

CESUN 2025 Conference Schedule-at-a-Glance

Monday, 9 June 2025 - Doctoral Colloquium Theme: *Preparing for Life After Graduate School*

Time	Title	Speakers or Session Chair
8:00-8:30	Opening address	Taylan Topcu, VT
8:30-10:00	Panel: What could be next for you? Insights from diverse workplace experiences for Phds	Moderator: Taylan Topcu; Panelists: Emily Liu, RPI; Paul Wach, VT NSI; Oscar Herrera-Restrepo, GSK; Joe Goldfrank GWU
10:00-10:30	Coffee Break + Snacks	
11:00-11:45	Talk 1: Graduate School Journey and the Life After	Ambrosio Valencia-Romero, Old Dominion University
11:45-12:30	Talk 2: Role of Search Committees and What do Faculty Jobs Expect	Babak Heydari, Northeastern
12:30-1:45	Lunch	
1:45-2:30	Routable 1: Theme: <i>Present - How to Navigate Graduate School</i>	Erica Gralla, GWU
2:40- 3:25	Routable 2: Theme: <i>Near Future - How to Prepare for an Academic Job</i>	Paul Grogan, ASU
3:35 - 4:20	Routable 3: Theme: <i>The Moment of Truth - How to Prepare for an Academic Job nterview</i>	Babak Heydari, Northeastern
4:30-5:00	Closing Remarks	Alejandro Salado, UA

Tuesday, 10 June 2025 - CESUN Day 1

7:45-8:45	Breakfast and Registration	
8:45-9:00	Opening address	Zoe Szajnfarber, GWU
9:00-10:30	Keynote I: William "Bill" Regli, University of Maryland at College Park	
10:30-11:00	Coffee Break	
11:00-12:30	Session 1A: Systems Engineering (SE) and Design	Session Chair TBD
	Session 1B: Infrastructure, Environment, Disaster Management	Session Chair TBD
12:30-1:45	Lunch + INCOSE Academic Equivalency Announcement	Courtney Wright, INCOSE
1:45-3:15	Session 2A: Artificial Intelligence for Systems Engineering (AI4SE)	Session Chair TBD
	Session 2B: Healthcare Systems	Session Chair TBD
3:15-4:15	Poster Session and Coffee	
4:15-5:15	Panel I: SE Community Synthesis Panel	Moderator: Zoe Szajnfarber, Panelists: Dinesh Verma, SERC; Paul Grogan, ASU; Bryan Mesmer; UAH & INCOSE
5:30-8:30	Reception and Dinner	

Wednesday, 11 June 2025 - CESUN Day 2

7:30-8:45	Breakfast and Registration	
	CESUN University Representatives' Breakfast (invitation only)	
8:45-9:45	Keynote II: John Little, Virginia Tech - Societal Challenges of the Anthropocene?	John Little, VT
9:45-11:15	Session 3A: Sociotechnical Systems	Session Chair TBD
	Session 3B: SE & Design	Session Chair TBD
11:15-11:30	Coffee Break	
11:30-12:45	Panel II: Pressing Research Problems from the Industry	Moderator: Bryan Mesmer; Panelists: Mike Watson, INCOSE & Leidos; TBD
12:45-2:00	Lunch, Awards, and Closing	Paul Grogan, ASU

Legend
Meals and Breaks
Panels, keynotes, and plenary sessions
Technical sessions
Poster session
Rountable Discussions

Council of Engineering Systems Scholars and Universities - CESUN 2025
10th International Engineering Systems Conference
June 10-11, 2025 George Mason University

