AMOS Conference 2026

PROGRAM

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 AMOS 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 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). Program is subject to change.

Program at a Glance

FRI Sep 11	**Virtual Platform Open to Registered Attendees**
	On-Demand Launch | Digital Poster Presentations
SUN Sep 13 – TUE Sep 15	**EMER-GEN® Program** *(separate registration fee required)* On-site Registration
MON Sep 14	**Virtual Technical Short Courses** *(separate registration fee required)*
TUE Sep 15	**Exhibitor Load-in** **In-person Technical Short Courses** *(separate registration fee required)* **Welcome Reception** | *Co-sponsored by KBR*
WED Sep 16	**Conference Opening** **Opening Keynote Address** | *General Stephen N. Whiting* **AMOS Policy Forum** | *Much Ado About Tracking: Navigating Dual-Use SSA* **Featured Presentation** | *Brian Weeden* **Technical Session** | *Astrodynamics* **Featured Presentation** | *Russell Teehan* **Technical Session** | *Space-Based Assets* **Technical Session** | *Atmospherics & Space Weather* **Technical Session** | *Conjunction/RPO* **Poster Session + Exhibit and Networking Reception** **Women & Allies in SDA**
THU Sep 17	**Keynote Address** | *Jonathan Herman* **AMOS Policy Forum** | *Where Does Basic SSA Service Begin and End?* **Featured Presentation** | *Jeremy C. Andrews* **Technical Session** | *Satellite Characterization* **Featured Presentation** | *Colonel Max Yates and Enrico Jeantete* **Technical Session** | *Cislunar SDA* **Technical Session** | *AI for SDA Applications* **Poster Session + Exhibit and Networking Reception**
FRI Sep 18	**Virtual Keynote Address** | *Gay Jane P. Perez* **AMOS Policy Forum** | *Mind the Gap: Coordinating Launch, Tracking, and Re-entry* **Technical Session** | *Space Domain Awareness* **AMOS Student Space Exploration Day**

AMOS Conference 2026

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Featured Presentation | *Barbara Golf*
Technical Session | *SDA Systems & Instrumentation*
Technical Session | *Space Debris*
Featured Presentation | *EMER-GEN® Outcomes*
Conference Closing & Awards Ceremony
Pau Hana Reception | *Co-sponsored by L3Harris*

Sunday 13 September – Tuesday 15 September

EMER-GEN®
The 9th 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 to learn more.

02:00 PM HST	06:00 PM HST	**ON-SITE REGISTRATION**	*Aulani Ballroom Foyer*

Monday 14 September

02:00 PM HST	06:00 PM HST	**ON-SITE REGISTRATION**	*Aulani Ballroom Foyer*

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**	The Probability of Collision Controversy	*Online Room-1* **VIRTUAL COURSE B**	Optical Modeling and Simulation for SSA/SDA	*Online Room-2*
12:00	01:00	**BREAK**	*Explore the AMOS Virtual Venue and Digital Poster Hall*
01:00 PM HST	05:00 PM HST	**VIRTUAL COURSE C**	Introduction to Data Driven Analytics and Applications to SSA	*Online Room-1*

AMOS Conference 2026

PROGRAM

Tuesday 15 September

07:00 AM HST	06:00 PM HST	**ON-SITE REGISTRATION** | *Aulani Ballroom Foyer*

IN-PERSON TECHNICAL SHORT COURSES: *In-person and virtual short courses are offered this year. Separate registration fee required for each half-day course. In-person short courses will not be livestreamed for virtual attendance, nor will they be recorded.*

08:00 AM HST	12:00 PM HST	**IN-PERSON COURSE 01** | Panchromatic, Multi-spectral, Spectroscopy and Polarimetry Data Collection and Image Processing for Non-resolved Space Object Characterization **IN-PERSON COURSE 02** | Observing and Characterizing Space Debris **IN-PERSON COURSE 03** | Telescopes and Optics: An Introduction to Optical SSA **IN-PERSON COURSE 04** | Applied Multi-Sensor Fusion for Enterprise-Level SDA: Deriving Coherent, Time-Relevant Operational Insight from EO, Passive RF and Heterogeneous Data Sources
12:00	01:00	**BREAK** | *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.*
01:00	05:00	**IN-PERSON COURSE 06** | Deep Learning & Large Language Methods for Space Domain Awareness **IN-PERSON COURSE 07** | Resource-Constrained Sensor Scheduling for Space Domain Awareness: A Scenario-Based Interactive Workshop **IN-PERSON COURSE 08** | Uncertainty Propagation for Space Situational Awareness **IN-PERSON COURSE 09** | Foundational Cislunar Education **IN-PERSON COURSE 10** | Hands-On Space Mission Analysis: Building Voice-Controlled AI Agents for GMAT, SatSim, and SDA Image Processing
06:00	07:30	**WELCOME RECEPTION** | *Luau Gardens* Join us for an oceanfront reception at sunset as we welcome the AMOS ʻohana back to the island while listening to music by the U.S. Air Force Band of the Pacific. *Co-sponsored by* KBR

Wednesday 16 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 AM HST	07:30 AM HST	BREAKFAST AT LEISURE | *Luau Gardens*

07:30 – 07:45 | **CONFERENCE OPENING** | *Haku/Pikake Ballroom*
Leslie Wilkins, President & CEO, Maui Economic Development Board, Inc.

