

2025 IEEE Aerospace Conference



Yellowstone Conference Center, Big Sky, Montana March 1-8, 2025

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SCHEDULE AND PROGRAM

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SYSTEMS ENGINEERING





Space Systems Engineering

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FRONT COVER – Lunar Earthrise seen by the ispace Hakuto-R mission during the solar eclipse of April 20, 2023 captured by the lander-mounted camera at an altitude of about 100 km from the lunar surface. The Hakuto-R Mission 1 was a failed private Japanese uncrewed lunar landing mission built and operated by ispace, which was launched in December 2022 for an attempted lunar landing on April 26, 2023. In an effort to conserve fuel, the mission used a slower path to approach the Moon, entering lunar orbit in March 2023. Photo Credit: ispace.

CONFERENCE CONTACTS*

Best Paper





Kendra Cook[1]

CHAIR

Richard

Mattingly^[5]

SOCIAL PROGRAM

& NETWORKING



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TECHNICAL PROGRAM



VICE CHAIR

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David Woerner





Bob Minnichelli^[3]



Lisa May





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Sebastian **Brandhorst**







SECRETARY



Shambayati







Justin

CONFERENCE HISTORIAN



Monica Panno







Dane Virgil Irvine Adumitroaie ***ADDITIONAL ROLES DETAILED ON PAGE 27**



Jackson



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Maddalena

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Sherwood



Minnichelli

WEBSITE SUPPORT



Jessica Millenbach

Mona Witkowski^[10]

RECORDING



Shervin















Julie

Profet_[9]

Joey

Minnichelli





WELCOME RECEPTION

Saturday, March 1, 2025 (6:30–9:00 PM) Registration & Icebreaker – Wine & Cheese Party

Conference Center, Grand Atrium

REGISTRATION OFFICE HOURS

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
6:30 – 9:00 PM	8:45 - 10:00 AM 4:00 - 6:45 PM	8:15 - 10:00 AM 4:00 - 6:45 PM	8:15 – 10:00 AM	8:15 - 10:00 AM 4:00 - 6:45 PM	8:15 – 9:30 AM 4:00 – 6:45 PM	8:15 – 9:30 AM











FLOOR PLAN OF THE CONFERENCE VENUE



CONFERENCE EVENTS

	Full Registration	Exhibitors	Guests
Welcome reception	X	X	X
Access to all sessions	Х		
Digest and Proceedings	Х		
Java Jam	Х	Х	Х
Pre-dinner hosted receptions	X	Х	Х
Scheduled dinners	Х	Х	Х
Fireside Cheer & Chat	X	Х	Х
Electronic Presentation Hall	Х	Х	Х
Presentation Workshop	X		
Access to Exhibits	X	X	Х
Junior Engineering & Science Conference	Х	X	Х
Farewell party	X	X	X

YOUR 2025 IEEE AEROSPACE CONFERENCE BADGE ADMITS YOU TO:

JAVA JAM

Link up with colleagues and refresh for the late afternoon sessions with hot coffee, tea, or cocoa at the Java Jam in the Grand Atrium. (See Floor Plan of the Conference Venue on page 5.)

FIRESIDE CHEER AND CHAT

When the evening's sessions are over, it's time to wind down with some camaraderie next to the fireplace in the Sunken Lounge. (See Floor Plan of the Conference Venue on page 5.) Have a bowl of ice cream with toppings, a cup of coffee or tea, and relaxing conversation with friends to prepare for a great night's sleep in the Rockies.

ELECTRONIC PRESENTATION HALL (EPH)

EPH presentations are available to attendees through our website (<u>https://aeroconf.org/eph_papers</u>) throughout the conference week.

PRESENTATION WORKSHOP

This free workshop, conducted by Caltech (see schedule for time and location) can help technical professionals improve their presentation skills, conveying technical concepts clearly, persuasively, and memorably. Participants will gain practical skills for ensuring their presentations captivate and resonate with diverse stakeholders. You must sign up on the conference bulletin board.

EXHIBITS

Exhibit booths are set up along the corridor in the Lower Atrium and in the Upper Atrium. (See the Floor Plan of the Conference Venue on page 5 and the Exhibitor Map on page 41.) Come check out our exhibitor displays and chat with the exhibitor reps about their offerings!

JUNIOR ENGINEERING & SCIENCE CONFERENCE

The Junior Conference is our forum for students in first grade through high school. They present technical papers on their ideas, reasoning, field work, research, experiments, inventions, or topical surveys. Come be amazed by the quality, originality and inquisitiveness of these kids. One session this year, Tuesday 1:15-4:00 in the Madison Room.

FAREWELL PARTY

It's Friday night. The last paper has been given; the final panel has concluded. Sponsors have closed their exhibits. You've turned in your Evaluation Forms and perhaps volunteered for a role in the 2026 Conference. It's time to say goodbye to colleagues new and old at our final gala Farewell Party. The buffet dinner begins at 7:00 pm upstairs in the Mountain Mall. **See you there!**

BADGES MUST BE WORN AT ALL EVENTS!



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Contact Us: Science Instruments zachary.olson@swri.org

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Schedule & Program | 🚸 📕 📕 E E Aerospace Conference | 7

SUNDAY, MARCH 2 - AFTERNOON AND EVENING					
	Amphitheatre	Jefferson	Madison	Gallatin	
	Electronic Presentat	ion Hall (EPH) Everyd	lay (see page 26 for a l	list of papers)	
3:05 PM					
4:00 PM		JAVA	JAM		
4:30 PM	8.0105 A Pathway to the Moon: Marshall Space Flight Center's Human Landing Systems - Kent Chojnacki	2.0112 Near-Earth Object Surveyor Project Progress towards CDR - Tom Hoffman	2.0905 Satellite Initial Positioning Optimization for Passive Multi- Debris Approaches - Giusy Falcone	4.0103 Comprehensive Analysis of Recent LEO Satellite Constellations : Capabilities & Innovative Trends - Behzad Koosha	
4:55 PM	8.0106 Lunar Engineering 101 - Milena Graziano	2.0104 System Engineering Implementation of the Investigation of Convective Updrafts (INCUS) Mission - Alex Austin	2.0908 The MMOD Hypervelocity Impact Modeling Approach for Dragonfly - Yasin Abul-Huda	4.0201 High-performance DTN Using Larger Packets - Fred Templin	
5:20 PM	8.0108 Progress in Planetary Protection Development for Crewed Mars Missions - James Spry	2.0103 Venus Probe Architecture - Robin Ripley	Plenary Setup & Testing	4.0203 Precision Time Protocol at Picosecond Scale over Asynchronous Ethernet - Alexander Utter	
5:50 PM	E Mich	Dancing Robots and the The Dark Energy Spe ael Levi, Lawrence Be	e Accelerating Univers ectroscopic Instrument rkeley National Labor	e: : :atory	
6:35 PM	HOS	STED RECEPTION i	n the GRAND ATRI	UM	
7:05 PM		DINNER in the M	AIN BALLROOM		
8:05 PM	Kakani	FathomVerse: Ex Katija, Monterey Bay	xplore the Depths Aquarium Research	Institute	
9:00 PM	8.0301 Recovery of Rocket Payloads and First Stages Using Unmanned Vehicles - a Proof-of- concept - Kristoffer Gryte	2.0107 The Endurance Mission Progress - John Baker	2.0901 Regulating Orbital Decay through Passive Thermochromism in PMPEs for Orbital Debris Remediation - Joseph Ivarson	4.0204 Security Challenges in Space-based Delay Tolerant Networks - Mohammad Salam	
9:25 PM	8.0302 Modelling Thrust for ABS/N20 Based 3D Printed Hybrid Rocket Engine - Review of Static Fire Results - Pratush Charan Donkada	2.0113 Mission Status and Initial Results from the Surface Water and Ocean Topography Project - Parag Vaze	2.0904 Intelligent Small Satellite Swarm Control System for Avoiding in Space Debris - Evan Finnigan	4.0205 Multicast Communications with Uplink Broadcast in a Proliferated Low Earth Orbit Satellite Network - Aradhana Narula-Tam	
9:50 PM		2.0105 Weather System Follow-on - Microwave (WSF-M) Mission Overview - Bailey Moser Smith		4.0206 PRABR: Integrating Primary and Backup Routing in pLEO Satellite Networks - Collin Brady	
10:15 PM		Fireside	e Cheer		

SUNDAY, MARCH 2 - AFTERNOON AND EVENING						
Lake/Canyon	Lamar/Gibbon	Dunraven	Cheyenne			
	resentation Workshop (hosted by altech) Extended Hours 9:00			2:40 PM		
	-12:00 am 1:00 - 3:45 pm - Mike Ash, Rick Hefner			3:05 PM		
	JAVA	JAM		4:00 PM		
5.0102 Distributed Space System Architecture to Enable Rapid Technology Development - Carlos Maldonado	6.0101 Prototype Testing of the AMR-CR Instrument: Drivers, Implementation, and Results - Lena Siskind	12.0105 Planning and Executing Psyche's First Post-Launch Flight Software Update - Shubhodeep Mukherji	10.0101 Accurate, GPU Accelerated Solar Radiation Pressure Modeling for Exoatmosphere Trajectory Simulation - Vivian Steyert	4:30 PM		
5.0104 The Pandora SmallSat: A Low-Cost, High Impact Mission to Study Exoplanets and Their Host Stars - Thomas Barclay Track 05 Best Paper	6.0102 Deep RL for UAV Energy and Coverage Optimization in 6G- Based IoT Remote Sensing Networks - Yonatan melese Worku	12.0107 The MSL Marathon: Ensuring Uninterrupted Rover Activities in a Dynamic Institutional Environment - Stephanie Oij	10.0103 Analysis of Various Injector Shapes to Improve Air- Fuel Mixing inside a Scramjet Combustor - Alhanouf Eshtairy	4:55 PM		
5.0105 From One Unit Tech Demo to Three Unit Class D Constellation: Ops Lessons from RainCube to INCUS DAR - Shivani Joshi	6.0103 The Psyche Multispectral Imager Flight Software Interface - Haley Bates-Tarasewicz	12.0201 Innovations in Mission and Sleep Planning in the NASA Artemis Campaign: HYPNOS - Adam Garrett	10.0105 Dshell-DARTS: A Reusability-focused Multi-mission Aerospace and Robotics Simulation Toolkit - Juan Garcia Bonilla	5:20 PM		
I Mich	Dancing Robots and th The Dark Energy Spo aael Levi, Lawrence Be	e Accelerating Univers ectroscopic Instrument erkeley National Labor	e: atory	5:50 PM		
HOS	STED RECEPTION	in the GRAND ATRI	UM	6:35 PM		
	DINNER in the M	AIN BALLROOM		7:05 PM		
Kakani	FathomVerse: Ex Katija, Monterey Bay	xplore the Depths	Institute	8:05 PM		
5.0101 DiskSat Demo Mission: New Paradigm in Small Satellite Architectures - Catherine Venturini	6.0104 Payload System Design, I&T and V&V Challenges for an Academically Centered Flight Instrument - Sara Susca	12.0202 Mars Perseverance Rover's Exploration from the Delta Floor to Crater Rim - Vandi Verma Track 12 Best Paper	10.0107 Digital Lunar Exploration Sites (DLES) Terrain Crafting - Cory Foreman	9:00 PM		
5.0107 Integration and Delivery of the Deployable Optical Receiver Aperture (DORA) Cubesat - Daniel Jacobs	6.0201 Europa Clipper Payload Accommodation Overview and Lessons Learned - Greta Studier	12.0203 Optimal Ground Station Selection for Low-Earth Orbiting Satellites - Duncan Eddy	10.0109 Quantum Computing Use Cases & Impacts for Aerospace Industry - Charles Chung	9:25 PM		
5.0109 Multispectral and Submetric Earth Observation Optical Payload for Micro Satellite Platform - Xavier Lopez	6.0205 Nonlinear Effects of Loosely Constrained Deployable Mass on Instrument Dynamic Testing and Analysis - Ryan Sorensen	12.0204 Evolution of Earth Satellite Multi-Mission Flight Operations at the Jet Propulsion Laboratory - Mark Fujishin	10.0110 Development of Spacecraft Molecular Accumulation and Contamination Kinetics Simulator (SMACKS) - Maxwell Martin	9:50 PM		
	Firesid	e Cheer		10:15 PM		

