The AMOS Conference is an in-person event with virtual attendance options and kicks off with a number of virtual and in-person Technical Short Courses in various Space Situational/Domain Awareness-related disciplines. The three plenary program days open with Keynote Addresses and SSA Policy Forum discussions followed by Technical Presentations covering a range of broad topical areas relating to SSA/SDA, all streamed live to the virtual conference platform. Posters are available in digital format this year and are accompanied by on-demand presentation videos. A select number of posters are invited for in-person presentation during the evening poster sessions.

Please note all dates/times listed are Hawaii Standard Time (HST). Agenda is subject to change.

**Program at a Glance**

<table>
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<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>FRI Sep 23</td>
<td>Virtual Platform Open to Registered Attendees</td>
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<tr>
<td></td>
<td>On-Demand Launch</td>
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<tr>
<td>SUN Sep 25</td>
<td>EMER-GEN® Program (separate registration fee required)</td>
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<tr>
<td>TUE Sep 27</td>
<td>On-site Registration</td>
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<tr>
<td>MON Sep 26</td>
<td>Virtual Technical Short Courses (separate registration fee required)</td>
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<td>TUE Sep 27</td>
<td>Exhibitor Load-in</td>
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<td></td>
<td>In-person Technical Short Courses (separate registration fee required)</td>
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<td>Welcome Reception</td>
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<td>WED Sep 28</td>
<td>Conference Opening &amp; Cultural Invocation</td>
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<td>Opening Keynote Address</td>
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<td>SSA Policy Forum</td>
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<td>Women &amp; Allies in SDA</td>
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<td>THU Sep 29</td>
<td>Keynote Address</td>
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<td>SSA Policy Forum</td>
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<td>Poster Session</td>
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<tr>
<td>FRI Sep 30</td>
<td>Keynote Address</td>
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</tbody>
</table>
**AMOS Conference 2022**

**PROGRAM**

| SSA Policy Forum | The European Perspective on Space Traffic Management |
| Student Space Exploration Day |
| Technical Session | Conjunction/Rendezvous Proximity Operations | Sponsored by LeoLabs |
| Technical Session | Atmospheric/Space Weather |
| Technical Session | Non-Resolved Object Characterization |
| Invited Talk | Col Raley & David Ehrlich |
| Technical Session | Cislunar SSA | Sponsored by Lockheed Martin |
| Conference Closing & Awards Ceremony |
| Pau Hana Reception | Co-sponsored by L3 Harris |

**Sunday 25 September - Tuesday 27 September**

**EMER-GEN®**

The 5th annual EMER-GEN® is a joint initiative of the AMOS Conference and SGAC. The program is designed especially for young professionals and students enthusiastic about careers in space. Separate registration required. Visit [www.emer-gen.com](http://www.emer-gen.com) to learn more.

**ON-SITE REGISTRATION** | Aulani Ballroom Foyer

**Monday 26 September**

**VIRTUAL TECHNICAL SHORT COURSES:** In-person and virtual short courses are offered this year. Separate registration fee required for each half-day course. Virtual short courses are “live” with the ability to interact with the instructor and attendees in real-time. Virtual courses will not be recorded. Access links will be provided to registrants closer to the course date.

| 08:00 AM HST | 12:00 PM HST | VIRTUAL COURSE A | Space Domain Awareness (SDA) Workshop |
|  | | VIRTUAL COURSE B | Space Weather Impacts on Orbital Operations |
|  | | VIRTUAL COURSE C | Telescopes and Optics for Ground-Based Optical SSA |

| 12:00 | 01:00 | BREAK | Explore the AMOS Virtual Venue and Digital Poster Hall |

