member of the board of directors of the ERPS and Seattle's Museum of Flight. Myers is a member of the National Academy of Engineering, a fellow of the American Institute of Aeronautics and Astronautics (AIAA), and recipient of the AIAA Wyld Propulsion Award and the Stuhlinger Medal for Outstanding Achievement in Electric Propulsion. Myers earned a Ph.D. in mechanical and aerospace engineering from Princeton University.

William F. Ballhaus, Jr.

Member

WILLIAM F. BALLHAUS, JR. (NAE) is the retired president and CEO of the Aerospace Corporation. Ballhaus joined Aerospace after serving as a corporate officer and VP for engineering and technology at the Lockheed Martin Corporation. Prior to Lockheed Martin, Ballhaus served as president of two Martin Marietta businesses, Aero and Naval Systems, and Civil Space and Communications. Before joining Martin Marietta, Ballhaus served as director of the NASA Ames Research Center. Ballhaus also served as acting associate administrator for aeronautics and space technology at NASA Headquarters. Ballhaus is an honorary fellow and past president of the American Institute of Aeronautics and Astronautics (AIAA), a fellow of the Royal Aeronautical Society and the American Astronautical Society, and a member of the International Academy of Astronautics and the National Academy of Engineering. Ballhaus has served on the Air Force SAB (co-chair), Defense Science Board, NOAA SAB, NASA Advisory Council, JPL Directors Adv. Council, NAE Council, Boards of Directors of OSI Systems, Draper Labs, Space Foundation (chair), and MIT Lincoln Lab. Example awards include AIAA Goddard Astronautics, Von Karman Lectureship, National Intelligence Medal, NRO Gold Medal, and NASA Distinguished Service and Exceptional Service Medals. Ballhaus earned a Ph.D. in engineering from the University of California, Berkeley.

Joseph Cassady

Member

JOSEPH CASSADY is executive director of space for Aerojet Rocketdyne Washington Operations. At Aerojet Rocketdyne, Cassady leads strategy formulation, mission architecture concept development, and outreach activities related to the company's NASA and Civil Space business. Previously, Cassady served as senior director of advanced concepts engineering and was responsible for high-power electric propulsion and hypersonic missile programs. Cassady received a Goddard Space Flight Achievement Award for work on the Pulsed Plasma Thruster experiment aboard the Earth Observing-1 satellite. Cassady received an M.S. in aeronautics and astronautics from Purdue University.

Todd K. Citron

Member

TODD CITRON is the chief technology officer for The Boeing Company, responsible for developing and executing Boeing's technology strategy. This includes Boeing Research & Technology; subsidiary Aurora Flight Sciences, and AvionX; and joint ventures at Wisk and SkyGrid. Previously, Citron served in a number of business, program management and engineering leadership roles, which included developing advanced space systems such as an awarded small satellite product line (702SP). Citron also created innovative architectures for satellite-based IP data systems and designed the company's first digital payload. Citron has published numerous technical papers and has three patents in the areas of error correction, signal processing and adaptive antennas. Citron was also chosen to participate in the National Academy of Engineering's Frontiers of Engineering. Citron earned a Ph.D. in electrical engineering from Stanford University.

John E. Foster

Member

JOHN FOSTER is a professor of nuclear engineering and radiological sciences at the University of Michigan. Foster's research includes space technologies ranging from gridded ion thrusters to MPD thrusters. Foster worked on advanced propulsion for nearly 10 years as an employee at NASA before moving to the University of Michigan. Foster continued this research at Michigan and added research into space nuclear power and propulsion systems as well. In parallel, Foster has developed a space nuclear power and propulsion design course. Foster also carried out research relevant to space in situ resource utilization including water recycling/purification and plastics waste recycling using plasmas. Foster received a Ph.D. in applied physics from the University of Michigan.

Kathleen C. Howell

Member

KATHLEEN HOWELL (NAE) is the Hsu Lo Distinguished Professor of Aeronautics and Astronautics at Purdue University. Howell is best known for contributions to the three-body problem, the interplanetary superhighway, and artificial satellite theories. Howell's research interests focus on astrodynamics, including orbit dynamics, perturbations, and stability; trajectory control and on-orbit maneuvers; trajectory optimization and transfers; spacecraft formations; and orbit determination and navigation. Howell is a member of the National Academy of Engineering and a fellow of the American Academy of Arts and Sciences and the American Astronautical Society. Howell earned a Ph.D. in aeronautics and astronautics from Stanford University.