07:45 – 08:30 | **OPENING KEYNOTE ADDRESS**
*Introduction by **Victoria Samson**, Chief Director, Space Security and Stability, Secure World Foundation*

General Stephen N. Whiting
Commander, U.S. Space Command

KEYNOTE Q&A | *Q&A sponsored by* KRATOS

08:30 – 09:30 | **AMOS POLICY FORUM** | **Much Ado about Tracking: Navigating Dual-Use SSA**
The technologies used for civilian SSA can also be used to monitor military satellites or space assets of adversarial nations. This is especially true for some of the new in-space SSA constellations. As well, there is an increasingly blurred line between inspector satellites and SSA satellites. Finally, as the USG continues to turn to space as a service model, this makes the line between what is/not a military space capability amorphous. This panel will discuss considerations for SSA operators and providers and what the current state is of policies and governance mechanisms, with the goal of providing clarity to both sides for how to allow this evolution to continue while also ensuring a stable, predictable space environment for all.

Moderated by:
Victoria Samson, Chief Director, Space Security and Stability, Secure World Foundation

Panelists:
Hilary Cohen, Director of Operations, HEO USA
Krista Langeland, Senior Physical Scientist, RAND Corporation
Jessica Tok, Space Policy Analyst, DoW OSW(P) Space Policy
Colonel Jonathan Whitaker, Chief of Staff, North Atlantic Treaty Organization (NATO) Combined Forces Space Component Command (CFSpCC), Director NATO Space Operations Center

09:30	10:00	**EXHIBITION AND NETWORKING BREAK** | *Sponsored by* PRIVATEER *Exhibit Hall + Conference Platform* Explore the Exhibit Hall on-site and online. Interact with our conference partners, view demos, access resources, schedule meetings, and more.
09:30 AM HST	07:00 PM HST	EXHIBITION HOURS FOR THE DAY
10:00	10:20	**FEATURED PRESENTATION** | **Evolution of SSA Capabilities to Support SDA and STM** | *Haku/Pikake Ballroom* *Introduction by **Victoria Samson**, Chief Director, Space Security and Stability, Secure World Foundation* **Brian Weeden,** Director of Civil and Commercial Policy, The Aerospace Corporation
10:20	10:30	**POSTER PITCHES** Listen to selection of poster presenters give a 30-second pitch on why you should come and view their poster presentation.
10:30	11:45	**ASTRODYNAMICS** Co-chaired by **Laura Pirovano**, NorthStar Earth & Space and **Paul Schumacher**, AFRL (retired) *Physics-informed Machine Learning for Initial Orbit Determination* **Sean Wolfe,** University of Toronto *Uncertainty Quantification in Physics-Informed Orbit Determination for Space Domain Awareness* **Andrea D'Ambrosio,** The University of South Florida *From Covariance Reduction to Decision Value: An Information-Theoretic Framework for Dynamic SSA Scheduling* **Thomas Higginbotham,** Kestrel Intelligence *Turning Uncorrelated Tracks into Catalogued Objects: An Operational Approach to Track Association Using Commercial SSA Data* **Laura Pirovano,** NorthStar Earth & Space *From Cislunar to Translunar: A Spatiography for Space Domain Awareness* **Anjali Rawat,** Virginia Tech
11:45 AM HST	12:45 PM HST	LUNCH | *Lokelani Ballroom*
12:45	01:05	**FEATURED PRESENTATION** | **MW-SDA Tech Roadmap Synergies** | *Haku/Pikake Ballroom* *Introduction by **Jeff Sherk**, Senior Project Leader SSC SYD 89, The Aerospace Corporation* **Russell Teehan,** Technical Director, Space Development Agency

