Cybersecurity

Papers Presented at the AIAA SciTech Forum and Exposition 2025

Orlando, Florida, USA 6-10 January 2025

ISBN: 979-8-3313-1849-9

Printed from e-media with permission by:

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



a		•			43		•				4	• 4	•
Some	tormat	ICCITAC	inheren	t in	the e	-media	Version	may 9	alen ar	mear II	n thic	nrint	version.
Some	ivi illat	issucs			u	-mcuia	VCI SIUII	1114 7 6	aisu ap	pcai ii		թւաւ	VCI SIUII.

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 Uwptkug'Xcmg{'Ftkxg."Uwkg'422, Reston, VA 20191, USA.

TABLE OF CONTENTS

CYBERSECURITY

Developing a Cybersecurity Architecture for Extensible Traffic Management (xTM)
Star Tracker Attacks and Defenses
Safety-Critical Control for Nonlinear Affine System With Robustness and Attack Recovery
Adaptive UAS Intent Estimation for Cyber-Physical Security
Cyber Shield: Advances in Detection, Isolation, and Containment Mechanisms
Quantum Entanglement and Measurement Noise: A Novel Approach to Satellite Node Authentication

Author Index