

2023



YPSE

YOUNG PROFESSIONALS
STUDENTS AND EDUCATORS

November 17-18, 2022

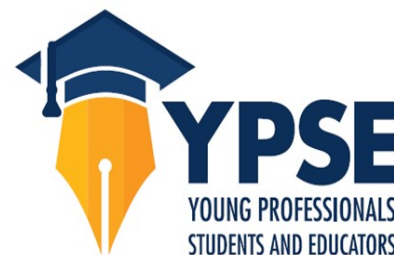
Kossiakoff Center

JHU/APL

Laurel, Maryland



Program



SAVE THE DATE

November 17-18, 2023

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Laurel, Maryland

Conference Website:

aiaaypse.com

AIAA Section Website:

**[https://engage.aiaa.org/
midatlantic/home](https://engage.aiaa.org/midatlantic/home)**



Follow Us!

Conference proceedings are NOT published and can be presented elsewhere. All abstracts are released to attendees. Conference sessions are unclassified and authors of sponsored work are requested to obtain sponsor clearance.

REGISTRATION

Registration is officially open! To register, visit aiaaypse.com/registration.

Abstract Submission Deadline:

October 20, 2023

Presentation Submission Deadline:

November 3, 2023

General Registration Deadline:

November 10, 2023

Register prior to **October 13, 2023** to receive a 20% discount off of the registration price with our Early Bird Deal!

EVENTS

Presentation Sessions: Presenters share their work on a wide variety of aerospace and Diversity, Equity and Inclusion (DEI) topics

Speakers: The 2023 YPSE Conference will include a DEI Keynote Speaker, Technical Keynote Speaker, and a Technical panel

Expo Hall: An Expo Hall will be held each day of the conference providing attendees an opportunity to network with prominent companies in the industry

ADDITIONAL DETAILS

For the presentation sessions, we are looking for 15 minute presentations in areas of interest to the aerospace community. Topics can be technical in nature or focus on DEI. Awards will be given to exceptional technical presentations. Complete papers are not required. Abstracts should be 250-500 words.

Please visit our conference website to stay up to date on conference details as they become available. Please send any questions, comments, or concerns to aiaa.midatlantic+YPSE@gmail.com.

Keynote Speakers

Technical Keynote: Rebekah Sosland Siegfriedt

Rebekah Sosland Siegfriedt received a B.S. in Aerospace Engineering from the University of Texas, Austin in 2013. She has operated 2 Mars Rovers during her 10 years at NASA's Jet Propulsion Laboratory; the Mars Exploration Rover, Opportunity and today, she operates Perseverance, the Mars rover that landed on February 18th 2021. Perseverance's mission is to search for signs of ancient life on Mars, collect Martian samples to be returned to Earth on a future Mars mission, and prepare for humans to go to Mars. She is the Deputy Team Chief for the Engineering Operations team that helps build instructions for the rover to execute on a daily basis and then analyzes the data when it returns to Earth to make sure Perseverance remains healthy and safe on the red planet. Not only is she a Mars robot operator but she is also the mom of 2 amazing children, Milo and Luna.



DEI Keynote: Dr. Joi C. Spraggins

Dr. Joi C. Spraggins is recognized as a legacy leadership expert in global diversity inclusion, leadership development, communications, workforce development, public policy, NASA STEM and community engagement. Dr. Spraggins is a NSBE Life-Time Member and 2018 recipient of the NSBE Technical Excellence Ambassador Award. As a NSBE Aerospace Ambassador SIG and a member of the NSBE Public Policy Leadership Team, she advocates for greater diversity and inclusion for women/girls, minorities and veterans in aviation/ aerospace, scientific research, systems thinking and private/public sector HBCU Partnerships. Dr. Spraggins serves as the AIAA Greater Philadelphia Section Public Policy Officer and sits on the AIAA National Diversity Working Group Committee.



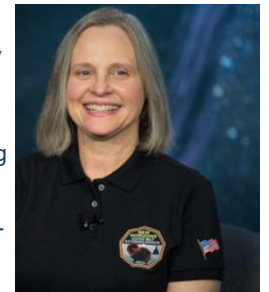
Technical Panelists (1/2)

Elena Adams is a member of APL's Principal Professional Staff. She is the Deputy Missions Systems Engineer on NASA Dragonfly Mission, and just finished her role as a Mission Systems and the Spacecraft Systems Engineer for the Double Asteroid Redirect Mission (DART), which impacted an asteroid on September 26, 2022. As a postdoctoral researcher, she worked on the Microwave Radiometer (MWR) instrument for NASA's Juno mission. Since coming to APL, Dr. Adams has served as an instrument systems engineer for the Van Allen Probes, an instrument scientist for the ExoMars Mars Organic Molecule Analyzer (MOMA) instrument, the Deputy Project Systems Engineer for the Europa Clipper mission, and the Payload Systems Engineer for the Parker Solar Probe mission. She has worked with NASA's Planetary Defense Coordination Office on a survey study of near-Earth objects and with the National Oceanic and Atmospheric Administration on the future of space-based architectures. She was a Principal Investigator for multiple new technology grants from NASA, including projects to develop a low-gravity hopper for asteroids (the Planetary Object Geophysical Observer, or POGO) and a sampling system for Enceladus plumes (the Enceladus Funnel, or EFUN). She has a B.S. in applied mathematics from the University of Virginia and an M.S. and Ph.D. in atmospheric, oceanic, and space sciences and an M.E. in space systems from the University of Michigan.