01:05	01:15	**POSTER PITCHES** Listen to selection of poster presenters give a 30-second pitch on why you should come and view their poster presentation.
01:15	02:45	**SPACE-BASED ASSETS** | *Sponsored by* amazon LEO Co-chaired by **BT Cesul**, Umbra and **Neil Dhingra**, BlackSky *Experimental Evaluation of Space-Based Search Operations Using NEOSSat* **Laurenne Tynski,** Department of National Defence Canada *Automated On-Demand High-Resolution Low-Latency Space-to-Space Imagery for SDA* **Neil Dhingra,** BlackSky *Multi-Phenomenology Collection with Non-Earth Imagery and Ground-based Sensors for Resident Space Object Characterization and Behavior Tracking* **Stuart Bartlett,** HEO Space *Towards Autonomous Space Situational Awareness at the Edge: Flight Results from NASA Starling* **Justin Kruger,** Era Drive *Characterization of GNSS Interference in LEO over Europe* **Kian Bostani Nezhad,** Technical University of Denmark *Angles-Only Orbit Determination with CMOS and Event-Based Optical Measurements: An Experimental Assessment across Orbital Regimes* **Glenn Nestell,** Air Force Institute of Technology
02:45	03:05	**EXHIBITION AND NETWORKING BREAK** | *Sponsored by* BAE SYSTEMS *Exhibit Hall + Conference Platform* Explore the Exhibit Hall on-site and online. Interact with our conference partners, view demos, access resources, schedule meetings, and more.
03:05	03:15	**POSTER PITCHES** Listen to selection of poster presenters give a 30-second pitch on why you should come and view their poster presentation.
03:15	04:15	**ATMOSPHERICS & SPACE WEATHER** Co-chaired by **Piyush Mehta**, West Virginia University and **Shaylah Mutschler**, Space Environment Technologies *Understanding Thermospheric Modelling Uncertainty and Variability in Very-Low Earth Orbits* **Alex Bush,** OKAPI: Orbits GmbH *Revealing Orbital and Atmospheric Responses to Solar activity (ROARS): A Constellation of Small Satellites for Space Weather Monitoring* **Ravindra Desai,** University of Warwick

		Lead-Time Forecasting of Drag-Influenced Trajectories Using Solar Wind Data **Mia Tian,** Massachusetts Institute of Technology *Large-Scale Validation of Satellite Lifetime Predictions Using Forecasted Space Weather* **Scott Shambaugh,** Leonid Space
04:15	05:30	**CONJUNCTION/RPO** Co-chaired by **Zach Funke**, University of Colorado Boulder and **Jonathan Kadan**, SSC/SYD 85/BI Odyssey Systems *Observability-Aware Estimation and Control for Angles-Only Relative Orbit Navigation of Non-Cooperative GEO Objects* **Ryoichiro Kaga,** Kyushu University *From Detection to Classification: A Feature-Driven Approach to Satellite Maneuver Characterization in LEO Using TLE Data* **Maya Harris,** Massachusetts Institute of Technology *Tactically Responsive Space (TacRS): Successes and Challenges, VICTUS HAZE, and the Necessity of an RPO Threat Response Capability* **Rick Yuan,** Space Systems Command *SpaceX's Conjunction Screening and Space Traffic Coordination Platform* **Michael Hoot,** SpaceX *Conjunction Risk Assessment in the Early Orbit Phase under Large and Poorly Characterized Uncertainty* **Yann Picard,** NorthStar Earth & Space
05:30	07:00	**EXHIBITION AND POSTER SESSION** | *Exhibit Hall* | *Sponsored by* MITRE Posters co-chaired by **Pat Patterson,** Space Dynamics Laboratory and **Matthew Stevenson,** LeoLabs *Meet select poster presenters while enjoying a beverage and interacting with exhibitors and fellow attendees.*
08:00	10:00	**WOMEN ADVANCING SPACE DOMAIN AWARENESS** | *Pacific Terrace Rooftop* Desserts, dancing, and networking under the stars. *Limited to first 300 guests. Separate registration required.*

Thursday 17 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 AM HST	07:30 AM HST	BREAKFAST AT LEISURE | *Luau Gardens*
07:30	08:00	**KEYNOTE ADDRESS** | *Haku/Pikake Ballroom* *Introduction by **Ian Christensen**, Senior Director, Private Sector Programs, Secure World Foundation*

Jonathan Herman
Senior Director, Starlink Constellation Engineering, SpaceX

08:00	09:00	**AMOS POLICY FORUM | Where Does Basic SSA Service Begin and End?** *Government space safety systems are in the process of defining and operationalizing basic SSA and space safety services. Programs such as TraCSS and EU-SST have been working jointly to research and map alignment between offerings as the baseline services are defined. At the same time, a United Nations Expert Group is seeking to establish basic space traffic coordination principles at the international level; and a leading satellite operator has announced a system to provide free of charge certain public SSA services based on information collected through operations. Throughout all of these, a still-emerging commercial SSA industry is working to build out value-added services and products based on SSA information and analysis. This discussion will center on the question of what is the basic minimum SSA information or service that should be provided as free or public good and the models for doing so, while at the same time enabling commercial or fee-based services to develop.* Moderated by: **Ian Christensen**, Senior Director, Private Sector Programs, Secure World Foundation Panelists: **Chris Binz**, Chief Architect, Mission Solutions, Umbra **Andrew D'Uva**, Founder & Principal Advisor, Providence Access Co. **Audrey Schaffer**, Senior Vice President, Global Policy and Government Strategy, Slingshot Aerospace **Gabriel Swiney**, Director, Policy, Advocacy, and International Division, Office of Space Commerce, NOAA, U.S. Department of Commerce

