



Distinguished Mentor Profiles

Daniel Adamo

Background

Mr. Adamo is an astrodynamics consultant focused on space mission trajectory design, operations, and architecture. He works with clients primarily at NASA and in academia. Until his retirement in 2008, Mr. Adamo was employed by United Space Alliance as a trajectory expert, serving as a “front room” flight controller for 60 Space Shuttle missions. Along with console duties during simulations and missions, this job entailed development of trajectory designs, software tools, flight rules, console procedures, and operations concepts. From 1979 until 1986, Mr. Adamo developed real-time software for the Shuttle Mission Simulator and led the programming team for the first PC laptop to fly in space, the Shuttle Portable On-Board Computer (SPoC). Mr. Adamo serves as an AIAA Distinguished Lecturer and gave regular presentations to local schools and the public on what to expect during 2017 August 21's total solar eclipse and how to observe it safely.

Job Title:
Independent
Astrodynamics
Consultant



Location:
Salem, OR

Education



BS, Optical Engineering, University of Rochester
MS, Physical Sciences, University of Houston



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

No Preference

Barbara Buckner

Background

Dr. Buckner currently works as an Educator Professional Development Specialist at NASA Armstrong Flight Research Center (AFRC) in Palmdale, California. She supports the mission and leadership of the NASA STEM Educator Professional Development Collaborative by delivering professional development programs to a wide range of teachers and educators. Dr. Buckner also supports the NASA AFRC Education Office by providing programs and delivering instruction leveraging expertise in NASA STEM content to engage the general public and educators. Prior to moving to California, Dr. Buckner was a 20-year veteran High School teacher of mathematics and science at Bradley Central High School in Cleveland, Tennessee, where she taught Mathematics, Chemistry, and Physics. She has also taught internationally in the Ukraine, Germany, and the Philippines. Dr. Buckner received the 2007 East Grand Division Tennessee Teacher of the Year award, and later served as a 2013-2014 Einstein Fellow at the National Science Foundation Education and Human Resources Directorate.

Job Title:
Education Specialist,
NASA AFRC



Location:
Palmdale, CA

Education



BS, Mathematics, Lee University
MA, Education, Tusculum College
PhD, Mathematics Education, University of Louisville



Type of Availability

Virtual



Preferred Audience

No Preference

Sandra Cauffman

Background

Mrs. Cauffman was born in Costa Rica and is fluent in Spanish. She joined NASA in 1991 and has supported/led numerous programs, including the Hubble Space Telescope First Servicing Mission, The Upper Atmosphere Research Satellite, the Geostationary Operational Environmental Satellite (GOES) I/M, N/P and R, and the Mars Atmosphere and Volatile Evolution (MAVEN) Mission. Mrs. Cauffman currently serves as the Deputy Director of the Earth Science Division, in the Science Mission Directorate at the National Aeronautics and Space Administration (NASA) Headquarters. She provides executive leadership, strategic direction, and overall management for the entire agency's Earth Science portfolio, from technology development, applied science, research, mission implementation and operation. Mrs. Cauffman has been awarded the NASA Exceptional Achievement Medal and, twice, the NASA Outstanding Leadership Medal.

Job Title:
Deputy Director,
NASA Earth Science



Location:
Washington, DC

Education



BS, Physics, George Mason University
BS, Electrical Engineering, George Mason University
MS, Electrical Engineering, George Mason University



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

No Preference

Kevin DeBruin

Background

Mr. DeBruin is a Systems Engineer at NASA's Jet Propulsion Lab. He currently works on the Europa Lander Mission as a Flight System Engineer and has experience with rapid concurrent engineering teams called A-team, Team X, and Team Xc. His responsibilities on the engineering teams include integrating all aspects of the design and managing the top level requirements like mass, power and cost. Mr. DeBruin ensures the design comes together, with the end product being a feasible spacecraft. He has been involved in over 20 different spacecraft concept designs from orbiting the earth to exploring the universe. At Georgia Tech, Mr. DeBruin was a Graduate Research Assistant in the ASDL (Aerospace System Design Lab) with his advisor Dr. Dimitri Mavris performing research into Naval Electronic Warfare, Human Mars Architecture Studies, and NASA's Europa Clipper Mission.