Schedule & Program | � IEEE Aerospace Conference | 9

MONDAY, MARCH 3 - MORNING AND EARLY AFTERNOON						
	Amphitheatre	Jefferson	Madison	Gallatin		
8:30 AM	8.0201 An Evaluation of the IEEE Std 1547-2018 for Power Systems Interconnected on Lunar Habitats - James Hurtt	2.0102 Results and Lessons Learned from the Psyche Mission Launch and Solar Array Deployment - Travis Imken	2.1102 The Communication and Computation Architecture for a Universal Space Robotic Joint - Ferdinand Elhardt	Keynote 4.03: Terrestrial-Non- Terrestrial Network integration in the framework of emerging 6G visions: the Euro Claudio Sacchi		
8:55 AM	8.0202 Moon BRICCSS: Moon Blocks Using Regolith ISRU for Corbelled Construction of Sustainable Shielding - Palak Patel	2.0110 Anomalies on the Psyche Mission: Fault Protection Performance and Lessons Learned - Virginia Sereno	2.1107 Design and Characterization of a Testbed Simulator for In-Space Robotics - Eddie Hilburn	4.0301 Airborne Quantum Key Distribution with Boundary Layer Effects and Mach Number - Abdelkrim Menina		
9:20 AM	8.0401 Blue Ring Spacecraft Adaptation for Large Payload Delivery, Hosting, and Relay Services at Mars - Thomas Randolph	2.0111 GRACE-C Mission Overview - Neil Dahya	2.1108 Planning for In-Space Robotic Assembly of Modular CubeSats - Leila Freitag	4.0303 Evaluating Performance in LEO Satellite Communication Networks: NS3-Based Simulation Study - Nour Badini		
9:45 AM	8.0402 The Commercial Lunar Payload Services Initiative - Paul Niles	2.0115 Contingency Decontamination Utilizing Pointing Maneuvers for the Cryogenic SPHEREx Mission - John Alred	2.1113 Towards Robust Spacecraft Trajectory Optimization via Transformers - Yuji Takubo	4.0304 Federated Learning and MEC for Disaggregated RAN Monitoring in the 5G Non- Terrestrial Networks - Yonatan melese Worku		
10:10 AM	6.0304 MethaneSAT On-Orbit Lunar Calibrations Planning - Maya Nasr	2.0108 The PACE Ocean Color Instrument (OCI): From Concept to Commissioning - Robert Estep	2.1114 A Gaussian Mixture Model for Probabilistic Workspace Generation of Multibody Systems - Nate Osikowicz	4.0305 Reliable Heterogeneous Multi-Node Quantum Networks for Future 6G Communication - Abdelkrim Menina		
10:35 AM		2.0106 Systems Engineering Lessons from NASA's Plankton, Aerosol, Cloud, Ocean Ecosystem (PACE) Mission - Gary Davis	2.1115 Capturing Tumbling Objects in Orbit with Adaptive Tube Model Predictive Control - Aaron John Sabu	4.0401 Acquiring Precision Doppler Measurements with Juno's Ka-band Translator for Increased Science - Dustin Buccino		
11:00 AM		2.0116 Achieving Stability: Systems Design and Analysis Process of the Roman Space Telescope - James Govern	2.1117 Origami-inspired Structural System for In-space Assembly - Megan Ochalek	4.0402 Hybrid Lunar Satellite and Cooperative Surface Navigation: A Distributed Estimation Perspective - Robert Pochlmann		
11:25 AM	14.03 PANEL: Small Satellite Trending – Past, Present and Future (11:25 - 12:20) - Kara O'Donnell Nicela Fondse	2.0201 Starship as an Enabling Option for a Uranus Flagship Mission - Daniel Gochenaur	2.1121 Architecting Autonomy for Safe Microgravity Free-Flyer Inspection - Keenan Albee			
11:50 AM	Stephen Shinn, Lee Jasper, Michael Sanders, Michael Swartwout, Kerianne Hobbs	2.0202 Uranus Orbiter and Probe: A Novel Approach to Meet the Challenges - Alfred Nash	2.1125 In-Space Manufacturing for Flexible Membranes: Process, Applications, and Vacuum Test Insights - Michael Kringer			
1:00 PM	14.05 PANEL: MSR Engineering					
1:25 PM	Challenges and Direction Forward - Lindsay Hays, Andrea Harrington, Steven Lee, Rachel McCauley, Suparna Mukherjee, Steve Thibault, Adam Steltzner					
1:50 PM						
2:15 PM	14.07 PANEL: Mars Exploration Program Future Plan - Tiffany Morgan, Steve Matousek, Lindsay Hays, Erica Montbach	JUNIOR ENGINEE	RING & SCIENCE CONF	ERENCE - Practice		

MONDAY, MARCH 3 - MORNING AND EARLY AFTERNOON						
Lake/Canyon	Lamar/Gibbon	Dunraven	Cheyenne			
5.0202 Small Satellite Mission Design for Robotic Assembly and Reconfiguration of Mechanical Metamaterials - Ashley Kline	6.0501 Linear Gaussian Models in Target Tracking - Stefano Coraluppi	12.0205 Dynamic Mission Assurance of Autonomous Distributed Satellite Systems - Samuel Hilton	10.0112 A Decoupled Approach to Fluid-Thermal Coupling in High- Speed Flow with Convection Boundary Condition - Gorkem Atay	8:30 AM		
5.0204 Cost-Effective Very Low Earth Orbit Mission for Atmospheric Science - Jose Pedro Ferreira	6.0502 Bayesian Decision-Level Fusion Algorithm for Addressing Correlated Inputs - Craig Agate	12.0206 Improving Sequence Traceability during Testing and Review for the Mars Science Laboratory - Jonathan Denison	10.0203 Removing the Design from the Simulation Speeds DO- 254 Pre-silicon Verification - Hamilton Carter	8:55 AM		
5.0207 Multimode Propulsion: Cislunar Rideshare Mission Concept Trade Space Analysis for Small Spacecraft - Tyler Presser	6.0503 Multiple-Hypothesis Tracking with Unframed Sensor Measurements - Stefano Coraluppi	12.0302 South Pole Lunar Lighting Effecting Lunar Rover Driving - Harry Litaker	10.0205 Enabling Interoperable Digital Twins for Collaborative Lunar Exploration - Subhobrata Chakraborty	9:20 AM		
5.0302 Avionics Design Architecture for Low-Cost CubeSat Missions and Lessons Learned from R5-S2 and R5-S4 - Kathryn Knesek	3.0101 Modeling the Performance of Beam Forming Software Defined Geostationary Communication Satellites - Roland Burton	12.0303 Lunar Terrain Vehicle (LTV) Remote Teleoperation Studies under Four Lunar Communication Latencies - Harry Litaker	10.0301 Software for the SpaceDREAM Robotic Arm - Maximilian Mühlbauer	9:45 AM		
5.0303 Operational Challenges and Achievements of the OPS- SAT-1 Mission - Georges Labrèche	3.0102 Modelling of IMDs from a Multiple Beams Transmitter under Antennas Crosstalk Conditions - Aymeric Cailleux	12.0501 A Review of Automation in Small Satellite Operations - Joseph Melville	10.0303 A Physics-based Sensor Simulation Environment for Lunar Ground Operations - Dan Negrut	10:10 AM		
5.0304 OPS-SAT-1's Final Orbits and Reentry Analysis amid Mission Extension Attempts - Georges Labrèche	3.0203 Polarization-Insensitive, Highly-Selective Metasurface- Based Filtenna for Satcom Applications - Ashifa Mohammed Musthafa	12.0503 Detecting Changes in Long-Term UHF Relay Communications Performance for Mars Surface Rovers - Ryan Mukai	10.0306 System Architecture for the Humanoid Robot Rollin' Justin in Context of the Surface Avatar Mission - Adrian Bauer	10:35 AM		
5.0306 Lessons Learned from the NASA TROPICS CubeSat Constellation Mission - Andrew Cunningham	3.0204 Spiral Wrapped Antenna Technology - Jenna Commisso	12.0401 Assured Spacecraft Autonomy - Sherry Neher	10.0307 Evaluating Flight Software Effort Estimation and Reusability Approaches for Planetary Exploration - Sarkis Mikaelian	11:00 AM		
		12.0404 Enhancing Satellite Cybersecurity through FPGA- Based Secure Boot - Nicole Webb	10.0401 Developing a Spacecraft Digital Twin to Parallelize Flight Software and Hardware Development - Ruth Adams	11:25 AM		
		12.0406 Pathfinding the Future of Spacecraft Protection with Project- Specific Threat Impact Assessments - Kendra Cook		11:50 AM		
				1:00 PM		
	Presentation Workshon (hosted by			1:25 PM		
	Caltech) - Rick Hefner, Mike Ash			1:50 PM		
				2:15 PM		

MONDAY, MARCH 3 - AFTERNOON AND EVENING						
	Amphitheatre	Jefferson	Madison	Gallatin		
4:00 PM		JAVA	JAM			
4:30 PM		2.0203 Ultra-Violet Exoplanet Explorer - Peter Wurz		4.0404 Implementation of Regenerative Ranging for Low SNR Scenarios for Software- Defined-Radios - Lindsay White		
4:55 PM	14.02 PANEL: Emerging Technologies for Mars Exploration - Larry Matthies, Vandi Verma, Laura Kerber, Michael McHenry, William Reid	2.0205 Technology Supporting the GRACE-C Mission and Other Mass Change Designated Observable Missions - Stephen Bennett		4.0501 Optimal Satellite Network Topology Design with Time- Dependent Traffic Demands - David Williams Rogers		
5:20 PM	-	2.0206 Uranus Cruise and Tour Design Impacts on Science Cost and Risk - Damon Landau	Plenary Setup & Testing			
5:50 PM	Seeing the Spectrum of the Universe in Gravitational Wave Sebastian Ellis, University of Geneva					
6:35 PM	HOS	STED RECEPTION i	n the GRAND ATRI	UM		
7:05 PM		DINNER in the M	AIN BALLROOM			
8:05 PM	Engaging	Engineers through Mo and Creativ Ben Zevenbe	oral Imagination, Scien ve Diagrams ergen, Google	ice Fiction,		
9:00 PM		2.0209 EnVision Radio Science and Altimetric Data Processing for Orbit Determination - Tommaso Torrini		4.0502 Onboard Processing for LunaNet Data Services - Jon Verville		
9:25 PM		2.0210 The Chromospheric Magnetism Explorer (CMEx) Mission Concept - BIII Kalinowski		4.0503 Investigation of Multipath Effects on Mars Relay Network Overflights - Marc Sanchez Net		
9:50 PM		2.0211 Conceptual Mission to Dim the Sun (DimSun) Using Controllable Swarm of Smallbody Regolith Particles - Amir Rahmani		7.0901 Pulsed Laser as a Single Event Effects Screening Technique an Introduction - George Ott		
10:15 PM		Fireside	Cheer			

MONDAY, MARCH 3 - AFTERNOON AND EVENING						
Lake/Canyon	Lamar/Gibbon	Dunraven	Cheyenne			
	JAVA JAM					
5.0308 On-Orbit Performance and Lessons Learned for Autonomous Angles-Only Navigation of a Satellite Swarm - Justin Kruger	6.0702 Extended Object Tracking Using a Gaussian Process Extent Model and Scene Flow-LiDAR Fusion - Steffen Folaasen	12.0601 Look Mob, No Hands! Automating Mobility Downlink for the Mars Science Laboratory - Peter Rollins	10.0403 Enhancing Aerospace Software Quality with Automated Code Review - Jeremy Ludwig	4:30 PM		
5.0402 Building a CubeSat Capstone for Master's Students - Luke Korth	6.0703 Advances in Modeling the Performance of Multitarget Tracking Systems - James Helferty	12.0604 The IPEx Autonomy Test- Site: Terrestrial Testing of Excavation in Lunar South Pole Conditions - Joseph Cloud	10.0404 Sustainability of Flight Software for Multi-Generational Time Periods - Robert Klar	4:55 PM		
5.0403 Applying DiskSat Concept to Small Satellite Education Programs - Michael Sanders	6.0704 An N-Observation Modification to Gooding's Method for Initial Orbit Determination - Daniel Doscher	12.0605 Cooperation and Coordination Principles for Icy Moon Exploration with Autonomous Multi-Robot Systems - Andrzej Skulimowski	10.0513 Implementing Artificial Thinking Autonomy with Model- Based Systems Engineering - Mitchell Kirshner	5:20 PM		
Seeing	the Spectrum of the U Sebastian Ellis, Ur	niverse in Gravitationa niversity of Geneva	al Wave	5:50 PM		
HO	STED RECEPTION	in the GRAND ATRI	UM	6:35 PM		
	DINNER in the M	AIN BALLROOM		7:05 PM		
Engaging	Engineers through Me and Creatin Ben Zevenbe	oral Imagination, Scier ve Diagrams ergen, Google	nce Fiction,	8:05 PM		
5.0504 Predicting the Expected Amount of Observable Space Debris with an SSA Capable Star Tracker Thijs Verhaeghe	6.0801 Developing an Edge Computing Architecture for a Lunar Dust Recognition System - Carmen Misa Moreira	12.0606 Enabling Verification of Language Instructions through Bidirectional Communication for Astrobee - Joshua Choi	10.0501 A Simulation Study of the Completion Time of the Endurance Mission - Jeffrey Tsang	9:00 PM		
5.0505 Development of an Extreme Ultraviolet Imager for the Sun Coronal Ejection Tracker (SunCET) CubeSat - Evan Burger	6.0804 Topologically Informed Unified Adaptive Multimodal Data Fusion Designs for Auto. Target Recognition - Paul Schrader	12.0610 The Safe Trusted Autonomy for Responsible Space Program - Kerianne Hobbs	10.0502 An Application for Model-Based Guided Engineering (MBGE) - Melinda Ong	9:25 PM		
				9:50 PM		
Fireside Cheer						