<p>| 01:00 | 05:00 | VIRTUAL COURSE D | LeoLabs Cloud-based SDA Platform |
| | | VIRTUAL COURSE E | The International Framework for Space Behavior: Present Foundations and Future Prospects |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>In-Person Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>08:00</td>
<td>IN-PERSON COURSE 01</td>
<td>Conjunction Assessment (CA) Risk Assessment</td>
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<tr>
<td>12:00</td>
<td>IN-PERSON COURSE 02</td>
<td>The Dynamic Co-Evolution of Space Policy and Technology: Historical Overview and Lessons for Assessing Future Trends</td>
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<td>IN-PERSON COURSE 03</td>
<td>Deep Learning Methods for Space Domain Awareness</td>
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<td>IN-PERSON COURSE 04</td>
<td>Optical Modeling and Simulation for SSA/SDA</td>
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<td>IN-PERSON COURSE 05</td>
<td>Navigating the Sea of Space Law</td>
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<tr>
<td>12:00</td>
<td>BREAK</td>
<td>Explore the AMOS Virtual Venue and Digital Poster Hall. Pick up lunch at one of the many locations on-site or next door at the Shops at Wailea.</td>
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<tr>
<td>01:00</td>
<td>IN-PERSON COURSE 06</td>
<td>Demystifying Machine and Deep Learning</td>
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<tr>
<td>05:00</td>
<td>IN-PERSON COURSE 07</td>
<td>Observing and Characterizing Space Debris</td>
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<td>IN-PERSON COURSE 08</td>
<td>An Introduction to Event-Based Sensors for SDA: A Hands-On Tutorial</td>
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<td>IN-PERSON COURSE 09</td>
<td>Space Law &amp; The Space Law Games: Legal Liability and Mapping the Future in LEO Operations</td>
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<tr>
<td></td>
<td>IN-PERSON COURSE 10</td>
<td>Astrodynamics for xGEO Space Domain Awareness</td>
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<tr>
<td>06:00</td>
<td>WELCOME RECEPTION</td>
<td>Luau Gardens</td>
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</tbody>
</table>

Join us for an oceanfront reception at sunset as we welcome the AMOS ‘ohana back to the island.

Co-sponsored by Boeing
Wednesday 28 September

The three-day plenary program will be livestreamed in its entirety to the virtual conference platform, with on-demand playback available in 24-48 hours. All registered attendees are encouraged to visit the virtual Exhibit Hall and Digital Poster Hall to review materials and interact with sponsors and poster presenters.

06:00 07:15  BREAKFAST AT LEISURE | Luau Gardens

07:30 07:45  CONFERENCE OPENING | Aulani Ballroom
Leslie Wilkins, President & CEO, Maui Economic Development Board, Inc.

CULTURAL INVOCATION
Kahu Kealahou Alika

WELCOME & INTRODUCTIONS

07:45 08:15  OPENING KEYNOTE ADDRESS
Introduction by Victoria Samson, Washington Office Director, Secure World Foundation

Lieutenant General Michael A. Guetlein
Commander, Space Systems Command
United States Space Force

08:15 09:15  SSA POLICY FORUM | Using SSA to Verify Future Space Security Agreements
As the international community strives to negotiate space security agreements, the question arises about how to verify actions on orbit and whether the agreed-to behavior is being followed. SSA can provide a technical foundation for verification; by understanding what SSA can do, states are better placed to negotiate behaviors that can be confirmed by outside observers. This panel will discuss the technical ranges of SSA programs and how they can be applied to verify future space security agreements.

Moderated by:
Victoria Samson, Washington Office Director, Secure World Foundation

Panelists:
Almudena Azcarate Ortega, Associate Researcher, Space Security and Weapons of Mass Destruction Programmes, United Nations Institute for Disarmament Research
Daniel Ceperley, Founder & CEO, LeoLabs
**EXHIBITION AND NETWORKING BREAK**

Explore the Exhibit Hall on-site and online. Interact with our conference partners, view demos, access resources, schedule meetings, and more.

