

# Mobility Systems: Land, Sea, Air and Space



**INCOSE 14<sup>th</sup> Annual GLNC  
Regional Conference**

Detroit, MI, USA

Hybrid Edition

*Coming in the Spring of 2023 – To Be Announced Dates*

1

## *At a Glance .....*

# *Program Schedule*

*Preliminary Advanced*

## ***Presentations, Workshops, Tutorials & Roundtables ....***

### ***3 – “Mobility Systems: Land, Sea, Air and Space”***

*Leveraging NASA’s Technology Transfer / Small Business Programs  
and Michigan’s Office for Future Mobility and Electrification (OFME)  
Resources & Programs for Rapid Mobility Systems Innovation.*

***2 – “INCOSE Smart Cities Initiative”*** Stakeholder Outreach  
and Exploration of System Modeling Concepts, Methods and Tools

### ***1 – “Transformation Through Digital Engineering”***

*Presentations, Workshops & Tutorials on Systems Modeling (MBSE)*

The Westin Book Cadillac\*  
Historic† Luxury Hotel and Conference Center



\* A Marriott Hotel

† A Contributing Property of the Detroit  
Washington Boulevard U.S. Historic District



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*At a Glance .....*

# *Program Schedule*

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*An "Innovation Accelerator"  
Hybrid Conference and  
Workshop Event Streamed from  
Detroit, Michigan, USA.*

# Featured Speakers and Instructors

*Preliminary Advanced*



**Thomas M. Doehne**

Partnership and Commercialization Specialist, Office of Technology Incubation and Innovation, NASA John H. Glenn Research Center



**Trevor Pawl**

Chief Mobility Officer, State of Michigan, Office of Future Mobility and Electrification (OFME)



**Kerry Lunney**

President, International Council on Systems Engineering (INCOSE), 2020-21. Engineering Director and Chief Engineer, Thales Australia



**Gavin Brown**

Executive Director, Michigan Aerospace Manufacturers Association (MAMA); Chair, North American Space Summit (NASS)



**Dr. Bruce Powel Douglass**

Senior Principal Systems Engineer, MITRE; Author, MBSE Instructor in SysML/UML



**Brett Hillhouse**

Global Automotive Leader, IBM Artificial Intelligence (AI) Applications.





# Speakers, Panelists and Instructors (Cont.)

*Preliminary Advanced*



**Dr. Tina P. Srivastava**

Co-Chair, INCOSE PM-SE Integration WG,  
PMI-INCOSE Strategic Alliance;  
Fellow, MIT Aeronautics and  
Astronautics Engineering, Design and  
Management School



Massachusetts  
Institute of  
Technology



**Pascal Thalin**

Director, Aerospace Standards, Technology and  
Innovation, SAE International



**Charlie Tyson**

Technology Activation Manager, Michigan's Office  
of Future Mobility & Electrification (OFME).



**Claude Laporte, Ph. D.**

Professor, École de Technologie Supérieure (ÉTS),  
Montreal, Quebec, Canada; Committee Member,  
ISO/IEC 29110, Systems and Software Engineering  
Standards, Guide for Very Small Entities



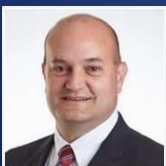
**Jon Mooney, PE**

INCOSE Smart Cities Initiative (SCI); Principal,  
Acoustics by JW Mooney, LLC.



**Stephane Lacrampe**

Director, ObeoSoft Canada Inc.



**Steve Cash, CSEP**

Principal Systems Engineer, Vitech Corporation



# Quick Reference – Keynote & Featured Speaker Presentation Topics

*Preliminary Advanced*

## Kerry Lunney

President, International Council on Systems Engineering (INCOSE), 2020-21; Engineering Director and Chief Engineer, Thales Australia.

***Travelling the Trajectory of Future Mobility Solution: A System of Systems Approach***

## Trevor Pawl

Chief Mobility Officer, State of Michigan Michigan Economic Development Corporation (MEDC) Office of Future Mobility and Electrification (OFME).

***Future Mobility & Electrification: Realizing Michigan's Vision for an Advanced Transportation Ecosystem***

## Thomas M. Doehne

Partnership and Commercialization Specialist, Office of Technology Incubation and Innovation; NASA Glenn Research Center.

***NASA Glenn Research Center Overview: NASA Entrepreneur and Small Business Programs***

## Gavin Brown

Chair, North American Space Summit (NASS) Executive Director, Michigan Aerospace Manufacturers Association (MAMA).

***Michigan: Mid-America's Space Harbor***

## Brett Hillhouse

Global Automotive Leader, IBM Artificial Intelligence (AI) Applications.

***The New Frontier: Artificial Intelligence (AI) and the Transformation to Digital Engineering***

## Dr. Bruce Powel Douglass

Senior Principal Systems Engineer, MITRE; Chief Evangelist (SysML/UML), IBM (1995-2019).

***Enabling Digital Engineering and Model-Based Systems Engineering (MBSE)***

## Jon Mooney, PE

INCOSE Smart Cities Initiative; Principal, Acoustics by JW Mooney, LLC.

***The Glass Bead Game: Bridging the Gap Between Complex Smart City Models and Practical Applications***

## Claude Laporte, Ph. D.

Professor, École de Technologie Supérieure (ÉTS), Montreal, Quebec, Canada.

***The ISO/IEC 29110 Systems and Software Engineering Standards and Guides for Very Small Entities***

## Charlie Tyson

Technology Activation Manager, Michigan's Office of Future Mobility & Electrification (OFME).