09:00	09:30	**EXHIBITION AND NETWORKING BREAK** | *Sponsored by* NORTHROP GRUMMAN *Exhibit Hall + Conference Platform* 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
09:30	09:50	**FEATURED PRESENTATION** | **Strategic Orchestration of the S&T Enterprise: A Framework for Accelerating Technology into Capability** | *Haku/Pikake Ballroom* *Introduction by **Lieutenant Colonel Andrew Massino**, Division Chief, USSF S&T Management, SAF/SQTM* **Jeremy C. Andrews**, Director of Science, Technology, and Engineering, Office of the Assistant Secretary of the Air Force for Space Acquisition and Integration
09:50	10:00	**POSTER PITCHES** Listen to selection of poster presenters give a 30-second pitch on why you should come and view their poster presentation.
10:00	11:30	**SATELLITE CHARACTERIZATION** | *Sponsored by* LOCKHEED MARTIN Co-chaired by **Heather Cowardin**, NASA and **Marcus Holzinger**, University of Colorado Boulder *Model-Free Spin State Characterization of Resident Space Objects Using Time Series of Radar Cross Section Measurements* **Maria Alessandra De Luca,** Politecnico di Milano *Space Object Classification of Light-Curve Features Using Bayesian Neural Networks* **Kimberly Kinateder,** Applied Optimization *Characterizing Tumbling Space Debris Using Unresolved Light Curve and Space Debris Laser Ranging Measurements* **Liam Robinson,** Purdue University *Transformer-Based Resident Space Object (RSO) Characterization from Photometric Time Series Observations* **Greg Furlich,** University of Colorado Boulder *Benchmarking Structural-Change Localization in Turbulence-Degraded Satellite Imagery* **Enrique De Alba,** EO Solutions *Adversarial Satellite Maneuver Prediction using Historical Pattern of Life and Hybrid Machine Learning* **Thamim Ansari,** Digantara
11:30	12:30 PM HST	LUNCH | *Lokelani Ballroom*

12:30	01:00	**FEATURED PRESENTATION** | **Forging United States Space Superiority: A Collaborative Framework Securing Space from vLEO Thru Cislunar** | *Haku/Pikake Ballroom* *Introduction by **Lieutenant Colonel Ayla Reed**, Chief AFRL Operating Location Maui, 15th Space Surveillance Squadron* **Colonel Max Yates**, DTEO for Space & Commander, Phillips Research Site, Air Force Research Laboratory **Enrico Jeantete**, Director, Innovation and Prototyping Division, SSC/SYD 89/SD
01:00	01:10	**POSTER PITCHES** Listen to selection of poster presenters give a 30-second pitch on why you should come and view their poster presentation.
01:10	02:40	**CISLUNAR SDA** Co-chaired by **Mark Bolden**, Trusted Space, Inc. and **Jaime Stearns**, Space Rapid Capabilities Office *The PHANTOM ECHOES - Cislunar Experiment* **Simon George,** Defence Science and Technology Laboratory (UK) *Constellation Design for Autonomous Cislunar Navigation and Target Tracking Using Relative Measurements* **Ryan Menges,** University of Colorado Boulder *Observability Considerations for Cislunar Angles-Only Relative Navigation* **Andrea López,** University of Colorado Boulder *Implementation Considerations for Cislunar Multi-Fidelity Uncertainty Propagation* **Juan Gutierrez,** KBR *Feasibility Study of Optical Space Situational Awareness from Sun-Earth L1* **Erik Payton,** University of Maryland, College Park *Trajectory Characterization Capabilities of Hamiltonian Normal Forms* **Carson Hunsberger,** Pennsylvania State University
02:40	03:00	**EXHIBITION AND NETWORKING BREAK** | *Sponsored by* VOYAGER *Exhibit Hall + Conference Platform* Explore the Exhibit Hall on-site and online. Interact with our conference partners, view demos, access resources, schedule meetings, and more.
03:00	05:15	**AI FOR SDA APPLICATIONS** | *Sponsored by* EO SOLUTIONS Co-chaired by **Heather James**, Kitware, Inc. and **Justin Fletcher,** USSF SSC/SZG *Improving Low-SNR RSO Learned Detection Through Detectability-Aware Sampling and Loss Scaling* **Kevin Phan,** EO Solutions

A Feasibility Study on Scientific Machine Learning in Detecting and Characterising Satellite Manoeuvres
Olivia Widjaja, University of New South Wales – Canberra

Transformer Networks for Spaceborne Detection of Temporarily Bound Objects
Widy Wang, University of Toronto Institute for Aerospace Studies

Responsive Autonomous RSO Imaging and Catalog Maintenance Using Reinforcement Learning Across Orbital Regimes
Daniel Huterer Prats, University of Colorado Boulder