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TUESDAY, MARCH 4 - MORNING AND EARLY AFTERNOON					
	Amphitheatre	Jefferson	Madison	Gallatin	
8:30 AM		2.0212 Survey of Mission Concepts for Exploring the Dark Ages Universe - Keenan Albee	7.0101 Shihab-1: A Cost-Effective Spacecraft On-board Computer with Machine Learning Capabilities - Alexey Simonov	4.1102 A Unified Software- Defined Radio Framework for Flexible Waveform Design in Non-Terrestrial Networks - Claudio Sacchi	
8:55 AM	8:11 PANEL: Nuclear Propulsion Systems - Opportunities and Barriers - Kurt Polzin, Timothy Cichan, Kate Kelly, Thomas Nix, Patrick Frye	2.0306 Landing Trajectory Tracking Guidance for Reusable Launch Vehicle Using MPC with SOCP - Da-Hwi Kim	7.0105 Runway Detection Using a Modified DeeplabV3+ Segmentation Neural Network for Space Applications - Douglas Carssow	4.1103 Prototyping Cooperative Radio Navigation for Planetary Exploration with Software-Defined Radios - Robert Poehlmann	
9:20 AM		2.0307 Powered Descent Guidance via Sequential Convex Programming with Constraint Function Design - Jaell Jang	7.0106 The JPL Snapdragon Co- Processor: A Compact High- performance Computer for Spaceflight Applications - Dennis Ogbe	4.1105 K/Ka-Band Space-Flight Reprogrammable and Flexible Communications - Frontier Radio - Multi-Lingual - Matthew Angert	
9:45 AM		2.0309 Approaches for Guidance & Control Distribution for Powered Descent of Chandrayaan- 3 - CHIRANJIB GUHA MAJUMDER	7.0201 SpaceFibre Onboard Interconnect: From Standard, through Demonstration to Space Flight - Steve Parkes	4.1107 Fast Software Implementation of a CCSDS LDPC Encoder - Eugene Grayver	
10:10 AM	8.12 PANEL: Radioisotope Power Systems – Expanding Our Reach - June Zakrajsek, Leo Gard, Jacob Matthews, Patrick Frye, Vincent Bilardo, Hannah Sargeant	9.0202 Station Keeping Vented Solar High-Altitude Balloons with Deep Reinforcement Learning - Tristan Schuler	7.0202 Titan Bound: The FPGA SoC Design of the Navigation Coprocessor Controller - Matthew Gile	4.1108 USRP Implementation and Verification of GNSS Multi- Carrier Broadband Waveforms - Dan Shen	
10:35 AM		9.0208 Autonomous Identification and Localization of Battle Damage on Aircraft Using Infrared-based Sensors - David Ke Track 09 Best Paper	7.0204 SpaceFibre IP Cores for Fast Adoption of Next-Gen FPGA Communication Architectures - Alberto Gonzalez Villafranca	4.1109 Testset for Cis-Lunar Communications and Navigation - Jon Verville	
11:00 AM	8.13 PANEL: Radioisotope Systems - Advancing Early Lunar Science Capabilities (extends to				
11:25 AM	12:10) - Milena Graziano, Vincent Bilardo, Jacob Matthews, Stephen Indyk				
12:00 PM	LUNCH in the HUNTLEY DINING ROOM Noon-1:30 PM				
1:15 PM	JUNIO	R ENGINEERING & 1:15 - 4:00 PM in the	SCIENCE CONFE	RENCE	



TUESDAY, MARCH 4 - MORNING AND EARLY AFTERNOON							
Lake/Canyon	Lamar/Gibbon	Dunraven	Cheyenne				
5.0507 CubeSat Laser Infrared CrosslinK Mission Development Status - Paige Forester	3.0302 Low SWaP X-Band Transceiver for Deep Space Applications - Lucas Wray	12.0612 Toward Robust Task Execution through Telerobotic Failure Recovery in Space Operations - Anne Köpken	10.0508 Application of Model- based Approaches for Earth- Observation Missions - Fatma Karagoz	8:30 AM			
5.0601 Silicon Photomultipliers Implemented as Free Space Optical Communication Sensors - Leonardo Gallo	3.0305 Measurements of Scattering Characteristics of Lunar Regolith for Radio Propagation Analysis - Kento Kimura	12.0613 A Platform for Autonomous Lunar Rover Rescue - David McDougall	10.0511 Application of Artificial Intelligence to Model Based Systems Engineering: Initial Case Studies - Matthew Cotter	8:55 AM			
5.0603 1U Membrane-based Deployable Solar Array Engineering Model Testing - Tom Sproewitz	3.0401 Pathfinding Low Frequency Radio Astronomy with the DORA Radio Background Experiment - Daniel Jacobs Track 03 Best Paper	12.0615 Endurance Rover Sample Return Mission: Challenges and Strategies for Long-Range Lunar Exploration - Richard Kornfeld	10.0512 Applying Model-Based Systems Engineering on CubeSat Budget Calculating - Ahmad Jbara	9:20 AM			
5.0604 Efficient GNSS-Based Attitude Determination and Integer Ambiguity Resolution for 3U CubeSats - Yonghwan Bae	3.0402 How GRAIL Radio Occultations Could Enable Future Lunar Missions for Mapping the near Surface Dust - Dustin Buccino			9:45 AM			
5.0608 Dynamically Reconfigurable Coprocessor for Floating-Point Arithmetic Capability in Small Satellites - Hezekiah Austin				10:10 AM			
5.0609 Prototype Testing of a Compact Modular High Voltage Power Supply for Space Applications - Carlos Maldonado				10:35 AM			
				11:00 AM			
				11:25 AM			
LUNCH in the HUNTLEY DINING ROOM Noon-1:30 PM							
JUNIOR ENGINEERING & SCIENCE CONFERENCE 1:15 - 4:00 PM in the MADISON ROOM							

Schedule & Program | Image: Sc

WEDNESDAY, MARCH 5 - MORNING AND EARLY AFTERNOON						
	Amphitheatre	Jefferson	Madison	Gallatin		
8:30 AM		2.0401 Tethered Variable Inertial Attitude Control Mechanisms through a Modular Jumping Limbed Robot - Yusuke Tanaka	7.0302 Design of a High- Performance EGSE Architecture for the Dragonfly Mission to Titan - Vijay Baharani	4.0901 ATimescale Concept in AltPNT: A Model-based Control of Networked Systems Approach - Khanh Pham		
8:55 AM	14.01 PANEL: Science Autonomy for Future Space Missions: Leveraging Data Driven Methods - Lorraine Fesq, Jack Lightholder, Florence Tan	2.0402 Scaling of RoboBall: A Parametric Robot Family for Crater Exploration - Rishi Jangale	7.0401 The Space Power System Standard - Steve Parkes	4.0902 On the Theory of Network Architectures in the Solar System Internet - Alan Hylton		
9:20 AM		2.0403 MLGTT: An Open-Source Tool to Generate Camera-Relative Ground Truth for Monocular Localization - Joseph Bowkett	7.0601 Enhancements of FLEX Hyperspectral Data Compression Using High-Performance Embedded Space Computing - Didier Keymeulen Track 07 Best Paper	4.0903 Towards Practical Clock Synchronization in the Solar System Internet - Alan Hylton		
9:45 AM		2.0404 Design and Testing of TRL5 IPEx Actuators - Casey Clark	7.0701 Capabilities and Recent Projects of the Jet Propulsion Laboratory's Guidance and Control Section - David Sternberg	4.0904 Mitigation of Turbulence Losses over Terrestrial Laser Links for Quantum and Optical Communications - Marc Sanchez Net		
10:10 AM	14.10 PANEL: Sustained Lunar Presence Policy - Erica Rodgers, Stephen Indyk, Marissa Herron, Dylan Cohen, Keiichi Wada	2.0405 The DLR AutoNav Experiment with the IDEFIX Rover: Software Architecture & Preliminary Ops Concept - Mallikarjuna Vayugundla	7.0702 Fast Fuel-Optimal Constrained Impulsive Control with Application to Distributed Spacecraft - Matthew Hunter	4.0906 Comparison of Error Probability Analyses for Asynchronous DS-CDMA Satellite Communication Systems - Len Yip		
10:35 AM		2.0406 14 Rover-years of Slip Risk Assessment for Robotic Arm Safety - Aaron Curtis	7.0703 Optimal Attitude Control of Large Flexible Space Structures with Distributed Momentum Actuators - Pedro Rocha Cachim	4.0907 Scaling up Deep Reinforcement Learning for AI Using FPGAs - John Porcello		
11:00 AM		2.0407 Robotics Capabilities Development for Mars Sample Return Transfer Activities - Joseph Bowkett	7.0708 Linear Parameter Varying Attitude Control for CubeSats Using Electrospray Thrusters - Felix Biertümpfel	4.0908 Construction of Low-rate LDPC Codes from Rate ½ CCSDS Standard LDPC Codes - Richard Wesel		
11:25 AM	14.11 PANEL: Commercial Space/Lunar Habitation, Exploration, and Resources: What is the Value Proposition? - John Scott, John Reed, Timothy Cichan, Patrick Frye, Vincent	2.0408 Design Considerations for a 2-DOF Robotic Gantry to Support a Mars Sample Return ConOps - Richard Fleischner	7.0710 A Crater-based Optical Navigation Approach for Precise Spacecraft Localization - Simone Andolfo	4.0909 Parallel Trellis-Stage- Combining BCJR for High- Throughput CUDA Decoder of CCSDS SCPPM - Richard Wesel		
11:50 AM	Bilardo	2.0409 Preliminary Design of the Robotic Pickup Install and Encapsulation Subsystem for CCRS - John Luke Wolff	7.0712 An Indirect Approach to Solve a Pursuit-Evasion War Game between Two Spacecraft - Aden Funkhouser	2.0301 Lidar-Based Landing Hazard Detection for Dragonfly - Samuel Bibelhauser		
1:00 PM	14.04 PANEL: Progress and Plans for the Deep Space Human					
1:25 PM	Exploration Architecture - Stephen Creech, Kent Chojnacki, Brian Derkowski, Barbara Caben, Sarah Shull					
1:50 PM	Ben Cichy					
2:15 PM						
2:40 PM	14.09 PAINEL: Commercial Services for Space Exploration -Kent Chojnacki, Paul Niles, Steve Matousek, Jacqueline Contece					
3:05 PM	Contrac					