Job Title:

Systems Engineer,
NASA Jet Propulsion



Location:

Pasadena, CA

Education



BS, Mechanical Engineering, University of Wisconsin, Platteville
Minor, Business Admin, University of Wisconsin, Platteville
MS, Aerospace Engineering, Georgia Institute of Technology



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

No Preference

John Fay

Background

Dr. Fay is a Subject Matter Expert (SME) at Eglin AFB, FL, performing engineering and mathematical analyses for a variety of Department of Defense weapon systems. His duties past and present include: simulation of missile dynamics, analysis of payload venting of spacecraft, computational fluid dynamics, software engineering, and distributed interactive simulation. Dr. Fay is heavily involved with STEM and is dedicated to mentoring the next generation of engineers and scientists. He was the Northwest Florida Section STEM education outreach coordinator for several years and later became the Region II Deputy Director for STEM education outreach, a position he currently still fills. He is also the leader of the AIAA Aerospace Micro-Lessons Working Group.

Job Title:

Subject Matter Expert,
Eglin AFB, FL



Location:

Fort Walton Beach, FL

Education



BS, Engineering Science, Georgia Tech
PhD, Mechanical & Aerospace Engineering, Princeton

Type of Availability



Virtual/In-Person (pending location and schedule)

Preferred Audience



No Preference

John (Larry) Foster

Background

Mr. Foster is a composites structures Fellow at Pratt & Whitney and is responsible for overseeing design execution and technology development for composite components across all Pratt & Whitney engine products. His business experiences range from independent consultant and a small start-up company, to pioneering engineering software companies and large, industry-leading aerospace companies. During his career, he has accrued product experience in jet engines, space launch vehicles, racing yachts, medical devices, and electronics. Mr. Foster also served as adjunct faculty at the University of Connecticut – Storrs, where he taught graduate level courses in mechanics of composite materials.

Job Title:

Fellow, Composite Structures, Pratt & Whitney



Location:

South Glastonbury, CT

Education



BS, Applied Mathematics, University of California at San Diego
MS, Aerospace Engineering, Virginia Tech



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

High School

Steve Hagerott

Background

Mr. Hagerott is an Aerosciences and Flight Control Law Senior Specialist for Textron Aviation. While with Textron, he led the internal R&D effort to develop fly by wire business jet control laws, created detailed control system and aircraft math models, performed aircraft simulation, and supported flight test evaluation of the control law algorithms. Prior to working for Textron, Mr. Hagerott was a member of the Lockheed Martin Skunk Works team, serving as a Flight Control Law Engineer for the Joint Strike Fighter Concept Demonstration Program. His work on this program supported an industry first hovering jet to reach supersonic flight. Before Skunk Works, Mr. Hagerott spent two years working for Hawker Beechcraft on general aviation aircraft design. As an undergraduate, he was a NASA Langley Research Summer Scholar where he performed research for next generation spacecraft. During his twenty-year career, he has accumulated nearly a dozen patents and several publications. His volunteer experience includes RC aircraft, robotics, and STEM coaching at the middle and high school levels.

Job Title:
Senior Engineer,
Textron Aviation



Location:
Wichita, KS

Education



BS, Aerospace Engineering, University of Kansas



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

Middle/High School

Tucker Hamilton

Background

Lieutenant Colonel (Lt Col) Hamilton is a senior pilot with combat experience and more than 1,700 flying hours in the F-35A/B/C, F-15C/D/E, F-18, F-16, A-10, T-38A/C, T-34, and T-6. Lt Col Hamilton also has experience as an Air Liaison Officer, where he was attached with ground units and served as the primary advisor to ground forces regarding air power. He is a seasoned test pilot and graduate of the United States Air Force Test Pilot School at Edwards AFB, CA. He currently serves as the Commander for the 461st Flight Test Squadron at Edwards AFB, overseeing the squadron responsible for the developmental test of the F-35. Outside of his roles as Squadron Commander, he founded the AIAA STEM Committee and served as the chair until the summer of 2017.