Leslie A. Jump

Member

LESLIE JUMP is the founder of DifferentFunds, the first platform designed and built to scale venture capital. Jump led the development and publication of ground-breaking research on the DeepTech capital market, woman-leading venture, the state of venture terms, and others. Jump was a partner in Sawari Ventures, LLC, a Cairo-based early-stage venture capital firm, investing in entrepreneurs across the Middle East/North Africa. Jump has served on the boards of UP Global, a network of entrepreneurs and startup community leaders, and Ubongo, a leading children's edutainment company reaching over 40 million children in Africa. Jump also served as vice-chair of the Board of Visitors and Governors of St. John's College. Jump earned a B.A. in mathematics and philosophy from St. John's College.

Janet L. Kavandi

Member

JANET L. KAVANDI is president and CEO of Kavandi Consulting, LLC. Kavandi was formerly president and chief science officer at the Sierra Space Corporation, director of the NASA Glenn Research Center, director of flight crew operations, deputy director of health and human performance, and deputy chief of the astronaut corps at the NASA Johnson Space Center. Kavandi completed three spaceflight missions as a U.S. astronaut and is a T-38 pilot with 1200 flying hours. Kavandi serves on several boards, including the Smithsonian National Air and Space Museum, Embry-Riddle Aeronautical University, and the Astronaut Scholarship Foundation. Kavandi has received two Presidential Rank Awards, a Women in Aerospace Lifetime Achievement Award, NASA's Distinguished Service Medal, two Exceptional Service Medals, two Outstanding Leadership Medals, and three Spaceflight Medals, and has been inducted into the Astronaut Hall of Fame. Kavandi earned a Ph.D. in chemistry from the University of Washington-Seattle.

Carol Lane

Member

CAROL LANE is vice president of government relations at X-energy, an advanced nuclear reactor and fuel company. Lane is the lead executive working with Congress and the executive branch with focus on the Department of Energy, NASA, and the Department of Defense on X-energy's technology and business. Lane has extensive experience working on energy, civilian space, and national security programs. Previously, Lane was vice president of Washington Operations and vice president of civil and commercial space for Ball Aerospace. Prior to Ball, Lane held positions in business development and strategic development at Lockheed Martin and TRW. Lane served as staff director for the Science, Technology and Space Subcommittee of the Senate Commerce, Science and Transportation Committee, and on the Senate Budget Committee, focusing on space and energy issues. Lane also served as the Director of the Office of Commercial Space Transportation in the Department of Transportation. Currently, Lane is on the Board of Directors for the U.S. Nuclear Industry Council and on the advisory board for the Nuclear Innovation Alliance. Formerly Lane served as president of the American Astronautical Society and chair of the Board of Directors for Women in Aerospace. Lane earned a B.A. in psychology from George Washington University.

Aaron D. Lazarus

Member

AARON LAZARUS is director of the Tactical Technology Office at the Defense Advanced Research Projects Agency (DARPA). In this role, Lazarus oversees efforts to reimagine every aspect of military hardware design, development, test, manufacture, and sustainment. Lazarus applies extensive experience in advanced technology to create innovative solutions to operational challenges. Prior to joining DARPA, Lazarus served as chief scientist at Pioneer Natural Resources, working to improve the efficiency of and reduce the footprint associated with large-scale, unconventional oil and gas operations. Before working at Pioneer Natural Resources, Lazarus served as a program manager in DARPA's Strategic Technology Office, focusing on platform design, multifunctional structures, and advanced energy systems. Lazarus earned a PhD in civil engineering from Johns Hopkins University.

E. Glenn Lightsey

Member

E. GLENN LIGHTSEY is the David Lewis Professor of Space Systems Technology in the School of Aerospace Engineering at the Georgia Institute of Technology. Lightsey's research focuses on the technology of small satellites, including guidance, navigation, and control systems; formation flying; satellite swarms and satellite networks; space traffic management; proximity operations and spacecraft rendezvous; propulsion; satellite operations; and space systems engineering. Lightsey founded two startup companies that invent and commercialize space technology, one of which was acquired by a larger company. Previously, Lightsey was a professor at the University of Texas at Austin in the Department of Aerospace Engineering and Engineering Mechanics. Lightsey is a fellow of the AIAA and a recipient of the AIAA Mechanics and Control of Flight Award, the AIAA/ASEE John Leland Atwood Award for Outstanding Teaching, and the Institute of Navigation Tycho Brahe Award. Lightsey received a Ph.D. in aeronautics and astronautics from Stanford University.