Classical to Neural: Quantitative Assessment of Detection Processing Architectures for Dim-Object Detection Across Space Surveillance and Adjacent Sensing Domains
Christopher Grant, Hyperion Vector Systems

A Transformer-Based Framework for Generalized Maneuver Detection and Reconstruction
Matteo Rosa, Politecnico di Milano

Multi-Agent Reinforcement Learning for Balancing SDA Task Execution and On-Orbit Constellation Management
Ryan Herchig, IERUS Technologies, Inc

Argus: Satellite Streak Detection with a Frozen Vision Transformer Backbone
Zachary Phaneuf, Cloudstone Innovations

A Repeatable Code World Model Assistant for Orbital Debris Governance and Mitigation
Tyler Barr, XDLab Embry-Riddle Aeronautical University

05:15 – 06:45

EXHIBITION AND POSTER SESSION | *Exhibit Hall* | *Sponsored by* ANDURIL
Posters co-chaired by **Pat Patterson,** Space Dynamics Laboratory and **Matthew Stevenson,** LeoLabs

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

Friday 18 September

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06:00 AM HST	07:30 AM HST	BREAKFAST AT LEISURE | *Luau Gardens*
07:30	08:00	**VIRTUAL KEYNOTE ADDRESS** | *Haku/Pikake Ballroom* *Introduction by **Alex Shi**, Senior Program Analyst, Space Safety, Secure World Foundation* **Gay Jane P. Perez** Director General, Philippine Space Agency
08:00	09:00	**AMOS POLICY FORUM | Mind the Gap: Coordinating Launch, Tracking, and Re-entry** *As launch operations increase in tempo and become more routine occurrences, the need to address a number of operational challenges in the integration of SSA information into launch operations become more acute. These issues including addressing and reducing the "COLA gap;" clarifying the respective roles of satellite and launch operators in identification and tracking immediately after separation; improving SSA information related to re-entry of space objects and launch vehicles; and addressing growing questions around the integration of launch activities into air traffic operations. This panel will discuss current policy and operational efforts to address these issues and examine where progress has been made to date. It will also look at how best to improve integration of launch operations into national and international space traffic coordination systems.* Moderated by: **Alex Shi,** Senior Program Analyst, Space Safety, Secure World Foundation Panelists: **Andrew Abraham**, Senior Engineering Specialist, The Aerospace Corporation **Matt Archer**, Deputy Director, Launch, SDA & ISAM, UK Space Agency **Steph Earle**, Space Policy & Outreach Branch Manager, Office of Commercial Space Transportation, Federal Aviation Administration **Adam Marsh**, Vice President of Technical Solutions, LeoLabs, Inc. **Ruth Stilwell**, Executive Director, Aerospace Policy Solutions, LLC
09:00 AM HST	03:10 PM HST	EXHIBITION HOURS FOR THE DAY

09:00	09:30	**EXHIBITION AND NETWORKING BREAK** | *Sponsored by* SpaceNav *Exhibit Hall + Conference Platform* 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	01:00 PM HST	**STUDENT SPACE EXPLORATION DAY** | *Ilima Ballroom + Exhibit Hall* The AMOS Conference welcomes Maui County middle school students and their STEM educators to explore careers in space and visit exhibit booths for hands-on STEM activities.
09:30	11:45	**SPACE DOMAIN AWARENESS** | *Sponsored by* Blue Canyon Technologies Co-chaired by **Jeremy Raley**, L3Harris and **Ayla Reed**, 15th Space Surveillance Squadron (MD2) *The Epistemic Support-Point Filter (ESPF): Possibilistic Space Object State Estimation Under Ignorance* **Moriba Jah,** University of Texas at Austin *Fallback Autonomy for Space Domain Awareness in Mega-Constellations* **Daniel Reynolds,** U.S. Space Force *Stargaze: SpaceX's Space Situational Awareness System* **Javier Roa Vicens,** SpaceX *Synthetic In-track Fence Tracking (SIFT) for Cathemeral Electro-optical Planar Search Tasking in LEO* **James Herring,** Slingshot Aerospace *From Ground-Based Telescopes to the Operations Center: CCSDS TDM v2.0 Conventions for Continuous Optical SSA Data Exchange* **Mariusz Slonina,** Polish Space Agency *Multimodal Sensor Fusion for Satellite Maneuver Detection and Propulsion Classification* **Phillip Schmedeman,** US Space Command *Electro-Optical and Passive Radio-Frequency Data Fusion for In-Space Anomaly Detection* **Narendra Gollu,** NorthStar Earth & Space, Inc. *A Hybrid Orbital-Socio-Technical Framework for Context-Aware Threat Assessment in Space Domain Awareness* **Tiffany Phan,** University of Texas at Austin *Establishing an Automated Pattern of Life Method for Manoeuvre Anomaly Detection in GEO* **Cameron Webb,** DSTG
11:45	12:45 PM HST	LUNCH | *Lokelani Ballroom*