WEDNESDAY	, MARCH 5 - MO	DRNING AND EA	ARLY AFTERNO	ON
Lake/Canyon	Lamar/Gibbon	Dunraven	Cheyenne	
5.0610 AI-Driven Efficient Downlink Communication for Limited-Transmit-Power CubeSats in the Ka-band - Mohammed Alqodah	8.0902 Sustained Lunar Presence Advances in Radioisotope Power Systems for Surviving the Lunar Night - Jacob Matthews	13.0101 Assessing the Complete Lifecycle of Space Systems: An Extended Technology Readiness Measure - Roshanak Nilchiani	10.0804 Video-based Methods for Measurement of Vibration Mode Shapes - Justin Chen	8:30 AM
5.0612 The Impact of Gravity- Gradient Stabilization of ADCS Efficiency and Design Optimization in CubeSats - Yasmin Avelino	8.0903 NASA's Radioisotope Power Systems Program Status Update and Focus on Commercialization - Carl Sandifer	13.0102 Ontological Methods of Functional Analysis for Aerospace Concepts - Hamilton Johnson	10.0805 Resource Efficient FPGA Implementation of SGM Stereo Disparity for a Planetary Rover - Maksim Shevtsov	8:55 AM
5.0701 Using the Decision Tree (DT) to Help Scientists Navigate the Access to Space (ATS) Options - Robert Caffrey	8.0904 Sensitivity Analysis of CFM Technologies for Combined NEP-Chemical Mars Missions - Elizabeth Turnbull	13.0104 Digital Thread Enhancements on the NASA Gateway Program: ACCESS - Cody Wheeler	10.0810 Evaluating Deep Learning Models for Land Cover Classification via Test-Time Augmentation - Sadikul Alim Toki	9:20 AM
5.0801 Feasibility Analysis of Distributed Space Antennas Using Electromagnetic Formation Flight - Seang Shim	8.0905 Monte Carlo Methods: Modeling TEG Material Property Uncertainty Propagation and Sensitivity - Carter Gassler	13.0105 Tradespace Exploration of Large Lunar Mars Analog Campaigns - Lanie McKinney	10.0813 How Important Are Data Augmentations to Close the Domain Gap for Object Detection in Orbit? - Maximilian Ulmer	9:45 AM
5.0802 Propellant-Free Rendezvous Mission of SNUGLITE-III CubeSat: Orbit Control Using Aerodynamic Forces - Jae Woong Hwang	8.0907 Mixed Quasi-Steady and Transient Modeling of Radioisotope Thermoelectric Generators - Joseph VanderVeer	13.0107 Validation of a Scenario- Based Approach to Assess Gaps in Earth Observations - Katharine Burn	10.0815 Bridging the Data Gap of Asteroid Exploration: OAISYS Extention for Synthetic Asteriods Creation - Wout Boerdijk Track 10 Best Paper	10:10 AM
9.0106 Design, Analysis and Fabrication of a Blended Wing Unmanned Aerial Vehicle - SWARNA MAYURI KUMAR	8.0909 Comparison of Radioisotope Power Systems to Enable the Endurance Mission Concept - Young Lee	13.0109 Architecting the Martian Sample Handling System with Agile MBSE - James Wheaton	10.0816 Evaluation and Integration of YOLO Models for Autonomous Crater Detection - William Zhang	10:35 AM
9.0107 Multibody Dynamics Modelling of a Passive Pilot for Aircraft-Pilot-Coupling Investigation - Daniel Nelson		13.0110 Doing More with Less: Co-Design of Human Moon and Mars Architectures with Their Funding Sources - George Lordos	10.0701 Toward Intuitive Robot- to-Human Error Reporting to Enhance User Awareness in Space (Tele)Operation - Nesrine Batti	11:00 AM
9.0113 Modeling of Active Control of the Wing Angle of Attack for a Flapping Wing Micro-Aerial Vehicle - Neil Schoenwetter		13.0202 Using Large Language Models to Assist with Project Performance Assessment - Nipa Phojanamongkolkij	10.0702 NASA's Virtual Exploration Rendered Simulation Environment (NVERSE) - Tanner Hunt	11:25 AM
		13.0203 Integrated Analysis of Robustness and Flexibility in Management of Earth Observation Portfolios - Lindsey Jacobson	10.0703 Enhancing Mobile Robot Teleoperation with Extended Predictive Polygon Method in Virtual Environment - Harsimran Singh	11:50 AM
				1:00 PM
				1:25 PM
				1:50 PM
				2:15 PM
				2:40 PM
				3:05 PM

	WEDNESDAY, MARCH 5 - AFTERNOON AND EVENING				
	Amphitheatre	Jefferson	Madison	Gallatin	
4:00 PM		JAVA	JAM		
4:30 PM		2.0502 DAVINCI Venus Descent Sphere Data Flow Design Overview and Initial Performance Estimates - Jacob Hageman	7.0714 Contingency-Aware Station-Keeping Control of Halo Orbits - Fausto Vega	4.1001 Enhancing Space Situational Awareness: Robust Millimeter-Wave Satellite Communication Solutions - Behzad Koosha	
4:55 PM	11.07 PANEL: PHM For Human Health and Performance (HHP) - Derek De Vries, Alexandre Popov	2.0505 Concept for a Lunar Electromagnetic Launch System Architecture - Luis Carrio	7.0802 Sub-attofarad Capacitance Sensor for High-precision Sensing in LISA - Benjamin Cella	4.1002 Optical Frequency Hopped Spread Spectrum: Thoughts and Experiments - Eugene Grayver	
5:20 PM		2.0506 OptiDrill: Next-Generation Instrumented Drill for In-Situ Planetary Surface Analysis - Joseph Palmowski	Plenary Setup & Testing	4.1003 Radio Transmitter Development to Support multi- Gbps Satellite Downlinks in Ka- band - Masatoshi Kobayashi	
5:50 PM	Illuminating the Dynamic Night Sky: Discoveries of the Zwicky Transient Facility Shri Kulkarni, California Institute of Technology				
6:35 PM	HOSTED RECEPTION in the GRAND ATRIUM				
7:05 PM	DINNER in the MAIN BALLROOM				
8:05 PM	Preservi	ng the Past – Underwa Brett Seymour, Na	ter History Through a tional Park Service	3D Lens	
9:00 PM		2.0507 Future Martian Landing Science Targets and Implications for Exploration Architecture - Laura Kerber		4.1302 Onboard Implementation and Validation of RTK-Based Relative Navigation System for CubeSats - Hanjoon Shim	
9:25 PM		2.0509 MSR Returned Sample Handling and Sample Removal Technology Development - Paulo Younse		4.1303 Sensor Fusion for Autonomous Orbit Determination and Time Synchronization in Lunar Orbit - Guillem Casadesus Vila Track 04 Best Paper	
9:50 PM				4.1304 PHODCOS: Pythagorean Hodograph-based Differentiable Coordinate System - Jon Arrizabalaga	
10:15 PM	Fireside Cheer				

WEDNESDAY, MARCH 5 - AFTERNOON AND EVENING				
Lake/Canyon	Lamar/Gibbon	Dunraven	Cheyenne	
	JAVA	JAM		4:00 PM
	6.0301 AquaSat-1: An Imaging Spectrometer for Water Quality and Aquatic Ecosystem Monitoring from Space - David Ardila	13.0206 Strengthening Knowledge Resilience in Innovative Organizations - JD Caddell	8.0502 Enhancing Flight Deck Decision Support with Distributed GenAI: A Multi-Agent Approach - Jose De Almeida Prado	4:30 PM
	6.0303 The Optical Design of the Carbon Investigation (Carbon-I) Imaging Spectrometer - Christine Bradley Track 06 Best Paper	13.0207 Uncertainty Quantification in Rocket Engine Development and Its Implementation Using MBSE - Danielle McDowell Track 13 Best Paper	8.0503 Unobtrusive Monitoring of Sensorimotor Performance in Ground-Based Functional Tasks - Hannah Weiss	4:55 PM
	6.0302 Preliminary Thermal Design of the OTTER Instrument for the SBG-TIR Study - Ian McKinley	10.0201 A Fractal UML Design Pattern for Collaborative Object Trees - Jeremiah Finnigan	8.0504 Characterizing Spontaneous Self-Scheduling in NASA's Human Exploration Research Analog Campaign 6 - Renee Abbott	5:20 PM
Illuminating the D Sł	Illuminating the Dynamic Night Sky: Discoveries of the Zwicky Transient Facility Shri Kulkarni, California Institute of Technology			5:50 PM
HO	HOSTED RECEPTION in the GRAND ATRIUM			6:35 PM
	DINNER in the MAIN BALLROOM			7:05 PM
Preservi	ng the Past – Underwa Brett Seymour, Na	nter History Through a ational Park Service	3D Lens	8:05 PM
		13.0209 A Case Study in Implementing SMC/NSS Mission Risk Class Requirements - Ian Claypool	8.0601 Sensorimotor Impairment Related to Vestibular Adaptation to Altered Gravity - Torin Clark	9:00 PM
		13.0210 Delivering a Complex Payload for the International Space Station during COVID - Charlene Ung	8.0604 A Soft-Tissue and Sensor Model of Exoskeletons for Amplifying Astronaut Strength - Lewis Simms	9:25 PM
			8.0607 Utilizing Closed-Loop Physiological Feedback for Dynamic Compression in Soft Robotic Wearables - Cort Reinarz	9:50 PM
Fireside Cheer			10:15 PM	

TH	IURSDAY, MAR	CH 6 - MORNIN	G AND EARLY	AFTERNOON
	Amphitheatre	Jefferson	Madison	Gallatin
8:30 AM	8.0701 Measuring and Mitigating Roman Space Telescope Reaction Wheel Imbalance Forces and Torques - Parker Lin	2.0512 Overview and Results from NASA's Break the Ice Lunar Challenge - Kurt Leucht	7.0902 Cross-Examining the Computational Performance of Radiation-Tolerant NVIDIA and AMD SoCs - Richard Briggs	4.0702 Testbed for Modulating Retroreflectors Enabled Passive Optical Communications - Lin Yi
8:55 AM	8.0702 Friction in Space – Analysis of Robotic Joint Friction in Space Conditions - Anton Shu	2.0513 Revolutionizing Lunar Subsurface Exploration through Instrumented Drilling Technologies - Joseph Palmowski	7.0903 An Affordable Fault- tolerant EDAC Designed for FPGA and Memory Applications - Youcef Bentoutou	4.0704 Orbit Determination and Time Synchronization for Future Mars Relay and Navigation Constellation - William Jun
9:20 AM	8.0703 Combating Amine Blush: Root Cause and Corrective Action of a Compromised Bond on Europa Clipper - Jon Hamel	2.0514 The CHOPPER Next- Generation Mars Rotorcraft: Scaling Ingenuity by a Factor 20 - Laura Jones Wilson	7.0904 RarePlanes Detection Using YOLOV5 on the Versal Adaptive SoC - Jacob Brown	4.0707 Expendable Nanosats Concept for Uranus Exploration - Lin Yi
9:45 AM	8.0707 Data-Driven Physics-Based Digital Twin for Linkage Analysis - Mitchell Fogelson	2.0515 Conceptual Design of a Mars Exploration Helicopter Packaged in an Accommodation Enclosure - Lindsay Sheppard	2.0701 Optimization of Satellite Formation Reconfiguration - Aaron Hoskins	4.0709 High Data Rates from the Outer Solar System - Kar Ming Cheung
10:10 AM	8.0714 DEVELOPMENT of a SELF-RESETABLE, LOW- SHOCK HOLD-DOWN and RELEASE MECHANISMS - Tom Sproewitz	2.0601 Development of a Dual Wavelength Microchip Laser for NASA's Raman Mass Spectrometer (RAMS) - Matthew Mullin	2.0702 Stochastic Multistage Satellite Constellation Reconfiguration for Tracking Uncertain Targets - Brycen Pearl	4.0801 Backup Routing considering Multiple Link Failures in Optical Communication Satellite Networks - Kazuki Takashima
10:35 AM	8.0801 First Year of Psyche Electric Propulsion Cruise Operations - Steve Snyder	2.0602 Advancing Lunar Exploration: The Neutral Gas Mass Spectrometer for Regolith and Exosphere Analysis - Rico Fausch	2.0704 Convex Station-Keeping Control of Halo Orbits Using a Solar Sail - Fausto Vega	4.0803 Free-Space Optical Communication Using an Optical Frequency Comb and Modulating Retroreflectors - Lin Yi
11:00 AM	8.0803 Assessment of Propellant Droplet Contamination Effects on the Europa Clipper Spacecraft - John Anderson	2.0603 Design and Testing of a Sample Handling System for Operation on the Lunar Surface - Peter Wurz	2.0705 Decentralized Impulse Control for Multiagent Space Systems - Xun Liu	4.0804 LuPNT: An Open-Source Simulator for Lunar Communications, Positioning, Navigation, and Timing - Guillem Casadesus Vila
11:25 AM	8.0806 Power System for a Venus Aerobot - Joel Schwartz	2.0604 PlumeCAS: A Novel Plume Capture and Potential Biosignature Detection Instrument - Frank Sheeran	2.0706 Information-Optimal Multi-Spacecraft Positioning for Interstellar Object Exploration - Arna Bhardwaj	4.0105 A Rapid, Low-Cost Path to Lunar Communication and Navigation with a Lunar Surface Station - William Jun
11:50 AM		2.0605 Ionospheric Observations and ISS Frame Charging during the March and April 2023 G4 Solar Storms - Carlos Maldonado		
1:00 PM	14.06 PANEL: NASA's Earth			
1:25 PM	System Observatory Overview -Ben Kim, Michael Egan, Chanel Duncan, Michael Calaway, Yadira Bordlemay			
1:50 PM	Padilla			
2:15 PM				
2:40 PM				
3:05 PM				