Elaine S. Oran

Member

ELAINE S. ORAN (NAE) is the O'Donnell Foundation Chair and Professor of Aerospace Engineering at Texas A&M University (TAMU), affiliate professor in the Department of Mechanical Engineering, Department of Multidisciplinary Engineering, and the Mary K. O'Conner Center for Processing Safety. At TAMU, Oran is developing computation, theoretical and experimental research, and facilities in high-speed reacting flows as applied to aerospace propulsion, astrophysical, atmospheric, and safety system. Previously, Oran was on the faculty at the University of Maryland in the Department of Aerospace Engineering, and before that Oran was the senior scientist for reactive flows physics at the U.S. Naval Research Laboratory. Oran holds honorary doctorates from Leeds University, the École Centrale de Lyon, and the Institut National des Sciences Appliquées de Rouen. Oran is a member of the American Academy of Arts and Sciences, a fellow and honorary fellow of the AIAA, and a fellow of the American Physical Society (APS), the Combustion Institute, the Society of Industrial and Applied Mathematics, and the American Society of Mechanical Engineers. Oran has received the Fluid Dynamics Prize of the APS, the Zel'dovich Prize of the Combustion Institute, and the Dryden Lectureship in Research from the AIAA. Oran received a Ph.D. in engineering and applied sciences.

Sonya T. Smith

Member

SONYA SMITH is professor of mechanical engineering and director of the Atmospheric Sciences Program at Howard University. Smith is also visiting faculty in the Department of Aeronautics and Astronautics at the Massachusetts Institute of Technology. Smith has established the Applied Fluids & Thermal Research Laboratory (@FTERLab) at Howard, an interdisciplinary research laboratory dedicated to the study of fundamental and applied problems in fluid mechanics and heat transfer. Smith's research covers thermal management for spacecraft power systems and energy storage. Smith is one of the Co-PIs for the Trans-Iron Galactic Element Recorder on the International Space Station (TIGERISS), which provides the most comprehensive data to date on ultraheavy Galactic cosmic rays. Smith is also one of the Co-PIs for the Engineering Research Center for Power Optimization for Electro-Thermal Systems. Smith is a fellow and a past-president and lifetime member of Sigma Xi, the scientific research honor society. Smith is a fellow of the American Society of Mechanical Engineers and the American Academy of Arts and Sciences, and an associate fellow of the American Institute of Aeronautics and Astronautics. Smith earned a Ph.D. in mechanical and aerospace engineering from the University of Virginia.

Patrick Zeitouni

Member

PATRICK ZEITOUNI is the chief strategy officer at HawkEye 360, which operates commercial satellites that allow the identification and geolocation of sources of radio frequencies. Previously, Zeitouni was the head of space mobility at Blue Origin, responsible for all programs for in-space transportation and logistics systems. Zeitouni also helped create and led Blue Origin's Advanced Development Programs business unit and led the National Team to win NASA's Artemis Phase 1. Prior to Blue Origin, Zeitouni was a partner at McKinsey & Company, serving NASA, the Department of Defense, and most aerospace primes and major suppliers. Zeitouni supported these institutions across a variety of strategy, operations, and product development engagements. Zeitouni received an M.B.A. from the MIT Sloan School of Management and an M.S. for electrical engineering and astronautics from the University of Southern California.

Greg Stover

Ex Officio Member

GREG STOVER is the acting associate administrator for NASA's Space Technology Mission Directorate. In this role, Stover leads the development of cross-cutting technologies that advance U.S. space capabilities, foster innovation, and inspire the aerospace technology community; and strategically connects industry, government, and academic partners to enable NASA's mission of scientific discovery and exploration of the Moon and Mars through effective technology implementation and infusion. Throughout a distinguished 35-year NASA career, Stover has provided leadership across the agency's technology development initiatives, robotic science missions, and human-rated systems. His expertise spans overseeing the human rated Orion Launch Abort System, the Earth System Science Pathfinder Program that developed and operated over 25 Earth observing projects annually, and flying technology experiments on numerous orbiting platforms including the Russian Mir space station. Stover's contributions have been recognized with the prestigious NASA Outstanding Leadership Medal, the Silver Snoopy award, and numerous NASA group achievement and individual performance awards. Stover earned an M.S. in electrical engineering from Georgia Tech.