



**“Trust, But Verify: Incentivizing Compliance” Space Traffic Management Conference
University of Texas at Austin
2021 Virtual Conference
Final Agenda**

Tuesday, January 26

(All times are U.S. Central Standard Time)

- 8:00 – 8:10 am** **Opening Ceremony: Jean-Michel Contant**, Secretary General, International Academy of Astronautics
Co-chairs: Moriba Jah, Space Security & Safety Program Lead, Strauss Center, Associate Professor of Aerospace Engineering and Engineering Mechanics, UT Austin and **Diane Howard**, Chief Counsel, Office of Space Commerce
- 8:10 – 8:50 am** **Keynote: Kevin O’Connell**, Former Director, Office of Space Commerce
- 8:50 – 9:00 am** **Break**
- 9:00 – 9:30 am** **Q&A Session 1: Range Management/Airspace to Orbital Integration**
([folder link](#)) **Moderator: Diane Howard**

Eng. Bibhorr Bibhorr
Time-Matricized Triangulation Modelling for Space Traffic Management

George Anthony Long
High Altitude Balloons and Maverick Small Sats

Gustavo Medina-Tanco, et al.
Scientific Ballooning with Small Payloads: In-flight and On-ground Quantitative Risk Assessment

Dirk-Roger Schmitt, et al.
Spaceport Operations: Integration into the German Airspace

Ruth Stilwell
Between Air and Space: Can Emerging Concepts in Air Traffic Management for Ultra-High Altitude Uncrewed Aircraft Provide a Model for Orbital Space?

9:30 – 9:40 am **Break**

9:40 – 10:30 am **Roundtable Panel 1: US Government**
Moderator: Mark Skinner, Senior Project Leader for Space Traffic Management, The Aerospace Corporation

Jeff Braxton (DoD)
Steph Earle (FAA)
Ryan Guglietta (State)
Diane Howard (DOC)

10:30 – 10:40 am **Break**

10:40 – 11:10 am **Q&A Session 2: Lifetime, ADR, Disposal, and Demise**
([folder link](#)) **Moderator: Moriba Jah**

Catherine Doldirina, et al.

The case for no waste: autonomous decommissioning devices as a requirement for satellites, an approach for Europe

Siwoo Kim, et al.

Orbital Lifetime Analysis of a Leo Mega Constellation Using a High-Fidelity Orbit Propagator

Hugh G. Lewis

The Legacy of a Split Second: Space Sustainability Across Time Scales

Miles Lifson

An Advance Market Commitment Program for Low Earth Orbit Active Debris Removal

Shawn Nowlan, et al.

Framework for Monetizing Space Debris

11:10 – 11:20 am **Break**

11:20 – 12:00 pm **Roundtable Panel 2: International and Other Perspectives**
([folder link](#)) **Moderator: Regina Peldszus**, Senior Policy Officer, German Aerospace Center (DLR)

Mert Evirgen (UK)
Marie Le Pellec (Australia)
Yu Takeuchi (Japan)
Brian Weeden (USA-NGO)
Huifeng Xue (China)

Wednesday, January 27
(All times are U.S. Central Standard Time)

8:00 – 8:40 am **Welcome and Introduction: Moriba Jah**
Keynote: Natália Archinard, Deputy Head of the Education, Science, Transport and Space Section, Federal Department of Foreign Affairs, Switzerland

8:40 – 8:50 am **Break**

8:50 – 9:20 am **Q&A Session 3: SSA Technologies**
[\(folder link\)](#) **Moderator: Moriba Jah**

Alberto Águeda, et al.
European Efforts Towards Space Traffic Management

Ulpia-Elena Botezatu, et al.
The Challenges of Dual/Multi-Use Technological Solutions

Han Cai, et al.
Credibility Consensus Fusion Using Outer Probability Measures

Daniel Kucharski, et al.
Astrometric Data Engine for Attitude Anomaly Detection of Megaconstellation Satellites

Manuel Ntumba, et al.
Improvement of Space Flight Performance and Optimal Control Using Trained Deep Neural Network – Trajectory Controller for Space Objects Collision Avoidance

Guido Pedone, et al.
Spook: A Tool for Space Objects Catalogue Creation and Maintenance Supporting Space Safety and Sustainability

Riley Steindl, et al
Developing Detectability, Identifiability, and Trackability Analyses for the Space Sustainability Rating

Tahsinul Haque Tasif, et al
Analytic Continuation Extended Kalman Filter Framework for Space-Based Inertial Orbit Estimation Via a Network of Observers

9:20 – 9:30 am **Break**

9:30 – 10:20 am **Roundtable Panel 3: STM Dimensions of Data Quality and Trust**
[\(folder link\)](#) **Moderator: Matt Bold**, Principal Engineer, Lockheed Martin

Islam I. Hussein
Darren McKnight
Pamela Melroy
Swapnil Surdi

Waqar Zaidi

10:20 – 10:30 am Break

10:30 – 11:00 am Q&A Session 4: Behavior Incentivizing, Monitoring, and Assessment
([folder link](#)) Moderator: Moriba Jah

Taeyoung Kim

Time-series Classification of GEO Satellites using Deep Convolutional Neural Network in Angular Momentum H-space Domain

Stijn Lemmens, et al.

The Monitoring of Compliance with Space Debris Mitigation Rules Establish the Carrying Capacity of the Environment

Minoo Rathnasabapathy

Links from the Space Sustainability Rating to Space Safety Concerns at Each Mission Lifecycle

Maria Lucas-Rhimbassen, et al.

Competitive Space Foresight: Incentivizing Compliance Through Antitrust

Ruvimbo Samanga

New Neutrality: Space Policy Solutions for Cyber Security in Space

Nevan Simone, et al.

Transparency and Accountability in Space Domain Awareness: Demonstrating ASTRIAGraph's Capabilities with the United Nations Registry Data

11:00 – 11:10 am Break

11:10 – 11:55 am Roundtable Panel 4: Space Security
([folder link](#)) Moderator: Carrie Christensen, Publisher of Aerospace &
Computational Engineering, Elsevier

Sandeepa Bhat

Malaya Kumar Biswal

George Anthony Long

The Honorable John McClellan Marshall

Prasanna Phanindran

Marco Romero

11:55 – 12:00 pm Closing Remarks
Co-chairs: Moriba Jah and Diane Howard