**EXHIBITION HOURS FOR THE DAY**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activities</th>
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<tbody>
<tr>
<td>10:00</td>
<td><strong>MACHINE LEARNING FOR SSA APPLICATIONS</strong> Sponsored by Aulani Ballroom</td>
</tr>
</tbody>
</table>
| 11:45  | Co-chaired by Islam Hussein, Trusted Space and Charlotte Shabarekh, MIT Lincoln Laboratory  
              - Adaptive Stress Testing Applied To Space Domain Awareness Systems 
                Jackson Wagner, University of Colorado Boulder  
              - Development of a Versatile LiDAR Point Cloud Simulation Testbed for Advanced RSO Algorithms 
                Lane Fuller, Advanced Scientific Concepts  
              - General-sum Game Modeling of Generative Adversarial Networks for Satellite Maneuver Detection 
                Dan Shen, Intelligent Fusion Technology, Inc  
              - Applications of Artificial Intelligence Methods for Satellite Maneuver Detection and Maneuver Time Estimation 
                Nicholas Perovich, MIT Lincoln Laboratory  
              - Light Curve Completion and Forecasting using Fast and Scalable Gaussian Processes (MuyGPs) 
                Imene Goumiri, Lawrence Livermore National Laboratory  
              - Recurrent Neural Network Autoencoders for Spin Stability Classification of Irregularly Sampled Light Curves 
                Gregory Badura, Georgia Tech Research Institute  
| 11:45  | **LUNCH** Lokelani Ballroom                                               |

**INVITED TALK** Space Delta 2: Mission Federation and Realignment for a Contested and Congested Domain 

Colonel Marc A. Brock, Commander, Space Delta 2, US Space Force
03:05

**SPACE SITUATIONAL/DOMAIN AWARENESS** | Sponsored by Peraton

Co-chaired by Moriba Jah, University of Texas at Austin and Privateer, and Danielle Wood, Space Enabled Research Group, MIT Media Lab

System Approach to Analyse the Performance of Current and Future EU Space Surveillance and Tracking System at Service Provision level
*Igone Urdampilleta*, CDTI

ExoALERT: 1 Year of AI-Enabled Space Traffic Management Services at GEO
*Doug Hendrix*, ExoAnalytic Solutions

*Increasing Capabilities in a Growing Radar Network*  
*Owen Marshall*, LeoLabs

European Expert Centre providing Services and Support for Space Surveillance and Traffic Management
*Thomas Schildknecht*, Astronomisches Institut Universität Bern

Target Behaviour Analysis based on Bistatic Radar Systems
*Simão da Graça Marto*, University of Strathclyde

Advanced Space Surveillance with the Imaging Radar IoSiS
*Simon Anger*, German Aerospace Center (DLR)

Improving the Resolution of Low Earth Orbit Objects by Multi-Exposure Imaging and Deconvolution
*Andrew Lambert*, UNSW Canberra

A Sensor Network for Integrated Space Traffic Management for Australia
*Edwin Peters*, University of New South Wales

03:05 03:25

**EXHIBITION AND NETWORKING BREAK** | Exhibit Hall + Conference Platform

Relax and recharge at the Recharging Station, brought to you by PRIVATEER

03:25 04:25

**SPACE SITUATIONAL/DOMAIN AWARENESS (cont.)** | Sponsored by Peraton

| Aulani Ballroom

Co-chaired by Moriba Jah, University of Texas at Austin and Privateer, and Danielle Wood, Space Enabled Research Group, MIT Media Lab

**SSA/SDA Technology Policy Panel**

Progress in building effective global cooperation in SSA/SDA will require contributions from engineering, policy, law, and cultural perspectives. This interactive panel discussion brings together thought leaders highlighting creative strategies for SSA & SDA. The ideas they share include ways to build international cooperation and learn from history.
Employing a Shared Space Information Sharing Ecosystem as a Mechanism for Promoting Constructive U.S. China Space Relations  
**Nathaniel Dailey**, MITRE & Space Force Association

Partnering not Bossing: Better Leveraging of International Capabilities for Space Domain Awareness  
**Lauren Hale**, The Aerospace Corporation

A Survey of International Telecommunication Union (ITU) Space Station License Applications in the Geosynchronous Orbital Regime (GEO)  
**Thomas G. Roberts**, Massachusetts Institute of Technology

Unnecessary Risks Created By Uncontrolled Rocket Reentries  
**Ewan Wright**, The University of British Columbia

04:25  05:40  SPACE DEBRIS | Sponsored by NORTHSTAR

Co-chaired by **Heather Cowardin**, NASA and **Carolin Frueh**, Purdue University

