



## 2021 American Astronautical Society Fellowships Announced

*Fourteen individuals are recognized for their significant scientific, engineering, academic, and management contributions to AAS and the space industry.*

The American Astronautical Society (AAS) is pleased to announce Vince Boles, Lisa Callahan, John Christian, Chris Crumbly, Mary Lynne Dittmar, Roberto Furfaro, Marcus Holzinger, Lisa May, Scott Pace, Ryan Park, Jinjun Shan, Sergei Tangin, Bobby Williams, and Ann Zulkosky have been elected as AAS Fellows in recognition of their outstanding contributions to astronautics and AAS.

“I am very proud to honor these fourteen individuals who have had a significant impact on the space industry and the future of space exploration,” said Alan DeLuna, AAS President. “AAS is thankful for their support of our Society and their contributions to entire space community.”

The 2021 class of AAS Fellows will receive their awards at several upcoming AAS events. Please see their biographies below and our website at [astronautical.org/fellows](http://astronautical.org/fellows) for more information.

*AAS Fellow nominations are open to any AAS member who has made outstanding contributions to astronautics. New AAS Fellows are nominated each year by current AAS members and reviewed by a distinguished selection committee. Nominations and selections encompass the broader space industry community. For more information visit [astronautical.org/fellows](http://astronautical.org/fellows)*

**Vincent Boles** received a Bachelor of Science in Electrical Engineering from the University of Southern California and a Master of Science in Electrical Engineering from Stanford University. While serving the Aerospace Corporation for 36 years, he most recently was a General Manager where he established, organized, and managed the Advanced Technology Division. Mr. Boles spent many years performing technical program acquisition and contract management for high priority National and civil space programs. His more recent years included the establishment of the corporation’s new business initiatives. He organized, staffed, and directed the new division for commercial, international, and civil space markets.

**Lisa Callahan** attended Virginia Polytechnic Institute and State University where she received a Bachelor of Science in Electrical Engineering. She currently serves as the VP & GM Commercial Civil Space at Lockheed Martin where she leads the execution, growth, and political support for commercial and civil programs. With previous experience as Vice President & General Manager, Undersea Systems – Missions Systems and Training, she worked with

international customers in more than fifteen countries through a combination of foreign military sales and direct commercial sales. Lisa currently serves on the Space Foundation and Coalition for Deep Space Exploration Board of Directors.

**John Christian** holds a Ph.D. from The University of Texas at Austin in Aerospace Engineering. He is currently an Assistant Professor at the Georgia Institute of Technology. Dr. Christian has over a decade of experience as a researcher in both U.S. Government and academic positions. He has led teams who focused on advancing algorithms for spacecraft navigation, computer vision, and astrodynamics and has supported the successful execution of multiple spaceflight missions. Additionally, Dr. Christian is the author or co-author on over 100 technical publications and patents.

**Chris Crumbly** holds a Master of Aerospace Engineering and a Bachelor of Aerospace Engineering from Auburn University. Currently serving as the Executive Director of the Institute for Digital Enterprise Advancement, Mr. Crumbly has over 33 years of experience with NASA, DoD, industry, and academia as an engineer, systems engineer, and project/program manager. He has worked on major programs including the Space Launch System, Space Shuttle, International Space Station, Spacelab, and numerous research and development programs.

**Mary Lynne Dittmar** holds a Ph.D., M.A. and B.A. from the University of Cincinnati. For over twenty years, Dr. Dittmar has made numerous contributions to astronautics that span her corporate, policy, and professional society activities. During her distinguished career, she worked for the Boeing Company where she oversaw new technology development and managed the Flight Operations Group for International Space Station (ISS) assembly flights and was Chief Scientist for Commercial Payloads on the ISS Program. She developed the Strategic Plan for the International Space Station National Laboratory, where she served as Senior Policy Advisor. Dr. Dittmar currently serves as the Executive Vice President for Government Affairs at Axiom Space, Inc.

**Roberto Furfaro** received a Ph.D. in Aerospace Engineering at the University of Arizona. Dr. Furfaro published more than 70 peer-reviewed journal papers and more than 200 conference papers and abstracts. From 2013 to 2018 he served as technical member of the American Astronautical Society (AAS) Space Flight Mechanics committee, where he served as web administration subcommittee lead. He also served as Technical Chair of the 2015 AAS/AIAA Spaceflight Mechanics Meeting and he has been session chair for more than 10 AAS/AIAA Space Flight Mechanics Conferences and Astrodynamics Specialist Conferences. Dr. Furfaro is currently Full Professor, Department of Systems and Industrial Engineering, Department of Aerospace and Mechanical Engineering, University of Arizona. He is also the Director of the Space Situational Awareness Arizona (SSA-Arizona) Initiative

**Marcus Holzinger** is Associate Professor and H. Joseph Smead Faculty Fellow Smead Aerospace Engineering Sciences, University of Colorado Boulder, and Associate Chair for Undergraduate Curriculum, Associate Director for Colorado Center for Astrodynamics Research. He received a Ph.D. in Aerospace Engineering Sciences at the University of Colorado, Boulder. Dr. Holzinger leads a robust, rigorous, and impactful research program at the University of Colorado. Since joining academia in 2012 he has attracted nearly \$2.5M in sponsored research and graduated eight PhD students and numerous MS and BS students. He

was honored with a Grainger Foundation Award (2018, administered by the National Academy of Engineering), an AFOSR Young Investigator Program Award (2017), a Northrop Grumman Space Technology Innovation Award (2008), and was selected by the National Academy of Engineering to participate in the US Frontiers of Engineering Symposium (2017).