***Overview of Michigan Economic Development Corporation (MEDC) and Office of Future Mobility and Electrification (OFME) Programs and Services***

## Dr. Tina P. Srivastava

MIT Aeronautics and Astronautics Engineering Fellow, MIT System Design & Management School; Co-Chair, INCOSE PM-SE Integration WG.

***Innovating for the Future: Why Integrating Project/Program Management (PM) and Systems Engineering (SE) is Important***

Pre-Event Tour:

Tour & Overview Presentation, American Center for Mobility (ACM) Willow Run Site, Ypsilanti, Michigan USA .

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# Program Schedule – Day 1

EDT	Track 1 - Presentations	Track 2 – MBSE Workshops
0800 - 0900	Networking / Showcase / Social	
0900 - 0945	<b>Dr. Bruce Powel Douglass</b> <i>Enabling Digital Engineering and MBSE</i>	<b>MBSE Workshop Prep:</b> Participant Arrival and Class Readiness
0945 - 1030	<b>Brett Hillhouse</b> <i>The New Frontier: AI and Transformation to Digital Engineering</i>	
1030 - 1100	Morning Break (30m)	
1100 - 1230	<b>Jon Mooney, PE</b> <i>The Glass Bead Game: Bridging the Gap Between Complex Smart City Models and Practical Applications</i>	<b>MBSE Workshop:</b> <i>Scenario-Based Use Case Analysis</i> (90 minutes) Instructor: <b>Dr. Bruce Powel Douglass</b>
1230 - 1330	Lunchtime Break / Showcase / Networking (60m)	
1330 - 1415	<b>Trevor Pawl</b> <i>Future Mobility &amp; Electrification: Realizing Michigan's Vision for an Advanced Transportation Ecosystem</i>	<b>MBSE Workshop:</b> <i>Test-Driven Modeling with State Machines</i> (3 hours)  Instructor: <b>Dr. Bruce Powel Douglass</b>
1415 – 1500	<b>Thomas Doehne</b> <i>NASA Glenn Research Center Overview and Entrepreneur/Small Business Programs</i>	
1500 - 1530	Afternoon Break (30m)	
1530 - 1615	<b>Charlie Tyson</b> <i>Accelerating Mobility Innovation: An Overview of the OFME's Land, Sea and Air Test Site Network, Grant Programs and Projects</i>	
1615 - 1700	<b>Claude Laporte, Ph.D.</b> <i>The ISO/IEC 29110 Systems and Software Engineering Standards and Guides for Very Small Entities</i>	

# Program Schedule – Day 2

*Preliminary Advanced*

EDT	Track 1 – Presentations and Workshops	Track 2 – Tutorials / Panel / Closing Keynote
0800 - 0900	Networking / Showcase / Social	
0900 - 0945	<b>Kerry Lunney</b> <i>Travelling the Trajectory of Future Mobility Solutions</i>	<b>MBSE Tutorial:</b> <i>Arcadia and Capella Discovery (3 hours)</i> Instructor: <b>Stephane Lacrampe</b>
0945 - 1030	<b>Gavin Brown</b> <i>Michigan: Mid-America’s Space Harbor</i>	
1030 - 1100	Morning Break (30m)	
1100 - 1230	<b>Workshop / Q&amp;A Session</b> <i>NASA Glenn Research Center Technology Transfer Office Overview and Mobility Related Technologies (90 minutes)</i> Facilitator: <b>Thomas Doehne</b>	<b>MBSE Tutorial (continued):</b> <i>Arcadia and Capella Discovery (3 hours)</i> Instructor: <b>Stephane Lacrampe</b>
1230 - 1330	Lunchtime Break / Showcase / Networking (60m)	
1330 - 1415	<b>Jon Mooney, PE</b> <i>Smart Cities Operational Analysis Workshop (3 hours)</i>	<b>Panel Roundtable:</b> <i>System Engineering and Technology Challenges and Opportunities –Enabling Electrification of Future Mobility Systems</i>  <b>Moderator:</b> R. Beach (NASA, Retired) <b>Panelists:</b> P. Thalin (SAE), B. Douglass (MITRE), B. Hillhouse (IBM), T. Srivastava (INCOSE-PMI)
1415 - 1500		
1500 - 1530	Afternoon Break (30m)	
1530 – 1700	<b>Jon Mooney, PE (continued)</b> <i>Smart Cities Operational Analysis Workshop (3 hours)</i>	<b>Tina P. Srivastava, Ph.D.</b> <i>Innovating for the Future: Integrating Project Management and Systems Engineering</i>

## Day 3:

**MBSE Workshop:** “Systems Engineering an Off Grid Electrical Supply”  
Instructor: Steve Cash, Vitech  
9:00am – 5:00pm EDT

**LEARN MORE**  
*Visit Event Website*

[www.incose.org/GLNC](http://www.incose.org/GLNC)

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*Thank You!*

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& ELECTRIFICATION**

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# Leveraging the Power of Connection!

[www.incose.org/GLNC](http://www.incose.org/GLNC)

## SAE-INCOSÉ Collaboration Partnership and Joint Membership Discount Program



## PMI-INCOSÉ Strategic Alliance on Integrating Project/Program (PM) and Systems Engineering (SE)



INCOSÉ is a not-for-profit membership organization founded in 1990 to develop and disseminate trans-disciplinary principles and practices that enable the realization of successful systems. INCOSÉ is designed to connect systems engineering professionals with educational, networking, and career-advancement opportunities in the interest of developing the global community of systems engineers and systems approaches to problems. We are also focused on producing state-of-the-art work products that support and enhance this discipline's visibility in the world.