Stability of the LEO Environment as a Dynamical System  
**Daniel Jang**, Massachusetts Institute of Technology

Report on 2021 COSMOS 1408 Event and Impact to Space Domain Awareness Mission  
**Deshaun Hutchinson**, 18th Space Control Squadron

LEO Capacity Modeling for Sustainable Design  
**Mark Sturza**, 3C Systems Company

Long-Term Evolution of Debris Clouds in Low Lunar Orbit  
**Nathan Boone**, Air Force Institute of Technology

A Statistical Approach to Identify Fragmentation Epoch from a Single Fragment Surveillance Radar Observation  
**Marco Felice Montaruli**, Politecnico di Milano

05:45  07:15  EXHIBITION AND POSTER SESSION | Exhibit Hall

Posters co-chaired by **Darren McKnight**, LeoLabs and **Matthew Stevenson**, LeoLabs

Meet select poster presenters while enjoying a cocktail and interacting with exhibitors and fellow attendees.

Co-sponsored by **SAIC**
08:00 10:00 **WOMEN & ALLIES IN SPACE DOMAIN AWARENESS** | Pacific Terrace Rooftop
Desserts, dancing, and networking under the stars, with featured speaker Ezinne Uzo-Okoro, Assistant Director for Space Policy, White House Office of Science and Technology.

Limited to first 300 guests. Separate registration required. Registration information is forthcoming.

Thursday 29 September

The three-day plenary program will be livestreamed in its entirety to the virtual conference platform, with on-demand playback available in 24-48 hours. All registered attendees are encouraged to visit the virtual Exhibit Hall and Digital Poster Hall to review materials and interact with sponsors and poster presenters.

06:00 07:15 **BREAKFAST AT LEISURE** | Luau Gardens

07:30 08:00 **KEYNOTE ADDRESS** | Aulani Ballroom
*Introduction by Ian Christensen, Director of Private Sector Programs, Secure World Foundation*

**Ezinne Uzo-Okoro**
Assistant Director for Space Policy
White House Office of Science and Technology Policy

08:00 09:00 **SSA POLICY FORUM** | Is Orbital Carrying Capacity a Useful Metric?
With the increasing deployment of very large satellite constellations, we are seeing a fundamental change in the way we use the space environment - calling into question our understanding of the carrying capacity of specific orbital regimes or regions. There are research efforts underway to define and apply approaches to assessing orbital capacity. This panel will discuss those approaches, and the work needed to understand how orbital capacity can be applied in behavioral and operationally relevant ways to improve the safe and sustainable use of LEO for all operators.

**Moderated by:**
Ian Christensen, Director of Private Sector Programs, Secure World Foundation

**Panelists:**
John Janka, Chief Officer, Global Government Affairs & Regulatory
Viasat Inc.

Francesca Letizia, Space Debris Engineer, European Space Agency
Hugh Lewis, Professor, Engineering and Physical Sciences, University of Southampton
Richard Linares, Associate Professor of Aeronautics and Astronautics, Massachusetts Institute of Technology
Akhil Rao, Assistant Professor of Economics, Middlebury College

09:00 - 09:40 | EXHIBITION AND NETWORKING BREAK | Sponsored by PRIVATER
| Explore the Exhibit Hall on-site and online. Interact with our conference partners, view demos, access resources, schedule meetings, and more.

09:00 AM HST - 07:00 PM HST | EXHIBITION HOURS FOR THE DAY

09:40 AM HST - 10:05 AM HST | INVITED TALK | National Space Council Policy Update 2022: Embracing Opportunity | Aulani Ballroom

Diane Howard, Director of Commercial Space Policy, National Space Council

10:05 AM HST - 11:20 AM HST | SPACE-BASED ASSETS
Co-chaired by John Ianni, Air Force Research Laboratory and Pat Patterson, Space Dynamics Laboratory

Pole-Sitter Based Space Domain Awareness for Cislunar Regions

Roberta Ewart, SSC/ST

Formation Flying and Change Detection for the UNSW Canberra Space ‘M2’ Low Earth Orbit Formation Flying CubeSat Mission