12:45	01:05	**FEATURED PRESENTATION** | **Commercial Space Operations** | *Haku/Pikake Ballroom* *Introduction by **Colonel Jonathan Whitaker**, Chief of Staff, North Atlantic Treaty Organization (NATO) Combined Forces Space Component Command (CFSpCC), Director NATO Space Operations Center* **Barbara Golf,** U.S. Space Force, Strategic Advisor for SDA, Space Systems Command
01:05	02:50	**SDA SYSTEMS & INSTRUMENTATION** | *Sponsored by* SLINGSHOT AEROSPACE Co-chaired by **Brett Hokr**, EO Solutions and **Jim Shell**, Novarum Tech, LLC *Enhanced Radar Imaging in Space Surveillance Applications* **Simon Anger,** German Aerospace Center (DLR) *Unintended Satellite Emissions for Expeditiary Space Domain Awareness (SDA)* **Karen Canne,** Nokomis, Inc. *LOCI – An Operational Network of Wide-Field, Fixed Point-of-View, Optical Space Fence Sensors* **Laurence Blacketer,** Raytheon UK *All-Sky Astronomical Surveys for Automated Cislunar SSA* **Greg Sallaberry,** Lawrence Livermore National Laboratory *High-Precision Satellite Tracking with a Low-Cost Dual-Telescope Optical Parallax System* **Phineas Whitlock,** University of Warwick *Multi-Target Bistatic L-Band Radar Observations of GEO Satellites with the Parkes 64-m Telescope* **Ken Smart,** CSIRO *Advancing Cis-Lunar Mission Navigation with Ground-Based Radio Telescope Networks* **Guifre Molera Calves,** HENSOLDT
02:50	03:10	**EXHIBITION AND NETWORKING BREAK** | *Exhibit Hall + Conference Platform* Explore the Exhibit Hall on-site and online. Interact with our conference partners, view demos, access resources, schedule meetings, and more.
03:10	04:10	**SPACE DEBRIS** | *Haku/Pikake Ballroom* Co-chaired by **Chris Kunstadter,** Triton Space LLC and **Darren McKnight,** LeoLabs *Synthetic Space Debris Populations from Break-Up Events* **Lorenzo Olivieri,** University of Padova *Independent Radar Detection and Characterization of the CZ-6A Breakup Debris cloud in LEO: Insights from EISCAT UHF Beam-park Campaigns* **Gautham Ganesan,** Digantara

		Observation and Characterization of Satellite and Debris Re-entries with the Global Meteor Network **Tam Do,** University of Western Ontario *A Practical Trade Assessment of Cislunar Space Surveillance Orbits* **Warren Soh,** Honeywell Aerospace
04:10	04:25	**FEATURED PRESENTATION** | **EMER-GEN® Outcomes**
04:25	04:45	**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 annual AMOS Conference Best Paper and Student Awards. Also awarded are a series of Poster Awards.
05:00	06:30	**PAU HANA RECEPTION** | *Kahoolawe Lawn* Commemorate the end of the 27th AMOS Conference with live music, cocktails, and friends as we say *Aloha* and *A Hui Hou!* *Sponsored by* L3HARRIS™ FAST. FORWARD.

Digital Poster Presentations | *Access Starts Sep 11*

All posters are available in digital format this year and are accompanied by brief presentation videos in the virtual conference platform's Poster Hall. Interact with poster presenters online. The online Poster Hall opens Sep 11.

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

Simulation-Driven Space Debris Governance Using EMOCAT-MC, Space Situational Awareness, and Catalyst for Quantitative Policy Assessment
Kyah Adams, XDLab Embry-Riddle Aeronautical University

Doppler-Only Orbit Determination with Physics-Informed Neural Networks and High-Fidelity Dynamics
Benedikt Aigner, Universität der Bundeswehr München

An Observability Driven Architecture for Orbit and Telescope Selection in Cislunar Space Based Surveillance **
Chingiz Akniyazov, The University of Auckland, Te Pūnaha Ātea — Space Institute

Design of Co-operative On-Orbit Radar Observation Scenarios for Mega-Constellations in VLEO **
Leah-Nani Alconcel, University of Birmingham

Extending the Georgia Tech Research Institute Goniometer (GT-RIG) System Towards Polarimetric BRDF Capabilities **
Gregory Badura, Georgia Tech Research Institute

Operationalizing the Ionosphere: A Cloud-Native Framework for Real-Time Rocket Detection using GNSS Receiver Network
Austin Barrow, Hyperios Technologies

SatLight: A Python Package for High-Fidelity Light Curve Simulation
Lily Beesley, University of Birmingham

Enhancing LEO Orbit Determination and Predictions with High-Fidelity Atmospheric Density Uncertainty Modeling **
Rachit Bhatia, West Virginia University

Event-based Warning of Impending Satellite Streak Contamination
James Blake, University of Warwick