THURSDAY,	MARCH 6 - MO	RNING AND EA	RLY AFTERNOO	DN
Lake/Canyon	Lamar/Gibbon	Dunraven	Cheyenne	
9.0305 Determining the Effect of BVID with Optical Fiber Sensors and Composite Material Strength - Sydney Houck	11.0101 A Physical Model-based Methodology for RUL Prognostics of Rolling Element Bearings - Konstantinos Gryllias	13.0301 Need for and Benefits of Additional Real-World Project Modeling Capabilities: Part 2 - Robert Richards	10.0601 Onboard Estimation of Physical Parameters in Active Neutron Spectroscopy Data - Jack Lightholder	8:30 AM
9.0401 Autonomous Navigation and Station-keeping of High- Altitude Balloon Using Extremum Seeking Control - Telema Harry	11.0104 Modular AI for Faults: Local Watch and Efficient Response - Evan Finnigan	13.0302 IMAP (Ultra), You Map, We All Map Cost Savings to Heritage - Rachel Sholder	10.0621 Machine Learning Convergence Behavior for an Airborne Surveillance Mission - Daniel Clancy	8:55 AM
9.0402 Evaluation of Automatic Landmark Selection Strategies for Navigation of Unmanned Aircraft - Nikolaus Ammann	11.0107 Automated Rotorcraft Turboshaft Engine Performance Monitoring Using a Transfer Learning Approach - David He	13.0303 Holistic Integration of Performance and Programmatic Metrics in Analysis of Alternatives - Patrick Malone	10.0602 A Lightweight Anomaly Detection Model in Aero Turbine Borescope Using Unsupervised Deep Learning - Seongjun Ha	9:20 AM
9.0410 Nonlinear MPC for Stabilizing the Longitudinal Dynamics of a Highly Unstable Aircraft - Paulina Conrad	11.0110 Rapid Measurement of the Internal Impedance of Batteries up to 100VDC - Bryce Hill	13.0304 Evaluating and Minimizing Cost Estimating Bias Early in Program Development - Patrick Malone	10.0603 Space Domain Awareness of Debris Evaluated through Synthetic Data - Victor Vergara	9:45 AM
9.0411 Dual-Control Autopilot Design for Combined Tail& Divert Thruster Controlled Hit-to- Kill Interceptor - Daniel Boudreau	11.0801 Unleashing the Cognitive Digital Twin via Semantic Orchestration - Mark Walker Track 11 Best Paper	13.0401 Analogs as a Research Platform: Quantitative Facility and Experiment Selection Framework - Madelyn MacRobbie	10.0604 Distributed Federated Learning in Satellite Constellations: A Framework for in Orbit ML - Pooria Madani	10:10 AM
9.0413 A Model-Free Data-Driven Algorithm for Continuous-Time Control - Sean Bowerfind		13.0402 A Distributed Simulation Framework Applied to Artemis Analysis, Studies, Integration, and Test - Keaton Dodd	10.0607 Spacecraft Multivariate Time Series Anomaly Detection in the Presence of Non-Anomalous Spikes - Alexandre Olive Pellicer	10:35 AM
9.0606 Verification and Clearance of Flight Control Software for High-Altitude Long Endurance Aircraft - Christian Weiser		13.0403 Many Minds, One Truth: A Concurrent Engineering Collaborative Tool in the Integrated Design Center - Elizabeth Matson	10.0608 Explainability for Unmanned Aerial Vehicle Control via Multi-Objective Reinforcement Learning - Christian Clark	11:00 AM
		13.0405 Mars Sample Recovery Helicopter Aerial Mode Commander Design Using Executable Models - Laura Jones Wilson		11:25 AM
		13.0406 Assessing Science Robustness in Uncertain Environments: Application to a Uranus Flagship Mission - Chloe Gentgen		11:50 AM
				1:00 PM
				1:25 PM
				1:50 PM
				2:15 PM
				2:40 PM
				3:05 PM

	THURSDAY, MARCH 6 - AFTERNOON AND EVENING				
	AmphitheatreJeffersonMadisonGallatin				
4:00 PM		JAVA	JAM		
4:30 PM		2.0802 Laboratory Testing of a Radiation Hardened 2D Imaging Anode for Charged Particle Spectrometry - Daniel Arnold	2.0707 Stochastic Models for Remote Sensing Coverage Analysis Limited by Geophysical Conditions - Jonathan Sipps	4.1306 Comparative Analysis and Design of a Dual-Satellite System for Lunar Rover Localization - Kaila Coimbra	
4:55 PM		2.0805 Fault Mitigation for SNN Classification of Neuromorphic Event Streams with Radiation- Induced Noise - Joshua Poravanthattil	2.0708 Electro-Optical Sensor Design for Space Traffic Management in Cislunar Space - Chingiz Akniyazov	4.1308 On-Orbit Demonstration of Range-Only Navigation for Small Satellite Formations - Ibrahima S. Sow	
5:20 PM			Plenary Setup & Testing		
5:50 PM	Wildfires Are Inevitable. How Can We Minimize Human Suffering? Phil Higuera, University of Montana				
6:35 PM	HOSTED RECEPTION in the GRAND ATRIUM				
7:05 PM	DINNER in the MAIN BALLROOM				
8:05 PM	Fish	ing for Invasive Lake Joseph Shaw, Monta	Frout with Airborne L ana State University	idar	
9:00 PM		2.1002 Designing a Near-Earth Asteroid Survey for a Telescope in Geosynchronous Orbit - Sophia Vlahakis	2.0711 Markov Decision Processes for Satellite Maneuver Planning and Collision Avoidance - William Kuhl	4.1309 Initial Orbit Determination with Sequential Stellar Aberration Measurements - Michela Mancini	
9:25 PM		2.1006 The Pan-STARRS Search for Near-Earth Objects: 10 Years Old, and Still Going Strong - Richard Wainscoat	2.0716 A MicroSatellite Mission to Sample LEO and Lower MEO Environment - Giovanni Palmerini	4.1402 Cost-Effective Integration of CNS Infrastructure for Urban Air Mobility: Insights and Strategies - Faizana Naeem	
9:50 PM					
10:15 PM		Fireside	e Cheer		

THURSDAY, MARCH 6 - AFTERNOON AND EVENING				
Lake/Canyon	Lamar/Gibbon	Dunraven	Cheyenne	
	JAVA	JAM		4:00 PM
	6.0403 Ice-Bed Detection Capabilities of a Low-VHF Radar on a Small UAS - Gabriel Rose	13.0408 Structural Equation Modeling for Efficient Mission Formulation - Alfred Nash	10.0609 Space-LLaVA: A Vision- Language Model Adapted to Extraterrestrial Applications - Matt Foutter	4:30 PM
	6.0404 Outdoor Long Range Object Detection Experiments with Event-Based Sensors - David Ziehl	13.0409 Leveraging Deep Reinforcement Learning for Spacecraft Configuration Design - Alexander Demagall	10.0610 Ensuring Accurate Navigation Solution in GPS- Denied Scenarios with Machine Learning - Amir Saeed	4:55 PM
	6.0401 Remote Sensing Dual- Band LWIR Thermometry Enhancements via Passive and Active Sensor Fusion - Darin Dunham	13.0502 Event-Driven Simulation for Rapid Iterative Development of Distributed Space Flight Software - Toby Bell		5:20 PM
V	Wildfires Are Inevitable. How Can We Minimize Human Suffering? Phil Higuera, University of Montana			5:50 PM
HO	HOSTED RECEPTION in the GRAND ATRIUM			6:35 PM
	DINNER in the MAIN BALLROOM			7:05 PM
Fish	ing for Invasive Lake Joseph Shaw, Mont	Trout with Airborne L ana State University	idar	8:05 PM
	6.0405 Advancements in Chree's Method for Enhanced Signal Amplitude Estimation in Remote Sensing - Darin Dunham	13.0503 Silent Steps: Mitigation and Analysis of Stepper Motor Induced Jitter on the RST - David Schwartz	10.0611 Neural Radiance Methods for Lunar Terrain Modeling - Ellemieke Van Kints	9:00 PM
	6.0602 Federated Learning for Low-Latency Emitter Identification from Space - Max Cui-Stein	13.0505 Post-Launch Verification of Lucy Solar Array Deployment - Jessica Lounsbury	10.0614 Compositional Diffusion Models for Powered Descent Trajectory Generation with Flexible Constraints - Enrico Zucchelli	9:25 PM
				9:50 PM
Fireside Cheer			10:15 PM	

	FRIDAY, MARCH 7				
	Amphitheatre	Jefferson	Madison	Gallatin	
8:30 AM	13.0602 Managing TVAC Vibration for Optical Testing of the Roman Space Telescope - Cory Smiley				
8:55 AM	13.0604 SysML Success Tree for DAVINCI In-Situ Campaign Requirements Validation and Redundancy Assessment - Khary Parker				
9:20 AM	13.0605 A Software Environment for Psyche Testbed Operation - Myra Lattimore				
9:45 AM	13.0606 Friction Analysis of the Motion Suspension System for Improved Space Robot Testing - Ferdinand Elhardt				
10:10 AM	13.0610 Highlights of the Psyche Environmental Assurance Program - Travis Imken				
10:35 AM					
11:00 AM					
11:25 AM					
11:50 AM					
6:30 PM	Farewell Dinner				

	FRIDA	Y, MARCH 7		
Lake/Canyon	Lamar/Gibbon	Dunraven	Cheyenne	
4.1504 Space Cybersecurity Incident Response Framework: A Viasat Case Study - Nick Saunders	13.0801 Authenticating Agile Principles for Government Transformation - Saahil Panikar			8:30 AM
4.1505 A Model Based System Security Goal Elicitation Method Applied to a Space Traffic Management System - Martin Span	13.0802 Behavioral PM: The Impact of Environment on Decision Making, Team Dynamics, and Project Success - Brendan Kach			8:55 AM
4.1508 Mechanical Vibration vs RF Characteristic: A Meta Fingerprinting Approach for UAV Classification - Ying Wang	13.0805 An Agile Ethos for Rapid Space Capability Delivery - Barbara Braun			9:20 AM
				9:45 AM
				10:10 AM
				10:35 AM
				11:00 AM
				11:25 AM
	4:00 - 5:30 PM: All Track/Session Organizers Planning Session for the 2026 Conference			11:50 AM
	Farewe	ll Dinner		6:30 PM

Electronic Presentation Hall 24/7 Electronic Presentation Hall 24/7 (contd.) 9.0118 • Modeling and Analysis of Thermal Aspects for a 2.0703 • Wide-Range Relative Velocity Sensor Using Laser Interferometry for Ultra-Precision Formation Flying -Hybrid Stratospheric HAPS - Salvatore Mazza 9.0119 • Design of the Pressurization System for a Novel Hosei O Inflatable HAPS Vehicle: Development and Simulation -2.0717 • CubeSat Orbit Insertion Maneuvering Using J2 Pietro Mazzei Perturbation - M. Reza Emami 9.012 • Study on the Influence of Sharp/Blunt Fuselage on 2.0906 • A Framework for the Quantitative Comparison the Aerodynamic Performance of Supersonic Nacelle - Lu of Collision Avoidance Maneuver Optimisation Methods -Bai **Thomas Childs** 9.0201 • Hierarchical Vision-Based Localization in Large-2.1109 • Validation of Fine Manipulation Using NMPC Scale GNSS-Denied Environments - Michael Schleiss for Rotation Floating Space Robots with HILS Setup -9.0403 • Vision-based Self-Localization for UAVs Using Kaushik Das Semantic Features and OpenStreetMap - Rebecca Schmidt 2.1118 • A Modular, Adaptive, Coiled Deployable Boom 9.0404 • Impact of Added Mass on the Control Laws System for Programmable Assembly - Olivia Formoso Design - Felice Fruncillo 2.1119 • Proprioceptive Inchworm Robots for Space 9.0405 • Pitch Plane Trajectory Tracking Control for Sounding Rockets via Adaptive Feedback Linearization -**Applications - Pascal Spino** Pedro Santos 3.0403 • Assessing the Impact of Solar Plasma on 9.0607 • Automatic Flight Tests Execution on a Distributed Spacecraft Telemetry during the 2023 Mars Solar Electrical Propulsion Demonstrator - Nicola Genito Conjunction - Daniel Kahan 10.0104 • Multiphase Compressibility Correction for 4.0306 • Efficient Message-Passing Detection for Multi-Supersonic Flow Using Lattice Boltzmann Method -Satellite Systems Using OTFS Modulation - Elisa Conti Hemant Joshi 4.0504 • Lunar Inter-Spacecraft Optical Communicator -10.0506 • Efficient Runtime Verification of Energy Jose Velazco Properties within Hardware / Software Co-Design -4.0705 • A Comparison of Navigation Methods Enabled by Morgan McColl a Deep Space Relay Architecture - Paul Carter 10.0605 • A Transformer-based Approach to Near-Earth 4.1503 • Testable Cyber Requirements for Space Flight Asteroid Detection - M. Reza Emami Software - James Curbo 10.0619 • End-to-End Imitation Learning for Optimal 5.0201 • Cost Effective Mission Concept for National Asteroid Proximity Operations - Patrick Quinn 11.0111 • Towards an Intelligent Health and Mission Security and Meteorological Applications - Aaron Pereira Management Framework for Autonomous Systems - Samir 5.0206 • REX: An Autonomous Resource Exchange Khan System for Optimizing Microgravity Manufacturing 11.0201 • Agent-based Architecture for Proactive Fault Efficiency - Anubhav Gupta Tolerance and Management in Small Satellite Missions -6.0305 • Monitoring Greenhouse Gases: From Massive Mohmmad Reza Jabbarpour Instruments to the Compact Uvsq-Sat NG Spectrometer -12.0402 • NewSpace, New Threats: The Influence of New Cannelle Clavier Entrants to the Space Industry on Cybersecurity - Sara 6.0402 • Energy Saving Waveform for Tracking Radar -Cannizzaro **Benjamin Gigleux** 12.0616 • Enabling Novel Mission Operations and 6.0701 • Event-Based Target Detection and Tracking for Interaction with ROSA: The Robot Operating System **Remote-Sensing Applications - Daniel Stumpp** Agent - Rob Royce 7.0203 • Formal Deadlock and Lifelock Detection of 13.0208 • Safety & Mission Assurance Approaches during FPGA-based SoC Designs - Kai Borchers IMAP's Integration & Test - Christina Collura 13.0504 • Digital Twin for the MMX Rover Locomotion 7.0502 • Radiation Shielding Simulation of High Energy Subsystem - Fabian Buse Neutrons for Small Instrument Packages - Samantha 13.0609 • From PLATO to EnVision, SimuCam as a Case Kenvon Study of Testing Equipment Reusability in Space Missions 8.0102 • Robotically Emplaced Lattice Reinforcement for - Rodrigo França Lunarcrete Structures and ISRU - Christine Greg 13.0804 • Cislunar Security Architecture: A QUAD 9.0104 • Design, Analysis and Development of a Mini Perspective - Aaron Pereira Airship - Alhamzah Al-Mawla 9.0116 • The Effect of Proturbance Structures on the Aerodynamic Performance of an Aerofoil - Samuel Jennings