Melrose Brown, UNSW Canberra Space

On Orbit Sensing of Objects Beyond GEO

Rachel Derbis, Air Force Institute of Technology

Sensor Management for Space-based Sensing Constellations

Joshua Davis, Defence Science and Technology Laboratory

Hyperspectral Thermal Imaging CubeSat for SSA Applications

Miguel Nunes, Hawaii Space Flight Laboratory

11:20 AM HST - 11:30 AM HST | FEATURED PRESENTATION | EMER-GEN® Briefing

11:30 AM HST - 11:45 AM HST | 2022 AMOS STUDENT AWARD WINNER
Optimal Cislunar Architecture Design Using Monte Carlo Tree Search Methods

Michael Klonowski, University of Colorado at Boulder

11:45 AM HST - 12:45 PM HST | LUNCH | Lokelani Ballroom
12:45  03:15  **OPTICAL SYSTEMS & INSTRUMENTATION | Aulani Ballroom**
Co-chaired by Jeff Sherk, Aerospace Corporation and Stacie Williams, Air Force Office of Scientific Research

*Adaptive Optics for Meter-Class Telescopes*
**Michael Hart**, HartSCI LLC

*Operational Acceptance and Employment of the Space Surveillance Telescope in 2022*
**Jonathan Hutfilz**, Space Systems Command

*Augmentation of a Southern Hemisphere Deep Space Bistatic Radar with Small Optical Systems to Detect Near Earth and other Space Objects*
**Ed Kruzins**, UNSW Canberra Space

*Ground-based Planetary Radars: Current and Future Prospects in the Cislunar Arena*
**Joseph Lazio**, Jet Propulsion Laboratory, California Institute of Technology

*Magdalena Ridge Observatory Interferometer: An Overview of an Astrophysics Facility for Supporting SDA Efforts*
**Van Romero**, New Mexico Tech

*LARADO: A Sensor for On-orbit Optical Detection of Lethal Non-Trackable Debris*
**Andrew Nicholas**, Naval Research Laboratory

*Upcoming Satellite Detection and Tracking Capabilities of the Australian National University*
**Doris Grosse**, Australian National University

*All-Sky Electro-Optical Tracking of Mega-Constellations in Low Earth Orbit*
**Cameron Key**, Slingshot Aerospace

*Event-Based Sensor Multiple Hypothesis Tracker For Space Domain Awareness*
**Rachel Oliver**, Cornell University

*Ultrafast Image Retrieval from a Holographic Memory Disc for High-Speed Operation of a Shift, Scale, and Rotation Invariant Target Recognition System*
**Julian Gamboa**, Northwestern University

*Automatic Detection and Characterization of Closely-Spaced Objects*
**Brandoch Calef**, The Boeing Company

03:30  03:50  **EXHIBITION AND NETWORKING BREAK | Sponsored by PRIVATEER**
| Exhibit Hall + Conference Platform
03:50  05:35  **ASTRODYNAMICS**  
Co-chaired by **John Gaebler**, KBR, and **Tom Kelecy**, The Stratagem Group  

**AURORAS: The Next Evolution of Orbit Determination Using Passive Optical Observations**  

Generalized Labeled Multi-Bernoulli Filter with Kernel-based Ensemble Gaussian Mixture Filtering for Orbit Determination with Sparse Data  
**Benjamin Reifler**, The University of Texas at Austin  

Geometric Solution to Probabilistic Admissible Region (G-PAR)  
**Utkarsh Mishra**, Texas A&M University  

Rapidly and Automatically Estimating Reachability of Electric Propulsion Spacecraft  
**Prashant Patel**, Institute for Defense Analyses  

Maneuver Estimation from Optical Observations of a Spiraling Trajectory: The Case of MEV-2  
**Laura Pirovano**, University of Auckland, Te Pūnaha Ātea - Space Institute  

Catalogue-based Atmosphere Uncertainty Quantification  
**Alejandro Cano Sanchez**, Universidad Carlos III de Madrid / GMV  

Improvements to the SGP4 Propagator (SGP4-XP)  
**Timothy Payne**, USSF/SPOC/DCG-T/S9I  

05:45  07:15  **EXHIBITION AND POSTER SESSION** | Exhibit Hall  
Posters co-chaired by **Darren McKnight**, LeoLabs and **Matthew Stevenson**, LeoLabs  

Meet select poster presenters while enjoying a cocktail and interacting with exhibitors and fellow attendees.  