EU SST — TraCSS Joint Study on Operational Information Exchange **
Mariel Borowitz, Office of Space Commerce

ORCHESTRA: Coordinated SDA Scheduling **
Dustin Burchett, MITRE

*Simulated Atmospheric Clouds for Electro-Optical Space Domain Awareness***
Alexander Cabello, EO Solutions

Updates to Stingray: Photometric Survey of the GEO Belt **
Tanner Campbell, University of Arizona

Performance Assessment of a Distributed Multi-Operator Space-Based Optical Sensor Network for Space Domain Awareness
Benedetta Margrethe Cattani, Ecosmic

Enhancing Emergent Satellite Data for Non-Earth Imaging
Yu-Yen Chang, Turion Space

Boosting On-Sky RSO Detection Performance by Optimizing Simulated Imagery for Machine Learning
David Chaparro, EO Solutions

Operational Space-Based SSA from Short-Arc Optical Data: Technical Challenges and Lessons Learned **
Marcello Chiariello, ARCA Dynamics

Joint Radon–Image Reasoning for Faint Streak Detection in Optical Space Surveillance
Chee-Kheng Chng, Adelaide University

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Jin Choi, Korea Astronomy & Space Science Institute (KASI)

Non-Myopic, Information Driven Sensor Tasking for Distributed Catalogue Maintenance in Space Domain Awareness **
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Assessing the Environmental Consequences of a Large-Scale Breakup Event in Cislunar Space: NRHO and ELFO case studies
Giacomo Colombatti, University of Padua

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Giuseppe Crescenzio, Officina Stellare S.p.A.

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Rashomon in Orbit: When Do Satellite Light Curves Tell the Same Story? **
Kimmy De Alba, SSC/SYD 85/BI

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Thomas Dearing, ARKA Group

On-Orbit Reconfigurable Flash Lidar using Liquid Crystal Polarization Gratings **
Ricardo Delgadillo, Advanced Scientific Concepts

Assessing Space Debris Observability: Measurement Uncertainty and Software Dataflow Considerations
Marthe D'Hooghe, arcsec

Preliminary Design of a "Black-Box" Diagnostics Suite for Remote, Real-Time Satellite Failure Attribution **
Nancy Diallo, Stanford University

Empirical Evaluation of Automated Sensor Calibration Impact on Orbit Determination Accuracy **
Joseph Diamond, Peraton Labs

Planning and Processing Pipeline for Satellite Observations Using Large Aperture Astronomical Telescopes **
Aishling Dignam, NOIRLab

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Finding Lost Satellites **
Stefan Doucette, InTrack Radar Technologies, Inc.

GPU-Accelerated Astrodynamics World Models for Spacecraft Rendezvous and Proximity Operations **
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Myles Fernau, Southwest Research Institute

Improving Satellite-Operation Efficiency Using Conjunction Data Message (CDM) Frequency Prediction **
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Afrah Ghedira, University of Colorado Boulder

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Zachary Gibson, Air Force Research Laboratory

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Tim Glinski, LSAS Tec

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Christopher Gramling, United States Military Academy

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Ravi Guntupalli, Teledyne

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Md Walid Hassan, University of Hawaii at Manoa

Reachability-Informed Custody Metrics for Rapid Space Surveillance Tracking and Catalogue Maintenance **
Casey Heidrich, University of Colorado Boulder

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Jun Heo, Defence Science and Technology Group (Australia)

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Shawn Higbee, Lawrence Livermore National Laboratory (LLNL)

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Harsha Honnappa, Purdue University

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Amit Jain, Massachusetts Institute of Technology

HARMONIA-ID: Cross-Modal Identification of Non-Cooperative Space Objects Using Standardized Interface Signatures **
Wanjiku Chebet Kanjumba, University of Florida

Edge-Deployable Physics-Informed and Quantum Assisted Neural Networks for Real-Time Autonomous Orbit Prediction **
Alex Khan, BosonQ Psi (BQP)

Chance-Constrained Belief-Space Maneuver Planning for Autonomous Collision Avoidance Under Uncertainty **
Grace Kim, Stanford Intelligent Systems Laboratory

Distributed Optimal Task Scheduling of LEO Constellations for Ground Based Assets **
Hongseok Kim, The University of Texas at Austin

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Moses Kodur, Surface Optics Corp

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Vatasta Koul, Kyushu Institute of Technology and The Institute of Statistical Mathematics

High-resolution spectra of GEOs using a Whoppshel on the USAFA one-meter telescope **
Ryan Kovacs, U.S. Air Force Academy

Determination of the Spacecraft Rotation Axis' Orientation Based on Photometric Observations
Oleksandr Kozhukhov, National Space Facilities Control and Test Center of State Space Agency of Ukraine

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Tatsuyoshi Kurumiya, EO Solutions

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Geoffrey Lake, Icebox Engineering