Requirement Statement	Compliance	Parent Requirements	Type	Verification
	COMPLIANT	00.	FUNCTIONAL	DEMONSTRATION
	INTEND TO COMPLY	• • • • • • • - · · ·	ENVIRONMENTAL	
	COMPLIANT	• • • •	SOFTWARE	TEST
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2026 CALL FOR PAPERS FLYER



*ADDITIONAL CONFERENCE COMMITTEE ROLES (FROM PAGE 4):

- [1] Board Member, Plenary Co-Chair, Language Review Committee, Exhibitor/Patrons Program Committee
- [2] Website Chair, Exhibitor/Patrons Program Committee, AIAA Representative
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- [4] Paper Review Committee, Publications Committee, Exhibitor/Patrons Program Committee, Website Administration
- [5] Vice Board Chair and Board Recorder
- [6] Publications Vice Chair
- [7] Board Member Emerita, Publications Committee
- [8] Thank You Note Writer
- [9] Paper Review Committee, VIP Hospitality Chair
- [10] EPH Vice Chair
- [11] Language Review Chair, Special Advisor
- [12] Paper Review Committee, Language Review Committee

PLENARY PROGRAM: SCIENCE AND AEROSPACE FRONTIERS

SUNDAY March 2, 2025 5:50 p.m.

Dancing Robots and the Accelerating Universe: The Dark Energy Spectroscopic Instrument

MICHAEL LEVI, LAWRENCE BERKELEY NATIONAL LABORATORY, BERKELEY, CALIFORNIA



A new instrument on the Mayall telescope in Kitt Peak, Arizona has been surveying the cosmos since 2021, using 5000 robots. The robots position optical fibers on the focal plane to within 10 microns to align with the positions of distant galaxies. A spectrum of each galaxy is obtained to determine its distance and to build the most detailed 3D map of the Universe ever created. From the third dimension we can look back in time and see how the Universe has evolved over the last 11 billion years. The data shows some surprising details.

SUNDAY March 2, 2025 8:05 p.m.

FathomVerse: Explore the Depths Kakani Katija, Monterey Bay Aquarium Research Institute, Monterey, California



The deep sea is the largest habitable ecosystem on the planet and remains one of the least explored. Very little is known about deep sea inhabitants, their behavior, and the limits and drivers for their survival. In order to fully explore our ocean and effectively steward the life that lives there, we need to increase our capacity for biological observations; massive disparities in effort between visual data collection and annotation make it prohibitively challenging to process this information. FathomVerse, a mobile game designed to inspire a new wave of ocean explorers, teaches casual gamers about ocean life while improving machine learning models and expanding annotated datasets (FathomNet). Of the three billion gamers worldwide, up to 70% say they care about the environment; FathomVerse taps into this engaged community with innovative gameplay and rich graphics that draw players into the captivating world of underwater imagery and cutting-edge ocean science. Through FathomVerse, we hope to activate audiences in high school and up, providing social engagement and workforce education, with the goal of increasing public awareness and inspiring empathy for ocean life.

Monday March 3, 2025 5:50 p.m.

Seeing the Spectrum of the Universe in Gravitational Waves Sebastian Ellis, Université de Genève, Genève, Switzerland



Our eyes are incredibly capable cameras, and yet they are only sensitive to a sliver of the full spectrum of electromagnetic radiation. In the last centuries, we have gone beyond the limitations of biology, and developed sensors for all wavelengths of light. We now measure light waves shorter than the size of a nucleus and larger than our planet. Almost ten years ago, we made our first detection of gravitational radiation, a phenomenal technological achievement. However, so far we are limited: we only "see" about a factor of 10 of the spectrum of gravitational waves. In this talk, I will discuss why we should expect to see gravitational waves across a wide range of wavelengths, and I will summarize ongoing efforts to go beyond our current limitations. Similarly to how we see the light spectrum of the universe, we may soon be able to see what the universe looks like in gravitational waves.



Engaging Engineers through Moral Imagination, Science Fiction, and Creative Diagrams

BEN ZEVENBERGEN, GOOGLE, AMSTERDAM, THE NETHERLANDS



Technologists are eager to engage with the human, social, and ethical dimensions of their work, but often lack the tools and mindsets to do so effectively. This talk introduces the "Moral Imagination" a methodology designed to empower tech teams to explore and address ethical considerations through creative diagrams, science fiction, and playful facilitation. Discover how this innovative approach, inspired by Google's commitment to responsible innovation, can transform how we envision the technologies we build.

PLENARY PROGRAM: SCIENCE AND AEROSPACE FRONTIERS

Illuminating the Dynamic Night Sky: Discoveries of the Zwicky Transient Facility Shri Kulkarni, California Institute of Technology, Pasadena, California

March 5, 2025 5:50 р.м.

WEDNESDAY



The Universe began only with hydrogen and helium. It is stars living and especially dying (supernovae) that gradually built up the periodic table. Astronomers have now identified several classes of cosmic explosions of which supernovae constitute the largest group. The Palomar Transient Factory was an innovative dual robotic telescope experiment, and its successor, the Zwicky Transient Factory (ZTF), is a high-tech project with gigantic CCD cameras, sophisticated algorithms (employing machine & deep learning) and robust pipelines, and squarely aimed to systematically find "blips and booms in the middle of the night". The speaker will talk about the great returns and surprises from this project: super-luminous supernovae, new classes of transients, new light on progenitors of supernovae, detection of gamma-ray bursts by purely optical techniques and troves of pulsating stars and binary stars. ZTF is now considered to be the steppingstone for the national flagship Rubin Observatory.

WEDNESDAY March 5, 2025 8:05 p.m.

Preserving the Past - Underwater History Through a 3D Lens Brett Seymour, Submerged Resources Center. National Park Service, Denver, Colorado



Structure from Motion (SfM) – also known as photogrammetry - is an emerging technology that generates three-dimensional visualizations from a sequence of two-dimensional images. The application has become mainstream in fields such as engineering, augmented reality, archaeology, and urban planning. But what about underwater? This talk will explore the technology, highlight the applications, and provide examples of how underwater 3D photogrammetry can be used in science, management, and educational frameworks. From ancient Roman shipwrecks to the most famous wreck of all – RMS Titanic; from WWII planes scattered in the warm Pacific Ocean to polar exploration vessels inside the Arctic Circle, this presentation will bring history to life and provide a fascinating 3D glimpse into the underwater world.

THURSDAY March 6, 2025 5:50 p.m.

Wildfires Are Inevitable. How Can We Minimize Human Suffering? Philip Higuera, University of Montana, Missoula, Montana



Our nation is facing a wildfire crisis, defined most poignantly by an increasing loss of life and property from fire disasters. Despite the urge to identify a single culprit, the causes are multifaceted and reflect societal decisions going back decades to centuries: colonization, internal-combustion engines and global warming, fire suppression, affordable housing, and an overarching fear of fire. Yet, fire has been part of our planet for millions of years. Much of life on Earth evolved with fire, including humans. How can understanding the deep history of fire on our planet help us live safely with fire today? How can we use "good fire" to help adapt to an increasingly flammable world? Answers are well known and ultimately require confronting the paradox that living safely with fire depends on renegotiating our relationship to see fire as friend and not foe.

THURSDAY March 6, 2025 8:05 p.m.

Fishing for Invasive Lake Trout with Airborne Lidar Joseph Shaw, Montana State University, Bozeman, Montana



The 1994 discovery of non-native lake trout in Yellowstone Lake at the southeast corner of Yellowstone National Park launched a struggle to preserve the Yellowstone ecosystem. Lake trout eat the prized native cutthroat trout but live far too deep to fill the cutthroat trout role as primary protein source for animals that include bears, pelicans, and otters. When fisheries biologists needed information on where the lake trout spawn, Montana State University lidar researchers developed a custom airborne lidar ("laser radar") system to fly in a small airplane and hunt for laser scattering signatures to reveal lake trout spawning locations. Manual examination of lidar data successfully identified previously unknown spawning sites and machine learning methods have been developed recently to automate the analysis. This presentation will tell the story of how a university-based optical scientist led the development and refinement of airborne lidar methods that are contributing to saving the Yellowstone ecosystem where his ancestors more than a century before ran one of the first camping companies in the newly established Yellowstone National Park.

- 1.0 Science and Aerospace Frontiers (Plenary Sessions), Kendra Cook (SAIC), David Woerner (Jet Propulsion Laboratory)
- 2.0 Space Missions, Systems and Architectures, Keyur Patel (Jet Propulsion Laboratory), Steven Arnold (Johns Hopkins University/ Applied Physics Laboratory)
- 02.01 Current Space and Earth Science Missions, James Graf (Jet Propulsion Laboratory), Keyur Patel (Jet Propulsion Laboratory), Stephen Schmidt (NASA Goddard Space Flight Center)
- 02.02 Future Space and Earth Science Missions, Michael Gross (Jet Propulsion Laboratory), Alex Austin (Jet Propulsion Laboratory)
- 02.03 System and Technologies for Landing on Planets, the Moon, Earth and Small Bodies , Ian Clark (Jet Propulsion Laboratory), Clara O'Farrell (Jet Propulsion Laboratory)
- 02.04 Robotic Mobility and Sample Acquisition Systems, Joseph Bowkett (Jet Propulsion Laboratory), Richard Volpe (Jet Propulsion Laboratory), Paul Backes (Jet Propulsion Laboratory)
- 02.05 Future Missions & Enabling Technologies for In Situ Exploration, Sample Returns, Elena Adams (Johns Hopkins University/Applied Physics Laboratory), Christopher Green (NASA Goddard Space Flight Center)
- 02.06 In Situ Instruments for Landed Surface Exploration, Orbiters, and Flybys, Xiang Li (NASA Goddard Space Flight Center), Terry Hurford (), Jacob Graham (NASA Goddard Space Flight Center)
- 02.07 Mission Design, Formation Flying and Constellations, Ryan Woolley (Jet Propulsion Laboratory), Leonard Felicetti (Cranfield University), Giovanni Palmerini (Sapienza University of Rome)
- 02.08 Space Radiation and its Interaction with Shielding, Electronics and Humans, Ondrej Ploc (Nuclear Physics Institute of the Czech Academy of Sciences), Lembit Sihver (TU Wien and NPI of the CAS)
- 02.09 Space Debris and Micrometeoroids: The Environment, Risks, and Mitigation Concepts and Practices, James Kinnison (Johns Hopkins University/Applied Physics Laboratory), Yasin Abul-Huda (Johns Hopkins University/Applied Physics Laboratory)
- 02.10 Asteroid Detection, Characterization, Sample-Return, and Deflection, Michael Werth (The Boeing Company), Jeffery Webster (Jet Propulsion Laboratory), Paul Chodas (Jet Propulsion Laboratory)
- 02.11 In-Space Robotics: In-Space Servicing, Assembly, Manufacturing, and Active Debris Removal, Kenneth Cheung (NASA Ames Research Center), David Sternberg (Jet Propulsion Laboratory)
- 3.0 Antennas, RF/Microwave Systems and Radio Science, Glenn Hopkins (Georgia Tech Research Institute), James Hoffman (Kinemetrics)