Job Title:

Commander, 461st
Flight Test Squadron,
Edwards AFB, CA



Location:

Edwards AFB, CA

Education



BS, Aerospace Engineering, University of Colorado, Boulder
MS, Aerospace Engineering, University of Tennessee
MS, Flight Test, USAF Test Pilot School, Edwards AFB, CA



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

No Preference

Ellen Harp

Background

Ms. Harp is a Technology Teacher at Brighton Central School District in Rochester, New York. She teaches computer skills, keyboarding, coding, PowerPoint and Word to 3rd, 4th and 5th graders. She also incorporates hands-on STEM activities including glider design, rocketry, drones, and a projectile motion in her curriculum. Outside of her core duties, Ms. Harp supports numerous school clubs within the Brighton Central School District. Such activities include supporting various student robotics competitions and building and racing solar cars. Ms. Harp recently became a Teacher Advisor for the NASA/WGBH STEM Education program. She is also part of a STEM Outreach Collaborative through Cornell University which has helped her to acquire more skills and equipment to round out her curriculum.

Job Title:

Technology Teacher,
Brighton Central
School District



Location:

Rochester, NY

Education



BS, Electrical Engineering, Carnegie Mellon University
BA, Public Policy, Carnegie Mellon University
MS, Electrical & Computer Engineering, University of Rochester



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

No Preference

David (Brian) Landrum

Background

Dr. Landrum is an Aerospace Engineering instructor at the University of Alabama in Huntsville. He developed the University's Aerospace Engineering introductory course, and also teaches courses in systems design and operation, unmanned aerial vehicles, flight dynamics and performance and the history of technology and societal impacts. He was a co-developer of "Monarch-Madness", a cross curricular STEM program that encourages students from underrepresented populations in Northern Alabama to pursue STEM careers by investigating the flight characteristics of a Monarch Butterfly.

Job Title:

Assoc. Department
Chair, University of
Alabama, Huntsville



Location:

Huntsville, AL

Education



PhD, Aerospace Engineering, North Carolina State
University

MS, Aerospace Engineering, Texas A&M University

BS, Aerospace Engineering, Texas A&M University



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

Elementary School

Prashant Khare

Background

Dr. Khare is an Assistant Professor of Aerospace Engineering at the University of Cincinnati. Dr. Khare's research focuses on multiphase flows, non-reacting and reacting fluid dynamics, combustion systems, and high-performance computing relevant to energy, propulsion, and environmental applications. He addresses the fundamental physics underlying various physical processes by conducting massively parallel high-fidelity numerical simulations and develops physics-based models using theoretical analyses combined with big-data analytics, which are leveraged for accurate and efficient engineering design and analysis. Dr. Khare has been a recipient of several awards, including the William R. Marshall award from the Institute of Atomization and Spray Systems (ILASS) for establishing the first generalized theory governing the deformation and fragmentation of liquid droplets, best presentation and the best video awards by the American Institute of Aeronautics and Astronautics (AIAA), among others. Dr. Khare will be a keynote speaker at the 5th International Conference and Exhibition on Mechanical & Aerospace Engineering later this year

Job Title:
Assistant Professor,
University of Cincinnati



Location:
Cincinnati, OH

Education



MS, Mechanical Engineering, Pennsylvania State University
PhD, Aerospace Engineering, Georgia Institute of Technology

Type of Availability



Virtual/In-Person (pending location and schedule)

Preferred Audience



High School

Andrew Klesh

Background

Dr. Klesh is NASA/JPL's Chief Engineer for the Mars Cube One (MarCO) mission to Mars and serves as Co-PI of the Buoyant Rover for Under-Ice Exploration. He also is Primary Investigator (PI) of the INSPIRE interplanetary CubeSats, a Lecturer at Caltech in EE, and an Adjunct Professor at Arizona State University where he teaches "MacGyver Engineering". Dr. Klesh's research primarily specializes in robotic exploration in extreme environments, including aerial, surface, and underwater field investigations in the Arctic, and NanoSpacecraft (including CubeSat) missions throughout the solar system. Prior to JPL, he served as a Postdoctoral Fellow at JAXA's Space Exploration Center in Sagamihara, Japan, and as Post-doc and Chief Engineer for the Radio Aurora Explorer project. He earned a PhD, MSE and BSE in Aerospace Engineering, MEng in Space Systems, and BSE in Electrical Engineering all from the University of Michigan.