**Lisa May** attended the University of Virginia where she received a Master of Engineering in Mechanical Engineering. Lisa is an accomplished senior executive, entrepreneur, program manager, and systems engineer with more than 35 years of success in aerospace and technology. She has led NASA and industry teams in the exploration of the solar system, Mars Sample Return, and enabling human exploration. Lisa specializes in assuring strategy, investments, and implementation align with customer and market priorities and execution supports the highest-level objectives. She is currently the Chief Technologist for Lockheed Martin's Commercial and Civil Space Advanced Programs.

**Scott Pace** is currently Director, Space Policy Institute and Professor of Practice of International Affairs in the Elliott School of International Affairs at George Washington University. He received a Ph.D. in Policy Analysis from RAND Graduate School. Throughout his career, Dr. Pace has contributed to critical analyses and developed policy options and solutions for the leadership of our country at the highest levels. From his service at the Department of Commerce, NASA, the White House Office of Science and Technology Policy, and the National Space Council, the national policies that Dr. Pace developed, and to which he continues to contribute, is an enduring legacy from which our nation will benefit for generations.

**Ryan Park** earned a Ph.D. in Aerospace Engineering from The University of Michigan at Ann Arbor. Dr. Park is recognized as an international authority on the dynamics and physics of solar system objects and the characterization and calibration of radiometric and optical measurements. He is currently Group Supervisor and Principal Engineer at the Jet Propulsion Laboratory (JPL). Dr. Park's primary research focuses on the development of JPL's planetary ephemerides (i.e., orbit of eight planetary systems and the Pluto system) and planetary gravity fields that are used by flight projects and researchers around the world. Dr. Park has directly contributed to numerous NASA missions and studies, including serving as the Juno Gravity Science Lead, Dawn Gravity Science Lead at Ceres, Psyche Deputy Gravity Science Lead, and more.

**Jinjun Shan** is a Professor of Space Engineering and Department Chair of the Department of Earth and Space Science and Engineering at York University. He received a Ph.D. in Spacecraft Design from the Harbin Institute of Technology. Dr. Jinjun Shan is an internationally recognized authority in the areas of space and autonomous systems, specifically spacecraft dynamics and control, multi-agent systems, smart materials and structures, and space instrumentation. He has secured over \$5 million in research funding from various governmental agencies and many industry partners. Dr. Shan has an outstanding publication record with over 170 original research articles, many of which have been published in high-caliber journals.

**Sergei Tanygin** received a Ph.D. in Aerospace Engineering from University of Cincinnati. Dr. Sergei Tanygin holds several patents from his nearly 20 years of experience at Analytical Graphics, Inc. as a Senior Astrodynamics Specialist. He has published seminal work on attitude dynamics and kinematics including novel families of three-coordinate mappings from the

quaternion constraint sphere to a three-dimensional space. He has also worked extensively in the field of trajectory and constellation design. He is currently Principal GNC Engineer at SpaceX.

**Bobby Williams** received a Ph.D. in Aerospace Engineering from the University of Southern California and currently serves as Executive Vice President and Director at KinetX. As an employee of the Jet Propulsion Laboratory, he participated in and eventually headed the orbit determination teams at JPL for the Viking missions to Mars, the Pioneer Venus Orbiter mission and the Earth oceanographic mission TOPEX/Poseidon. He participated in gravity field determination for both Mars and Venus by analyzing orbiter tracking data and was a member of the Phobos Experiment Team which first determined the mass of the Martian moon, Phobos, from spacecraft tracking data. Dr. Williams was the recipient of NASA Distinguished Public Service Medal in December 2020.

**Ann Zulkosky** is Vice President of Commercial Civil Space at Lockheed Martin. She received a M.S. Marine Environmental Science, Stony Brook University. She has furthered the development and establishment of US national space policy and efforts to increase participatory diversity and improved gender balance in the space community and broad ecosystem. While serving as senior staff of the US Senate Committee on Commerce, Science, and Transportation, Ms. Zulkosky played a critical leadership role in the development of both the 2008 and 2010 NASA Authorization Acts, which, along with the preceding 2005 NASA Authorization Act, established in law the fundamental policy guidance and direction of NASA and its space exploration and utilization programs, which has enabled NASA and its public and private partners over the past sixteen years to reach the current threshold of the next great era of space exploration.

### **About AAS**

Since 1954, AAS has been the premier network of current and future space professionals dedicated to advancing all space activities. The Society has long been recognized for the excellence of our national symposia, technical conferences, and publications and for our impact on shaping the U.S. space program. AAS members have opportunities to meet and connect with leaders and peers in the space industry to exchange information and ideas, discuss career aspirations, and expand their knowledge and expertise.

The American Astronautical Society: Connections. Insight. Credibility. Leadership.