- 03.01 Phased Array Antenna Systems and Beamforming Technologies, Glenn Hopkins (Georgia Tech Research Institute)
- 03.02 Ground and Space Antenna Technologies and Systems, James Hoffman (Kinemetrics), David Mooradd (MIT Lincoln Laboratory)
- 03.03 RF/Microwave Systems, James Hoffman (Kinemetrics), Orin Council (Georgia Tech Research Institute)
- 03.04 Radio Astronomy and Radio Science, Melissa Soriano (Jet Propulsion Laboratory), Mark Bentum (Eindhoven University of Technology)
- 4.0 Communication & Navigation Systems & Technologies, John Enright (Toronto Metropolitan University), Kar Ming Cheung (Jet Propulsion Laboratory)
- 04.01 Evolving Space Communication Architectures, Behzad Koosha (The George Washington University), Shervin Shambayati (The Aerospace Corporation)
- 04.02 Communication Protocols and Services for Space Networks, Behzad Koosha (The George Washington University), Shervin Shambayati (The Aerospace Corporation)
- 04.03 Next Generation Space Systems: AESS GLUE, Claudio Sacchi (University of Trento), Tommaso Rossi (University of Rome Tor Vergata)
- 04.04 Navigation and Communication Systems for Exploration, David Copeland (Johns Hopkins University/Applied Physics Laboratory), Patrick Stadter (The Aerospace Corporation)
- 04.05 Relay Communications for Space Exploration, Mazen Shihabi (Jet Propulsion Laboratory), Jaime Esper (NASA Goddard Space Flight Center)
- 04.06 Space Communication Systems Roundtable : Networking the Solar System, E. Jay Wyatt (Jet Propulsion Laboratory), Alan Hylton (NASA)
- 04.07 Innovative Space Communications and Tracking Techniques, Alessandra Babuscia (Jet Propulsion Laboratory), Kar Ming Cheung (Jet Propulsion Laboratory)
- 04.08 Communication System Analysis & Simulation, Marc Sanchez Net (Jet Propulsion Laboratory)
- 04.09 Communications and/or Related Systems: Theory, Simulation, and Signal Processing, Claudio Sacchi (University of Trento), David Taggart (), Len Yip (The Aerospace Corporation)
- 04.10 Wideband Communications Systems, David Taggart (), Claudio Sacchi (University of Trento)
- 04.11 Software Defined Radio and Cognitive Radio Systems and Technology, Eugene Grayver (The Aerospace Corporation), Genshe Chen (Intelligent Fusion Technology, Inc.)
- 04.12 Global Navigation Satellite Systems, Sriramya Bhamidipati (Jet Propulsion Laboratory), Lin Yi (Jet Propulsion Laboratory)
- 04.13 Space Navigation Techniques, Lin Yi (Jet Propulsion Laboratory), John Enright (Toronto Metropolitan University)
- 04.14 CNS Systems and Airborne Networks for Manned and Unmanned Aircraft, Dylan Hasson (Volpe National Transportation Systems Center)

- 04.15 Aerospace Cyber Security and Cyber-Physical Systems, Krishna Sampigethaya (Embry-Riddle Aeronautical University)
- 5.0 Small Spacecraft, Low-Cost Missions, Systems and Technologies, Catherine Venturini (The Aerospace Corporation), Alex Austin (Jet Propulsion Laboratory)
- 05.01 Small, Low-Cost Missions in Development and Operations for Space and Earth Exploration, Lee Jasper (Space Dynamics Laboratory), Benjamin Donitz (Jet Propulsion Laboratory), Young Lee (Jet Propulsion Laboratory)
- 05.02 Future Small, Low-Cost Mission Concepts, Nathan Barba (Jet Propulsion Laboratory), Young Lee (Jet Propulsion Laboratory), Dexter Becklund (The Aerospace Corporation)
- 05.03 Lessons Learned from Small Spacecraft Missions, Michael Swartwout (Saint Louis University), Bruce Yost (NASA Ames Research Center), John Samson (Morehead State University)
- 05.04 Small Missions as an Educational Opportunity, Jin S. Kang (U.S. Naval Academy), Michael Swartwout (Saint Louis University)
- 05.05 Instruments and Payloads for Small, Low-Cost Missions, Rashmi Shah (Jet Propulsion Laboratory), Laila Kazemi (arcsec), Michael O'Connor (United States Space Force)
- 05.06 Technologies for Small, Low-Cost Missions, Dimitris Anagnostou (Heriot Watt University), Michael Mclelland (Southwest Research Institute), John Dickinson (Sandia National Laboratories)
- 05.07 Access to Space for Small, Low-Cost Missions, Kara O'Donnell (The Aerospace Corporation), Nicole Fondse (The Aerospace Corporation)
- 05.08 Applications for Distributed Systems of Small Spacecraft, Ryan Woolley (Jet Propulsion Laboratory), Rashmi Shah (Jet Propulsion Laboratory), Ashwati Das-Stuart (Jet Propulsion Laboratory)
- 6.0 Remote Sensing, Darin Dunham (Lockheed Martin), Jordan Evans (Jet Propulsion Laboratory)
- 06.01 Systems Engineering Challenges and Approaches for Remote Sensing Systems, Travis Imken (Jet Propulsion Laboratory), Bogdan Oaida (Jet Propulsion Laboratory), Maria De Soria Santacruz Pich (Jet Propulsion Laboratory)
- 06.02 Instrument and Sensor Architecture, Design, Test, and Accommodation, Keith Rosette (Jet Propulsion Laboratory), Matthew Horner (Jet Propulsion Laboratory)
- 06.03 Imaging Spectrometer Systems, Science, and Applications, Peter Sullivan (Jet Propulsion Laboratory), Mohamed Abid (Jet Propulsion Laboratory / NASA)
- 06.04 Radar, IR, and Electro-Optical Sensor Systems and Signal Processing, Donnie Smith (Waymo), Thomas Backes (Georgia Institute of Technology), Robert Magnusson (University of Texas at Arlington)
- 06.05 Information Fusion, Dan Harris (Northrop Grumman Corporation), Craig Agate (Toyon Research Corporation)

- 06.06 Multisensor Fusion, Laura Bateman (Johns Hopkins University/Applied Physics Laboratory), William Blair (Georgia Tech Research Institute)
- 06.07 Applications of Target Tracking , John Glass (RTX), John Grimes (BAE Systems, Inc)
- 06.08 Fusion Integration of Sensor Harvesting, Erik Blasch (Air Force Research Laboratory), Peter Zulch (Air Force Research Laboratory), Paul Schrader (Air Force Research Laboratory Information Directorate)
- 7.0 Avionics and Electronics for Space Applications, Patrick Phelan (Southwest Research Institute), John Dickinson (Sandia National Laboratories)
- 07.01 High Performance Computing and On-Board Data Processing for Space Applications, Jamal Haque (Lockheed Martin Space Systems Company), Robert Merl (Los Alamos National Laboratory)
- 07.02 Peripheral Electronics, Data Handling, and Interconnects for Space Applications, Michael Epperly (Southwest Research Institute), Mark Post (University of York), Patrick Phelan (Southwest Research Institute)
- 07.03 Assembly, Integration, and Test for Electrical Space Systems, Eric Bradley (Naval Research Lab), Eric Rossland (Naval Research Laboratory)
- 07.04 Power Electronics for Aerospace Applications, Thomas Cook (Voyager Space), Christopher Iannello (NASA - NESC)
- 07.05 Electronics for Extreme Environments, Mohammad Mojarradi (Jet Propulsion Laboratory)
- 07.06 Fault Tolerance, Autonomy, and Evolvability in Spacecraft and Instrument Avionics, Didier Keymeulen (Jet Propulsion Laboratory), Tom Hoffman (Jet Propulsion Laboratory)
- 07.07 Guidance, Navigation, and Control Technologies for Space Applications, John Enright (Toronto Metropolitan University), Matthew Lashley (GTRI), Leena Singh (MIT Lincoln Laboratory)
- 07.08 Emerging Technologies for Space Applications, Michael Mclelland (Southwest Research Institute), William Jackson (L3Harris Technologies)
- 07.09 COTS Utilization for Reliable Space Applications, Matthew Spear (Air Force Research Laboratory), Douglas Carssow (Naval Research Laboratory)
- 07.10 Designing Spacecraft Hardware for Electromagnetic Compatibility, Signal Integrity, and Power Integrity in Space Applications, Pablo Narvaez (Jet Propulsion Laboratory), Jeffrey Boye (Johns Hopkins University/Applied Physics Laboratory)
- 8.0 Spacecraft & Launch Vehicle Systems & Technologies, Lisa May (Lockheed Martin Space), Greg Chavers (NASA)
- 08.01 Human Exploration Beyond Low Earth Orbit, Kevin Post (Booz Allen Hamilton), Chel Stromgren (Binera, Inc.)
- 08.02 Human Exploration Systems Technology Development, Erica Rodgers (NASA Headquarters), Matthew Simon (NASA Langley Research Center)

- 08.03 Advanced Launch Vehicle Systems and Technologies, Melissa Sampson (Lockheed Martin), Randy Williams (The Aerospace Corporation)
- 08.04 Commercial Services for Lunar and Mars Exploration, Paul Niles (NASA Johnson Space Center), Steve Matousek (Jet Propulsion Laboratory)
- 08.05 Human Factors & Performance, Jessica Marquez (NASA Ames Research Center), Kevin Duda (The Charles Stark Draper Laboratory, Inc.)
- 08.06 Space Human Physiology and Countermeasures , Torin Clark (University of Colorado-Boulder), Ana Diaz Artiles (Texas A&M University), Andrew Abercromby (NASA Johnson Space Center)
- 08.07 Mechanical Systems, Design and Technologies, Alexander Eremenko (Jet Propulsion Laboratory), Peter Rossoni (NASA/GSFC), Brian McCarthy (The Aerospace Corporation)
- 08.08 Spacecraft Propulsion and Power Systems, Erica Deionno (The Aerospace Corporation), Richard Hofer (Jet Propulsion Laboratory)
- 08.09 Nuclear Space Power Generation, Concha Reid (National Aeronautics and Space Administration), Christofer Whiting (NASA Glenn Research Center)
- 08.10 Systems and Technologies for Ascent from Lunar and Planetary Bodies, Ashley Karp (Jet Propulsion Laboratory), Tara Polsgrove (NASA Marshall Space Flight Center)
- 08.11 PANEL:Nuclear Propulsion Systems --Opportunities and Barriers, Robert Sievers (RKS Consulting)
- 08.12 PANEL: Radioisotope Power Systems Expanding Our Reach, Christofer Whiting (NASA Glenn Research Center)
- 08.13 PANEL: Radioisotope Power Systems: Advancing Early Lunar Science Capabilities, Robert Sievers (RKS Consulting)
- 9.0 Air Vehicle Systems and Technologies for Piloted, Remotely Piloted, or UAS Atmospheric Platforms, Tom Mc Ateer (NAVAIR), Christopher Elliott (CMElliott Applied Science LLC)
- 09.01 Air Vehicle Modeling and Simulation, Richard Hoobler (University of Texas at Austin), Will Goins (Radiance Technologies)
- 09.02 Air Vehicle Autonomy and Artificial Intelligence for Atmospheric Platforms, Will Goins (Radiance Technologies), Kerianne Hobbs (Air Force Research Laboratory)
- 09.03 Air Vehicle Integrated Systems, Sensors, Safety-Critical Hardware, and Avionics, Will Goins (Radiance Technologies), Thomas Fraser (Lockheed Martin Corp), Andrew Lynch (Tactical Air Support Inc.)
- 09.04 Air Vehicle Flight Guidance, Navigation, and Control Theory and Application, Christopher Elliott (CMElliott Applied Science LLC), Richard Hoobler (University of Texas at Austin), Tom Mc Ateer (NAVAIR), Nikolaus Ammann (German Aerospace Center (DLR))