Job Title:
JPL Chief Engineer for
Interplanetary Small
Spacecraft



Location:
Pasadena, CA

Education



BS, Aerospace Engineering, University of Michigan
BS, Electrical Engineering, University of Michigan
MS, Aerospace Engineering, University of Michigan
MEng, Space Systems Engineering, University of Michigan
PhD, Aerospace Engineering, University of Michigan



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

No Preference

April Lanotte

Background

Ms. Lanotte is an Instructional Designer with NASA and a Senior Instructor at the University of Colorado at Colorado Springs (UCCS). With NASA, she works with various programs and creates activities to help students and teachers understand what NASA is working on. At the University of Colorado at Colorado Springs (UCCS), Ms. Lanotte works with and teaches university students in the STEM teacher preparation program. She is from a small town near Pittsburgh, PA (Mars, PA) and currently lives in a Colorado ranching community with her husband and three children, two dogs, two cats, bees, and chickens.

Job Title:

Instructional Designer,
NASA
Senior Instructor, UCCS



Location:

Colorado Springs, CO

Education



MA, Space Education
MA, Science Writing

Type of Availability



Virtual/In-Person (pending location and schedule)

Preferred Audience



No Preference

Noam Lior

Background

Dr. Lior is a Professor of Mechanical Engineering at the University of Pennsylvania. His work covers energy, generation of power in space for terrestrial use, water desalination, fluid mechanics, heat transfer, thermodynamics and scientific sustainability analysis. Dr. Lior has numerous editorships and publications, and more information can be obtained from his website: www.seas.upenn.edu/~lior.

Job Title:

Professor of Mechanical Engineering, University of Pennsylvania



Location:

Philadelphia, PA

Education



BS, Mechanical Engineering, Technion, Haifa, Israel
MS, Mechanical Engineering, Technion, Haifa, Israel
PhD, Mechanical Engineering, University of California at Berkeley

Type of Availability



Virtual/In-Person (pending location and schedule)

Preferred Audience



No Preference

Emily Matula

Background

Ms. Matula is a Bioastronautics (human spaceflight focus) PhD candidate at the University of Colorado at Boulder. Her thesis investigates the use of algae to scrub carbon dioxide from a spacecraft's cabin and return breathable oxygen to the astronauts. Her research is currently funded by the NASA Space Technology Research Fellowship (NSTRF). Through this fellowship she has conducted research at various NASA centers including Johnson, Kennedy, and Ames. When she is not conducting research, she enjoys camping, boxing, and working on cars. Ms. Matula is originally from Ohio and has always dreamed of supporting human space flight.

Job Title:

PhD Candidate,
Bioastronautics, UC at
Boulder



Location:

Boulder, CO

Education



BS, Mechanical Engineering, University of Michigan
MS, Mechanical Engineering, University of Michigan



Type of Availability

Virtual



Preferred Audience

No Preference

Craig Merrett

Background

Dr. Merrett is a professor of Aeronautical Engineering at Clarkson University. He teaches courses in aircraft structures analysis and design, and conducts research on composite materials for advanced aircraft designs, wake effects for off-shore wind turbines, and flight data recorders for general aviation. Dr. Merrett started his career as an educator at Carleton University in Ottawa, Canada, upon receiving his PhD. He spent five years at Carleton University before joining Clarkson University in 2016. Dr. Merrett has supervised Master's and PhD students on a diverse range of research projects, such as: acoustics in caterpillars, flight data recorder design, off-shore wind power, and minimization of aircraft carbon dioxide emissions. Dr. Merrett is the chair of the Education Subcommittee of the Structures Technical Committee and a member of the Technology Working Group of the STEM K-12 Committee. He is active in virtual outreach activities through the Virtual Researcher on Call program in Canada, and the Nepris program in the United States.