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Sophia Matthews, University of Maryland, College Park

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Darren McKnight, LeoLabs

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Trier Mortlock, Lawrence Livermore National Laboratory

Optimal Multispectral Filters for AI-Assisted Subpixel Material Characterization of Resident Space Objects **
Kedar Naik, BAE Systems Space and Mission Systems

*Photometric Inversion for Uncontrolled Spacecraft Using a Neural Posterior Estimator***
Girish Narayanan, The University of Auckland, Te Pūnaha Ātea — Space Institute

Observation-Driven Adaptation of Reduced-Order Thermospheric Density Models **
Sriram Narayanan, West Virginia University

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Miguel Nunes, Hawaii Space Flight Laboratory

Small-Aperture Ground-Based Spectroscopy for LEO Object Type Identification: Acquisition, Bench References, and Type-Level Results **
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Rachel Oliver, Air Force Institute of Technology

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Bogachan Ondes, University of Florida

Ground-Based Differential Orbit Updates in the XGEO Regime: A Practical Performance Assessment
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Storm-proofing LEO Cataloguing: Operational Mitigation of Space Weather-Driven Drag Uncertainty
Alejandro Pastor, GMV

Assessing Space Object Interactions in Low Earth Orbit Using Conceptual Spaces **
Cedric Petion, The University of Texas at Austin

Efficient Physics-Informed Burst Restoration for Satellite Identification Under Atmospheric Turbulence
Taylor Phan, Clemson University

Pointing the Way: Deep Reinforcement Learning on Unordered Sets for Optimal Boresight Tasking **
Collin Phillips, Virginia Tech National Security Institute

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Zach Pollmiller, Headquarters CFC

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Mohammed Irfan Rashed, Hawaii Space Flight Lab, University of Hawaii at Manoa

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Clarice Reid, Slingshot Aerospace

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Marco Rocchetto, Spaceflux

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William Ryan, New Mexico Tech/MRO

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Aster Saul, Virginia Tech National Security Institute

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Earl Scime, West Virginia University

MACHINA Tactical Persistent Monitoring: UCT Track, Triage, and Graduation **
Connor Segal, EO Solutions

Autonomous Satellite Maneuver Analysis Using Domain Ontology and LLM-Based Reasoning **
Jaedong Seong, Korea Aerospace Research Institute

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Ryan Shepperd, Iridium

A Requirements Blueprint for a Composable Semantic Model of Satellite Behavior **
Haley Solera, Massachusetts Institute of Technology

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Passive RF for Space Domain Awareness: From Theoretical Bounds and Low-Complexity Signal Processing to Field Validation in Time Synchronization **
Saehan Song, Korea Aerospace Research Institute

Mapping Quasi-Chaotic Lunar Transport Pathways in the Earth-Moon System using an Ephemeris Model
Jeremiah Specht, Air Force Institute of Technology

Complete and Total Satellite Autonomy for SDA Applications, an In-Space Experiment **
Richard Stottler, Stottler Henke Associates, Inc.

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Vithurshan Suthakar, York University

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Steven Szklany, Anduril

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Shinsuke Takahashi, University of Southern California

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Noah Thompson, Hawaii Space Flight Lab, University of Hawaii at Manoa

A Critical Assessment of Space Data Message Standards and Their Application to Space Force and Partner Missions
Daniel Tippie, MD2

A Power-Scalable, Spectrally Engineered Sodium Guide Star Laser Platform Enabling Polychromatic Tip/Tilt-Resolved Beacons
Thomas Tongue, TOPTICA Photonics Inc

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Analysis of Polarization Signatures of Geosynchronous Satellites
Gavin Unterreiner, United States Air Force Academy

DreamSat-Bench: Development and Initial Testing of a Testbed for AI-Based Pose Estimation from 3D Reconstruction **
Josiane Uwumukiza, Massachusetts Institute of Technology

Developing Signature Analytics for RSO Identification from Unresolved Imaging using Machine Learning **
Miguel Velez-Reyes, The University of Texas at El Paso

SDA Benchmarking for On-orbit Edge AI Computing
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ASTRA-Net: A Hybrid CNN Detection and Poisson Labeled Multi-Bernoulli Tracking Framework for SSA using Star Trackers **
Thijs Verhaeghe, Royal Military Academy

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Mark Vincent, Raytheon

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David Witman, Slingshot Aerospace

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Travis Yeager, Lawrence Livermore National Laboratory

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Jun Yoshida, NEC Corporation

In-Situ Low-Lunar Orbit Optical Observation and Cataloging Feasibility **
Anthony Zara, Advanced Space, LLC

Dichotomizing Temporarily Bound Objects Using Capture States
Shuhan Zheng, University of Toronto Institute for Aerospace Studies

Regime-Adaptive Joint State—Drag Estimation for Multi-Sensor Orbit Determination in Terminal Decay **
Tomasz Zubowicz, Polish Space Agency