- 09.05 Air Vehicle Distributed, Cooperative, and Multi-Vehicle GNC, Christopher Elliott (CMElliott Applied Science LLC)
- 09.06 Air Vehicle Flight Testing, Verification, and Validation, Christopher Elliott (CMElliott Applied Science LLC)
- 10.0 Software and Computing, Virgil Adumitroaie (Jet Propulsion Laboratory), Kristin Wortman (Johns Hopkins University Applied Physics Laboratory)
- 10.01 Computational Modeling, Virgil Adumitroaie (Jet Propulsion Laboratory), Seungwon Lee (Jet Propulsion Laboratory)
- 10.02 Innovative Software Engineering and Management Techniques and Practices, Ronnie Killough (Southwest Research Institute), Kristin Wortman (Johns Hopkins University Applied Physics Laboratory)
- 10.03 Software Architecture and Design, Martin Stelzer (German Aerospace Center (DLR)), Peter Lehner (German Aerospace Center (DLR))
- 10.04 Software Quality, Reliability and Safety Engineering and Other Illities, Kristin Wortman (Johns Hopkins University Applied Physics Laboratory), Robert Klar (Southwest Research Institute)
- 10.05 Model-based Systems and Software Engineering, Hongman Kim (Jet Propulsion Laboratory), Aleksandra Markina Khusid (MITRE Corporation)
- 10.06 Machine Learning / Artificial Intelligence (ML/ AI) for Aerospace Applications, Georges Labrèche (Tanagra Space / European Space Agency), Daniel Clancy (Georgia Tech Research Institute)
- 10.07 Human-Systems Interaction, Andreas Gerndt (German Aerospace Center (DLR)), Janki Dodiya (IU International University of Applied Science)
- 10.08 Image Processing and Computer Vision, Marco Sewtz (German Aerospace Center - DLR), Timothy Chase (University at Buffalo/NASA Goddard Space Flight Center), Samuel Bibelhauser (Johns Hopkins University/Applied Physics Laboratory)
- 11.0 Diagnostics, Prognostics and Health Management (PHM), Andrew Hess (The Hess PHM Group, Inc.), Wolfgang Fink (University of Arizona)
- 11.01 PHM for Aerospace Systems, Subsystems, Components, Electronics, and Structures, David He (University of Illinois at Chicago), Andrew Hess (The Hess PHM Group, Inc.)
- 11.02 PHM for Autonomous Platforms and Control Systems Applications, Wolfgang Fink (University of Arizona), Derek De Vries (Northrop Grumman Propulsion Systems)
- 11.03 PHM System Design Attributes, Architectures, and Assessments, Andrew Hess (The Hess PHM Group, Inc.), Derek De Vries (Northrop Grumman Propulsion Systems)
- 11.04 Non-Destructive Testing and Sensor Technologies for PHM Applications, David He (University of Illinois at Chicago), Morteza Safai (Boeing Company)
- 11.05 PHM for Non-Aerospace Applications, David He (University of Illinois at Chicago), Andrew Hess (The Hess PHM Group, Inc.)

- 11.06 PHM for Commercial Space Applications, Andrew Hess (The Hess PHM Group, Inc.), Wolfgang Fink (University of Arizona), Derek De Vries (Northrop Grumman Propulsion Systems)
- 11.07 PHM for Human Health and Performance, Wolfgang Fink (University of Arizona), Alexandre Popov (McGill University)
- 11.08 PHM and Digital Engineering and Transformation, Andrew Hess (The Hess PHM Group, Inc.), Mark Walker (End to End Enterprise Solutions)
- 11.09 Panel: PHM from a Practitioner's Perspective – a Potpourri of Capabilities, Issues, Case Studies, and Lessons Learned, Andrew Hess (The Hess PHM Group, Inc.), Derek De Vries (Northrop Grumman Propulsion Systems)
- 12.0 Ground and Space Operations, Mona Witkowski (Jet Propulsion Laboratory), Michael Machado (NASA Goddard Space Flight Center)
- Orbital, Surface and Payload/Instrument Mission 12.01 Operations, Heidi Hallowell (Ball Aerospace), Mona Witkowski (Jet Propulsion Laboratory)
- Mission Planning, Mission Operations Systems 12.02 and Ground Architectures, Rob Lange (Jet Propulsion Laboratory), Kedar Naik (BAE Systems, Space & Mission Systems)
- 12.03 Human Space Flight Development, Processing, and Operations, Michael Lee (NASA Kennedy Space Center), William Koenig (NASA Kennedy Space Center)
- 12.04 Resilient and Cyber Secure Systems for Mission Operations, John Kenworthy (BAE Systems), Seth Kricheff (Purdue University)
- 12.05 Automation and Machine Learning Applications in Spacecraft Operations, Dennis Ögbe (Jet Propulsion Laboratory), Zaid Towfic (Jet Propulsion Laboratory)
- 12.06 Robotics, Autonomy and Operations, Alexandra Holloway (Jet Propulsion Laboratory), Vandi Verma (Jet Propulsion Laboratory)
- 13.0 Systems Engineering, Management, and Cost, **Torrey Radcliffe (The Aerospace Corporation),** Jeffery Webster (Jet Propulsion Laboratory)
- 13.01 Systems Architecture, Engineering and System of Systems, Dean Bucher (The Aerospace Corporation), Lisa May (Lockheed Martin Space), Daniel Selva (Texas A&M University)
- 13.02 Management and Risk Tools, Methods and Processes, Jeremiah Finnigan (Johns Hopkins University/Applied Physics Laboratory), Joshua Calkins (Ensign-Bickford Aerospace & Defense (EBAD))
- 13.03 Cost and Schedule Tools, Methods, and Processes, Stephen Shinn (NASA Headquarters), Eric Mahr (The Aerospace Corporation)
- 13.04 Advances in Conceptual Design Methods and Applications, Alfred Nash (Jet Propulsion Laboratory), Rob Stevens (The Aerospace Corporation)
- 13.05 System Simulation and Verification, Virgil Adumitroaie (Jet Propulsion Laboratory), Gregory Falco (Cornell University)

- 13.06 System Verification & Validation and Integration & Test, Evan Smith (Johns Hopkins University/ Applied Physics Laboratory), Benjamin Solish (Jet Propulsion Laboratory), Sarah Bucior (Johns Hopkins University Applied Physics Laboratory)
- Strategic Technology Planning, Management & Infusion, Charles Player (The Aerospace 13.07 Corporation), Theodore Bujewski (Department of Defense), Andrea Belz (University of Southern California)
- Promote (and Provoke!) Cultural Change, John 13.08 Ryskowski (JFR Consulting), David Scott ((Self))
- **Government Plans, Policies and Education,** 14.0 **Richard Mattingly** (Jet Propulsion Laboratory Retired), Erica Deionno (The Aerospace **Corporation**)
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About the Prognostics and Health Management Society

The Prognostics and Health Management (PHM) Society is a professional organization dedicated to the advancement of PHM as an engineering discipline. The PHM Society was incorporated in 2009 as a non-profit organization dedicated to the advancement of all things PHM and their related technology disciplines, across appropriate industry sectors, and applications. The flagship events of the society are our annual conference events and their diverse offerings. Current the society has over 7,000 participating members across over 30 countries. More information and content can be found on our website is: phmsociety.org

The Prognostics and Health Management Society is dedicated to:



- promoting the development, growth, and recognition of prognostics and health management (PHM) as an engineering discipline;
- supporting PHM education by developing standard teaching curricula in the field;
- participating in and facilitating international scientific collaboration in connection with the advancement or application of PHM;
- advancing the theory and practice of PHM;
- establishing, presenting, managing, or organizing PHM conferences, workshops, seminars, and courses;
- publishing peer-reviewed publications concerning or related to PHM and its applications; and
- establishing, developing, or adopting standards, methods, and metrics for PHM



IEEE Junior Engineering and Science Conference

JUNIOR ENGINEERING AND SCIENCE AUTHORS*

Madison Cook 1st Michael Valentino 2nd **Dolores Hoskins** 2nd Mia Apostolopoulos 3rd Diana Carter 3rd Michael Gross II 5th Savannah Cook 5th 5th Mila Grayver

6th	Robbie Sherwood
6th	Audrey Valentino
7th	Michael He
7th	Samantha Khusid
7th	Julia Bradley
7th	Alexander He
8th	Kayleigh Cook
8th	Kai Schiffman

8th Jackson Sims
9th Samantha Bearden
9th Fiona Bearden
10th Haolin Li
11th Nicole Chen
11th Hamie Carter
12th Jimmy Helferty

*Junior Conference Scholarship is Proudly Sponsored by IEEE AESS



EVALUATE THE 2025 CONFERENCE

Help us continue to improve your conference experience (see above). Printed evaluation forms can be found in the registration room. Forms will be collected after the Thursday evening dinner, but if you leave Big Sky before then, please complete your form and place it in the Evaluation Forms box in the Registration Office or Grand Atrium.

VOLUNTEER FOR THE 2026 CONFERENCE

https://www.aeroconf.org/conference_volunteers/new

The conference is seeking talented and energetic volunteers to organize technical sessions. Please consider adding conference management experience to your resume and volunteer to join our friendly, hard-working group.

THE 2026 IEEE AEROSPACE CONFERENCE YELLOWSTONE CONFERENCE CENTER, BIG SKY MARCH 7 - 14, 2026

REGISTRATION OPENS OCTOBER 2025!



Plan to submit a paper and attend Tell your colleagues Check our website: <u>aeroconf.org</u>

SCHEDULE OVERVIEW

6 Days of Presentations, Over 200 Hours of Technical Sessions, and 20 Hours of Conference-Sponsored Technical Networking

Registration and Icebreaker Wine & Cheese Reception Saturday March 1, 6:30–9:00 PM							
Sunday March 2	Monday March 3	Tuesday March 4	Wednesday March 5	Thursday March 6	Friday March 7		
Continued Registration 8:45–10:00 AM	Technical Sessions 8:30 AM–Noon	Technical Sessions 8:30 AM–Noon	Technical Sessions 8:30 AM–Noon	Technical Sessions 8:30 AM–Noon	Technical Sessions 8:30 AM–Noon		
Continued Registration 4:00–6:45 PM	Lunch Break 12:15–1:25 PM	Catered Lunch Noon-1:30 PM	Lunch Break 12:15–1:25 PM	Lunch Break 12:15–1:25 PM	Lunch Break 12:15–1:25 PM		
	Panels 1:25–4:00 PM	Jr Engineering & Science Conference 1:15–4:00 PM	Panels 1:25–4:00 PM	Panels 1:25–4:00 PM	Ad Hoc Individual Track Planning Meetings		
Java Jam 4:00–4:30 PM	Java Jam 4:00–4:30 PM	Ad Hoc Session Workshops (see announcement board for time and location)	Java Jam 4:00–4:30 PM	Java Jam 4:00–4:30 PM	Track/Session Organizers		
Technical Sessions 4:30–5:45 PM	Technical Sessions 4:30–5:45 PM		Technical Sessions 4:30–5:45 PM	Technical Sessions 4:30–5:45 PM	for 2026 Conference 4:00–5:30 PM		
Plenary Session 5:50–6:35 PM	Plenary Session 5:50–6:35 PM		Plenary Session 5:50–6:35 PM	Plenary Session 5:50–6:35 PM			
Hosted Reception 6:35–7:05 PM	Hosted Reception 6:35–7:05 PM	Free Evening in Big Sky Village	Hosted Reception 6:35–7:05 PM	Hosted Reception 6:35–7:05 PM			
Catered Dinner 7:05–8:05 PM	Catered Dinner 7:05–8:05 PM		Catered Dinner 7:05–8:05 PM	Catered Dinner 7:05–8:05 PM	Farewell Networking Catered		
Plenary Session 8:05–8.50 PM	Plenary Session 8:05–8.50 PM		Plenary Session 8:05–8.50 PM	Plenary Session 8:05–8.50 PM	Reception & Dinner		
Technical Sessions 9:00–10:15 PM	Technical Sessions 9:00–10:15 PM		Technical Sessions 9:00–10:15 PM	Technical Sessions 9.00–10:15 PM	7:00-11:00 PM		
Après Session Fireside Cheer and Chat 10:15–11:00 PM	Après Session Fireside Cheer and Chat 10:15–11:00 PM		Après Session Fireside Cheer and Chat 10:15–11:00 PM	Après Session Fireside Cheer and Chat 10:15–11:00 PM	7:00–9:00 PM)		

All dinners and networking activities are intended to promote, enhance, and facilitate technical discussions and long-term professional and personal relationships.