Job Title:
Assistant Professor,
Clarkson University



Location:
Potsdam, NY

Education



PhD, Aerospace Engineering, University of Illinois at Urbana-Champaign

Type of Availability



Virtual

Preferred Audience



No Preference

Blake Morgan

Background

Lieutenant (Lt) Morgan is the Deputy Chief of the In-Space Propulsion Branch at the Air Force Research Laboratory's Rocket Propulsion Division located at Edwards AFB. He guides the execution of various science and engineering projects, both in-house and contractual, for the development and application of in-space chemical and electric thruster technology for U.S. Air Force. Prior to becoming the Deputy Chief, Lt Morgan was a Spacecraft Propulsion Research Engineer focusing on the development of green monopropellant engine technology. He primarily worked with AF-M315E, which is flying on a NASA spacecraft for the first time in early 2018. Alongside his duties as Deputy Chief, Lt Morgan currently serves as the program manager for a \$16M AF-M315E engine technology demonstration. Lt Morgan is the AIAA Outreach Technology Working Group Lead and is responsible for the management of the Distinguished Mentor Program. He is passionate about STEM, and has been involved with numerous STEM organizations throughout his military career.

Job Title:

Dep. Chief, In-Space
Propulsion Branch, Air
Force Research Lab



Location:

Lancaster, CA

Education



BS, Astronautical Engineering, United States Air Force Academy
MS, Astronautical Engineering, Air Force Institute of Technology



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

No Preference

Christopher Nie

Background

Chris Nie is a Systems Engineer at Lockheed Martin, Space Systems Company currently on rotation with Lockheed Martin Government Affairs (LMGA) in El Segundo, CA. His post with the LMGA field office focuses on customer relationship building with the Space and Missile Systems Center on Los Angeles Air Force Base. Mr. Nie started at Lockheed Martin in 2015 after graduating from the University of Colorado, Boulder. During his university career he gained experience through internships and projects in the fields of space life science research, robotics, environmental control and life support systems, human factors, and small satellites. Mr. Nie has been named one of Aviation Week's Twenty20s and rising leaders in Aerospace and Defense, and received the President's Volunteer Service Award multiple times for work in STEM outreach.

Job Title:
Systems/Test Engineer,
Lockheed Martin



Location:
Los Angeles, CA

Education



BS, Aerospace Engineering, University of Colorado at Boulder
MS, Aerospace Engineering, University of Colorado at Boulder



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

Elementary School

Jovita Pinto

Background

Ms. Pinto is currently working as a structural analyst on Building Construction Products at the Caterpillar CMDC facility in Clayton, North Carolina. Her interest in designing robust structures stems from the unfortunate loss of the Columbia Space Shuttle in Feb 2003. As a young woman interested in STEM from a very young age, she competed in several math and science olympiads in elementary school. She also worked as a tutor through her undergraduate program and as a Mathematics graduate teaching assistant in her masters' program. She is also currently involved with ChickTech-RDU Chapter, a non-profit organization geared towards increasing the number of women holding technology-based positions.

Job Title:

Structural Analyst, Belcan Engineering



Location:

Raleigh, NC

Education



BS, Aerospace Engineering, Embry-Riddle Aeronautical University MAE, Aerospace Engineering, Embry-Riddle Aeronautical University

Type of Availability



Virtual/In-Person (pending location and schedule)

Preferred Audience



No Preference

Benny Prats

Background

Mr. Prats is an Aerospace Engineer with eINFORME Inc., currently working projects on the NASA Mars Curiosity rover and the European Space Agency's ExoMars rover set for launch in 2020. Prior to working on the Curiosity and ExoMars rovers, Mr. Prats was involved with numerous other projects spanning a variety of domains. His work has taken him from designing subsonic wind tunnels for Ford and Chrysler, to testing the solar arrays on the International Space Station. Mr. Prats has extensive design and test experience covering both manned and unmanned aircraft and spacecraft. Mr. Prats is also fluent in Spanish.