Tuesday, 10 June 2025 - CESUN Day 1

11:00-12:30	Authors	Session 1A: Systems Engineering (SE) and Design
11:00 - 11:15	1A.P1 Lance Sherry, Ali Raz, John Shortle and Matt Amissah	INTEGRATING SYSTEM SAFETY ANALYSIS (SSA) AND SysML: OPPORTUNITIES AND CHALLENGES
11:15 - 11:30	1A.P2 Jannatul Shefa and Taylan Topcu	Sustainment of Navy Assets: A Case study of Post-Production Design Change Process and Documentation of Archetypical Sources of Inefficiency
11:30 - 11:45	1A.P3 Ambrosio Valencia-Romero and Paul T. Grogan	Strategic Hindrances in Digital Engineering: A Simulation Study of Information Exchange in a System-of-systems Design Problem
11:45 - 12:00	1A.P4 Rock Mendenhall and Steve Simske	Systems Engineering Process Improvement with Cognitive, Historical Augmented Intelligence Systems Engineering (CHAISE)
12:00 - 12:15	1A.P5 Aditya Singh and Zoe Szajnfarber	The Roles of Task-Allocation and Trust Behavior in Trading-off Performance and Risk in Human-AI Systems
12:15 - 12:30	1A.P6 John Little and Amro Farid	A Unifying Vision for the Future of Systems Engineering
11:00-12:30	Authors	Session 1B: Infrastructure, Environment, Disaster Management
11:00 - 11:15	1B.P1 Daniel Gonzalez, Brandon Costelloe-Kuehn, James Olson, Addison Mulder and Emily Liu	Experiential Learning and Dialogue for Consent-Based Nuclear Infrastructure Decision-Making
11:15 - 11:30	1B.P2 Fahimeh Ghorbani, Sara Nikdel, John Shortle and Lance Sherry	The Art of Separation in Complex Engineered Systems: Safety Metrics for Normal Operations in a Constrained Airspace
11:30 - 11:45	1B.P3 Abbey Kollar and Caitlin Grady	Assessing Current Climate Risks to Balancing Authorities in the United States
11:45 - 12:00	1B.P4 Pawornwan Thongmak, Yinshuang Xiao, Ming Zhang and Zhenghui Sha	Network Analysis of Urban Growth in U.S. Megaregions
12:00 - 12:15	1B.P5 Mobin Zarreh and Paul Grogan	Strategic Engineering Design in Water Infrastructure: A Game-Theoretic Approach and Network Topology for Flood Irrigation System
12:15 - 12:30	1B.P6 Oleksandra Donnelly, Jie Xu, John Shortle and Lance Sherry	AI in the Air: Application of AI for Generating Flight Tracks for Collision Risk Analysis
1:45-3:15	Authors	Session 2A: Artificial Intelligence for Systems Engineering (AI4SE)
1:45 - 2:00	2A.P1 Qiliang Chen and Babak Heydari	Resource Governance in Networked Systems via Integrated Variational Autoencoders and Reinforcement Learning
2:00 - 2:15	2A.P2 Charles Collard, Daniel Dunbar and Mark Blackburn	Use of Large Language Models to Compress Cycle Between Research and the Classroom
2:15 - 2:30	2A.P3 Qiliang Chen, Sepehr Ilami, Nunzio Lore and Babak Heydari	Instigating Cooperation among LLM Agents using Adaptive Information Modulation
2:30- 2:45	2A.P4 Christopher White, Bryan Mesmer, Oluyinka Adedokun, Daniel Gossman and Hanumanthrao Kannan	An Agent-Based Perspective on Systems Engineering for AI
2:45 - 3:00	2A.P5 Zoe Szajnfarber, Stephen Hilton and Suparna Mukherjee	Are LLMs a Cheaper, Faster Replacement for Open Innovation?
3:00 - 3:15	2A.P6 Paul Wach, Mary Nerayo, Brady Jugan, Caleb Anderson, Peter Beling and Taylan G Topcu	Cautions of Leveraging LLMs for Systems Engineering: Generalist versus Specialist
1:45-3:15	Authors	Session 2B: Healthcare Systems
1:45 - 2:00	2B.P1 Zhaoyue Zhang, Kateřina Staňkova and Patrick Stokkink	Trauma Care Network Optimization in the Netherlands
2:00 - 2:15	2B.P2 Matthew Beigh and Erica Gralla	Modeling Coordination of Resilient Medical Supply Chains Under Disruption
2:15 - 2:30	2B.P3 Mohamed Mogahed and Mo Mansouri	Contextualizing Healthcare Systems in the Societal Context
2:30- 2:45	2B.P4 Rachel Dzieran, Cihan Dagli and Robert Marley	Human-AI Teaming in Complex Healthcare Systems: A Fuzzy Associative Memory Approach Integrating Surgeon Expertise and Deep Learning Models
2:45 - 3:00	2B.P5 Lorien Abrams, Artin Yousefi, Christina Wysota, Tien-Chin Wu and David	AI Chatbots for Smoking Cessation
3:00 - 3:15	2B.P6 Arina Soboleva, Irene Grossmann, Jafar Rezaei and Katerina Stankova	A Systems Approach for Translating Evolutionary Cancer Therapy to Clinical Practice

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Wednesday, 11 June 2025 - CESUN Day 2

9:45-11:15			Session 3A: Sociotechnical Systems
9:45-10:00	3A.P1	David Broniatowski, Wei Zhong, Joseph Simons, Mark Dredze and Lorien Abroms	A Simulation Approach to Determining the Flexibility of Social Media Platforms
10:00 - 10:15	3A.P2	Negin Maddah and Babak Heydari	Building Back Better: Modeling Decentralized Recovery in Sociotechnical Systems using Strategic Network Dynamics
10:15- 10:30	3A.P3	Payuna Uday	Building Tomorrow's National Security STEM Workforce: A System-of-Systems Approach
10:30 - 10:45	3A.P4	Shamsnaz Bhada and Parker Langa	Experiential learning in Engineering and Public Policy Interaction
10:45- 11:00	3A.P5	Ademir-Paolo Vrolijk	The Impact of Impact Canada Challenges: exploring innovation challenges as a tool for economic outcomes
11:00 - 11:15	3A.P6	Anna Vaynman, Valerie Reyna and David Broniatowski	Detecting Criminal Behavior in Sociotechnical Systems: Insights from a Systematic Review of AI in Legal Decision-Making
9:45-11:15			Session 3B: SE & Design
9:45-10:00	3B.P1	Lance Sherry, Jomana Bashata and Rochelle Jones	Intentional Design for Stakeholder Collaboration: The Stakeholder Transaction Diagram (STD)
10:00 - 10:15	3B.P2	Md Doulotuzzaman Xames and Taylan Topcu	A Sociotechnical Categorization of Barriers to Digital Engineering Transformation and Their Mapping Against the United States Department of Defense's Policy Goals
10:15- 10:30	3B.P3	Pawornwan Thongmak, Hyongju Park, Yan Fu and Zhenghui Sha	Agentic Customer Query Response Using Knowledge Graph-based Retrieval-Augmented Generation
10:30 - 10:45	3B.P4	Arifuzzaman Sheikh, Edwin Chong and Thomas Bradley	Hierarchical Reward Mechanisms for AI/ML-Driven Decision-Making in System of Systems: A Semiconductor Manufacturing Case Study
10:45- 11:00	3B.P5	Trupti Bawankar, Mayur Chavan and Amrita Francis	Transforming Agriculture: A Model-Based Systems Engineering Approach to Drone-Enabled Precision Farming
11:00 - 11:15	3B.P6	Jomana Bashata and Lance Sherry	Integrating Standard Operating Procedures (SOPs) into MBSE SysML Models