Co-sponsored by **Northrop Grumman**
AMOS Conference 2022

PROGRAM

Friday 30 September

The three-day plenary program will be livestreamed in its entirety to the virtual conference platform, with on-demand playback available in 24-48 hours. All registered attendees are encouraged to visit the virtual Exhibit Hall and Digital Poster Hall to review materials and interact with sponsors and poster presenters.

06:00 07:15 BREAKFAST AT LEISURE | Luau Gardens

07:30 08:00 KEYNOTE ADDRESS | Aulani Ballroom
Introduction by Brian Weeden, Director of Program Planning, Secure World Foundation

Richard DalBello
Director, Office of Space Commerce
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

08:00 09:00 SSA POLICY FORUM | The European Perspective on Space Traffic Management
While space traffic management has been a hot policy topic for the last several years, the conversation has largely been driven by the perspective from the United States. The European Union recently announced their strategy on STM, which is billed as a different approach than that from the United States. This panel will discuss the current EU thinking on STM, how it is similar or different from that of the United States or other countries, and what the prospects are for cooperation or competition going forward to develop an international STM regime.

Moderated by:
Brian Weeden, Director of Program Planning, Secure World Foundation

Panelists:
Pascal Faucher, Chair, European Union Space Surveillance and Tracking; Defense & Security, CNES
Sebastien Moranta, Research Manager, European Space Policy Institute
Rodolphe Muñoz, Legal Officer, European Commission, Directorate-General for Defence Industry and Space
Regina Peldszus, Space Policy Officer (Space Security, Space Situational Awareness), European External Action Service

09:00 09:30 EXHIBITION AND NETWORKING BREAK | Sponsored by Lockheed Martin

Explore the Exhibit Hall on-site and online. Interact with our conference partners, view demos, access resources, schedule meetings, and more.
### EXHIBITION HOURS FOR THE DAY

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### STUDENT SPACE EXPLORATION DAY

**South Pacific Ballroom + Exhibit Hall**

The AMOS Conference welcomes 150 Maui County middle school students and their STEM educators to meet astronaut Scott “Scooter” Altman and visit exhibit booths for hands-on STEM activities.

### CONJUNCTION/RPO

**Sponsored by LEO LABS**

**Aulani Ballroom**

Co-chaired by Zach Funke, AFRL Maui and Jim Shell, Novarum Tech LLC

- Conjunction Assessment: NASA Best Practices and Lessons Learned
  - Lauri Newman, NASA

- Design And Development of a Decision Support Tool for Risk Assessment & Manoeuvre Planning in Collision Avoidance
  - David Shteinman, Industrial Sciences Group

- Opportunistic Conjunction Screening with Maneuvering Spacecraft
  - Max Geissbuhler, Slingshot Aerospace

- Predicted Intent Inferred from Real-time Rendezvous and Proximity Behavior
  - Thomas Kelecy, The Stratagem Group

- Analysis of Orbit Residual Behavior to Determine Contact in Rendezvous and Proximity Operations at Geosynchronous Orbit
  - Jaycie Bishop, ExoAnalytic Solutions

### ATMOSPHERICS/SPACE WEATHER

Co-chaired by Randall Alliss, Northrop Grumman Corporation and Tom Berger, University of Colorado/Space Weather Technology, Research, and Education Center (SWx TREC)

- The Impact of Space Weather Disturbances on Very Low Earth Orbit (VLEO) Satellites
  - Vishal Ray, University of Colorado Boulder

- Impact of Space Weather on Space Assets and Satellite Launches
  - Julia Briden, Massachusetts Institute of Technology

- Validation of Atmospheric Characterization and Prediction over Haleakalā during the Laser Communications Relay Demonstration
  - Mary Ellen Craddock, NGC