Job Title:
Aerospace Engineer,
eINFORME



Location:
Washington, DC
(often travels to FL/CA)

Education



BS, Aerospace Engineering, University of Maryland

Type of Availability



Virtual/In-Person (pending location and schedule)

Preferred Audience



No Preference

James Senft

Background

Mr. Senft currently serves as the Director of the Central High School STEM Aviation Project, providing students with a unique venue for developing knowledge and skills in the area of STEM by building a Van's RV-12 aircraft. Outside of his work with Central High School, Mr. Senft is a private pilot, FAA Advanced Ground School Instructor, EAA Technology counselor, and commercial UAS pilot. He has a plethora of experience in building and restoring aircraft.

Job Title:

Director of Aviation,
Westosha Central High
School



Location:

Kenosha, WI

Education



BS, Chemistry and Physics, Northern Illinois University MS,
Aeronautical Science, Embry-Riddle Aeronautical University
MA, Curriculum and Instruction, National Louis University

Type of Availability



Virtual/In-Person (pending location and schedule)

Preferred Audience



High School

Lauren Smith

Background

Ms. Smith is a program manager for NG Next – a branch of Northrop Grumman tasked with solving its customers’ hardest problems and pursuing technologies that are often riskier, less well defined or non-existent. In this role, she leads pursuit and development of new space opportunities. She was previously the program manager of Quad Cup, the 2016 Northrop Grumman Sector Innovation Challenge. Under her leadership, Quad Cup brought together employees from across the country to compete in a quadcopter sporting event demonstrating critical technologies such as GPS-denied navigation and collision avoidance. Before Quad Cup, she was a concept development engineer for Northrop Grumman in San Diego working to invent novel autonomous systems and disruptive concepts spanning various missions. Before moving to the West Coast, Ms. Smith worked at NASA Glenn Research Center in Cleveland, Ohio, in the Simulated Lunar Operations (SLOPE) Lab. She also conducted her thesis research at Glenn and developed a patent-pending locomotion mechanism called the Tri-Wheel. The Tri-Wheel increases robot mobility on search and rescue vehicles; it also has extraterrestrial applications. This work contributed to her being named one of Aviation Week’s Twenty20s. Ms. Smith currently serves as the U.S. National Point of Contact for the Space Generation Advisory Council, an international non-profit that represents young space professionals to the United Nations. She is also the vice president of Caroline’s Project, a nonprofit that awards scholarships to girls who wish to attend STEM summer camps.

Job Title:

Program Manager, NG Next, Northrop Grumman Corporation



Location:

Redondo Beach, CA

Education



BS, Aerospace Engineering, Case Western Reserve University
BS, Mechanical Engineering, Case Western Reserve University
Minor, Political Science, Case Western Reserve University
MS, Mechanical Engineering, Case Western Reserve University



Type of Availability

Virtual/In-Person (pending location and schedule)



Preferred Audience

No Preference

Amanda Walkowicz

Background

Ms. Walkowicz is the current chair of the AIAA K-12 STEM Committee and a mechanical engineer with Pratt & Whitney. Her core responsibilities involve continuous improvement initiatives within the OEM and After market business units that encompass commercial and military jet engine repairs. Many projects involve the improvement of the Geared Turbo Fan (GTF) engines. While at Syracuse University, she served as the chair of the AIAA Syracuse University Student Branch for two years. While chair, her team worked to bridge the gap between the collegiate academic environment and the professional working world by hosting a myriad of networking events featuring professionals within the realm of Aerospace.

Job Title:
Mechanical Engineer,
Pratt & Whitney



Location:
Dallas, TX

Education



BS, Aerospace Engineering, Syracuse University
Minor, Engineering Business Management, Syracuse University

Type of Availability



Virtual/In-Person (pending location and schedule)

Preferred Audience



No Preference
