

# **Space History, Society, and Policy**

Papers Presented at the AIAA Aviation Forum 2025 and  
ASCEND 2025

Las Vegas, Nevada, USA  
21-25 July 2025

ISBN: 979-8-3313-2804-7

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

The contents of this work are copyrighted and additional reproduction in whole or in part are expressly prohibited without the prior written permission of the Publisher or copyright holder. The resale of the entire proceeding as received from CURRAN is permitted.

For reprint permission, please contact AIAA's Business Manager, Technical Papers. Contact by phone at 703-264-7500; fax at 703-264-7551 or by mail at 34922 Uvptkug'Xcmg{'Ftkxg.'Uwkg'422, Reston, VA 20191, USA.

# TABLE OF CONTENTS

Towards an Environmentally Sustainable Space Future: An Interdisciplinary Approach to Assess Terrestrial and Orbital Interdependencies.....	1
<i>Manu H. Nair; John C. Mackintosh; Laurie Waller; Carys Thomas; Nicholas H. Crisp; Kate Smith; Alejandro Gallego-Schmid; Craig Thomas; Andrew Iwanoczko; Joey Tabone; Rob Bellamy; Ciara N. McGrath</i>	
Governing Space Security: An Analysis of the Potential for a Binding Multilateral Treaty.....	19
<i>Lina Laghman; Piper Barnard; Maria Storch; Vanesa Aguay; Nina Bodow</i>	
Expanding LEO Capacity Through Orbital Classification Frameworks .....	38
<i>Ruth Stilwell; Diane Howard; Darren McKnight; Nate Dailey; Alex Luttmann</i>	
Communicating the Cosmos: A Call for Academic and Industry Collaboration in Space Science Communication's Unification.....	48
<i>James Phillips</i>	
Research-Based Learning as a Pathway to Prepare Students for Aerospace Careers: Clemson's Creative Inquiry Program .....	56
<i>Jenna Spangler; David DeCriscio; Cameron Drolet; Ethan Toole; Laura Redmond</i>	
MultiPlanet University, Education, Space Physics, and Payload Engineering Program .....	69
<i>Kolemann Lutz; Dennis T. Trevino; Atakan Kubilay; Ted Tagami</i>	
A Knowledge Management Model of the U.S. Aerospace Labor Pool .....	74
<i>Noah Gold</i>	
Compare and Contrast: Opportunities and Challenges for Native Americans in the United States Commercial Spaceport Industry .....	101
<i>Janet K. Tinoco; Laquila Alonzo</i>	
The Early Public-Private Challenge of Commercializing Orbital Space: Comsat-Intelsat and Matters of Concern .....	118
<i>Robert Edgell; Jeffrey Olney</i>	

## Author Index