- A High Power, Large Aperture Doppler Lidar for Upper Atmospheric Sensing
  - Peter Dragic, University of Illinois at Urbana-Champaign

### LUNCH

**Lokelani Ballroom**
12:45  02:30  NON-RESOLVED OBJECT CHARACTERIZATION | Aulani Ballroom
Co-chaired by Zach Gazak, Odyssey and Emily Gerber, Stratagem Group

Shadow Imaging of Geostationary Satellites: Experimental Demonstration with Accurate Polychromatic Modelling of Diffraction and Atmospheric Disturbances
Hanae Labriji, DTIS, ONERA, Université Paris Saclay, F-91123 Palaiseau - France

Simulation and Analysis of Event Camera Data for Non-Resolved Objects
Conor Benson, University of Colorado Boulder

What is That Object Out There? Automated Satellite Modeling and Alternate Reality (AR)
Zachary Bergen, Ball Aerospace

Spectral Characterization of Modern Spacecraft Materials
Heather Cowardin, NASA

Spectropolarimeter for Satellite Identification
Louis Lischwe, Delft University of Technology

Space Object Identification and Change Detection Methods for the Cislunar Orbit Regime
Tamara Payne, Altamira Technologies Corp.

Remote Sensing of Satellite Activity through Optical and Infrared Temporal Differential Spectrophotometry Informed by Analysis of Noise
John Kielkopf, University of Louisville

02:30  02:50  EXHIBITION AND NETWORKING BREAK | Exhibit Hall + Conference Platform

02:50  3:20  INVITED TALK | Challenging Space: Strategic S&T from LEO to Cislunar | Aulani Ballroom

Colonel Jeremy A. Raley, Director, Space Vehicles Directorate, Air Force Research Laboratory

David A. Ehrlich, Principal Deputy, Innovation & Prototyping Acquisition Delta, Space Systems Command

03:20  05:05  CISLUNAR SSA | Sponsored by Lockheed Martin

Co-chaired by Channing Chow, Cloudstone Innovations LLC and Jaime Stearns, AFRL Space Vehicles Directorate

An Analytical Approach for Cislunar Information Gain
Patrick Miga, University of Colorado
Probabilistic Initial Orbit Determination and Object Tracking in Cislunar Space Using Optical Sensors
Islam Hussein, Trusted Space, Inc.

Optical Observation Regions in Cislunar Space Using the Bicircular Restricted Four Body Problem Geometry
Carolin Frueh, Purdue University

Cislunar SDA with Low-Fidelity Sensors and Observer Uncertainty
Joshua Block, Air Force Institute of Technology

Classifying State Uncertainty for Earth-Moon Trajectories
Juan Gutierrez, KBR

Capacity-based Cislunar SDA Architecture Optimization
Josh Wysack, Ball Aerospace

Utilization of Space-Based TDoA and FDoA for Cislunar Orbit Determination
Michael Thompson, Advanced Space

05:05 05:30  CONFERENCE CLOSING & AWARDS CEREMONY
In collaboration with the Space Surveillance Technical Committee of the American Astronautical Society (AAS), the AMOS Conference recognizes outstanding efforts in the field of Space Situational/Domain Awareness by presenting the fifth annual AMOS Conference Best Paper and Student Awards. Also awarded are Best Presentation for each technical session and a series of Poster Awards.

05:30 07:00  PAU HANA RECEPTION | Mei Court
Commemorate the end of the 23rd AMOS Conference with live music, cocktails, and friends as we say Aloha and A Hui Hou

Co-sponsored by L3HARRIS
Digital Poster Presentations | Access Starts Sep 21

All posters are available in digital format this year and are accompanied by brief on-demand presentation videos in the virtual conference platform’s Poster Hall. Interact with poster presenters on discussion boards and via video chat during optional Office Hours. The online Poster Hall opens Sep 23.

A select number of posters are invited for in-person presentation during the Poster Sessions, as indicated with a (**) double asterisk.

Machine Learning for Satellite Characterisation
Alexander Agathanggelou, Defence Science and Technology Laboratory**

From Ozone Depletion to Orbital Debris: Applying Lessons Learned from the Montreal Protocol to Orbital Debris
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