Mission and Spacecraft Systems Engineer for NASA DART Mission, Formulation and New Opportunities Lead at the Johns Hopkins Applied Physics Lab

Alice Bowman is a member of the Principal Professional Staff at the Johns Hopkins Applied Physics Laboratory (APL) in Laurel, Maryland. She is the Space Mission Operations Group supervisor and the NASA New Horizons mission operations manager (MOM). She supervises approximately 50 staff members who operate deep space and Earth-orbiting spacecraft, including NASA's TIMED, STEREO, New Horizons, Parker Solar Probe, and recently DART. Ms. Bowman's experience also includes national defense space operations, systems engineering, program management, space systems, and space instrument development. Ms. Bowman has a degree in chemistry and physics from the University of Virginia and has more than 30 years of experience in space operations. Asteroid 146040 Alicebowman, discovered by Marc Buie in 2000, is named after her. She is a member of the Society of Women Engineers – which recently presented her with its prestigious Resnick Challenger Medal – as well as an AIAA Associate Fellow, and has served on the International SpaceOps Committee since 2009.



New Horizons Mission Operations Manager, Space Mission Operations Group Supervisor at the Johns Hopkins Applied Physics Lab

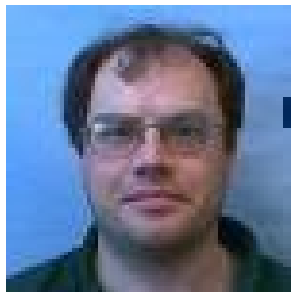
Technical Panelists (2/2)

Andrew S. Driesman has served as the managing executive for the Space Exploration Sector at the Johns Hopkins Applied Physics Laboratory (APL) since 2020. The sector provides innovative solutions to critical civil and national security space problems. Mr. Driesman oversees approximately 1,200 technical and scientific staff within the sector and is responsible for ensuring the performance and quality of the sector's technical products, research, and services, while creating a work environment that promotes innovation and diversity of thought. Mr. Driesman has a bachelor's degree in electrical engineering and geological sciences from Tufts University and a master's degree in technical management from the Johns Hopkins University. He has over 35 years of experience at APL, the National Oceanic and Atmospheric Administration, and the Air Force Research Laboratory providing systems engineering solutions and managing complex space missions for the civil and national security space communities.



**Parker Solar Probe
Program Manager,
Managing Executive
for the Johns Hopkins
Applied Physics Lab
Space Sector**

Ralph Lorenz is a planetary scientist at the Johns Hopkins Applied Physics Lab, specializing in the interaction of vehicles and instruments with planetary surfaces and atmospheres. He is associated with NASA's InSight and Perseverance missions at Mars, the Japanese Venus climate orbiter Akatsuki and the DAVINCI Venus probe Discovery mission presently in development. He worked for the European Space Agency as an engineer on the design of the Huygens probe to Titan, planned Cassini's radar observations of that world, and is the Mission Architect and Geophysics/Meteorology Lead for the Dragonfly New Frontiers mission. He has over 300 refereed journal publications and has authored ten books. These include "Titan Unveiled", "Spinning Flight", "Space Systems Failures", and most recently "Planetary Exploration with Ingenuity and Dragonfly: Rotary Wing Flight on Mars and Titan" published by the AIAA.



**Dragonfly Mission
Architect, Planetary
Scientist at the
Johns Hopkins Ap-
plied Physics Lab**

Conference Schedule

Friday, November 17th	
7:45 AM	Registration and Breakfast
8:45 AM	Opening Remarks
9:00 AM	Session 1
10:20 AM	Break
10:30 AM	Session 2
12:10 PM	Lunch + Expo Hall
1:30 PM	Session 3
3:15 PM	DEI Keynote
5:00 PM	Happy Hour

Saturday, November 18th	
8:00 AM	Registration and Breakfast
9:00 AM	Technical Panel
10:15 AM	Break
10:30 AM	Session 4
12:10 PM	Lunch + Expo Hall
1:30 PM	Session 5
2:50 PM	Break
3:00 PM	Technical Keynote
4:15 PM	Awards