

INCOSE Heartland Chapter Meeting

Thursday 14OCT2021

7:00 - 8:30 PM CDT

(8:00 - 9:30 PM EDT)



Tonight's Agenda

Welcome to all members!

Welcome

7:00pm CDT

- Shadrak Rajkumar, *President, Heartland Chapter*
- Sean Mahrt, *Program Director, Heartland Chapter*
- Andrew Muxen, *Treasurer, Heartland Chapter*
- Jack Stein, *Asst. Director, INCOSE Americas Sector*
- *Round robin introductions (New Member welcome)*

INCOSE News (Jack Stein)

7:30pm CDT

Program Directors Corner (Sean Mahrt)

7:40pm CDT

Heartland Chapter Treasurers report (Andrew Muxen)

7:50pm CDT

Heartland Chapter Status (Shadrak Rajkumar)

8:00pm CDT

Questions/Open Forum

8:10pm CDT

Adjourn

8:20pm CDT





About *INCOS*E – Welcome!

Founded 1990

18,000+ Members

74 Chapters

35 Countries

55 Working Groups

3500 SEs Certified

A better world through a systems approach:



www.incose.org

The International Council on Systems Engineering (INCOS E) is a not-for-profit membership organization founded to develop and disseminate the transdisciplinary principles and practices that enable the realization of successful systems. INCOS E 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.



The International Council On Systems Engineering (INCOSE)

119
INCOSE
CAB
Member
Organizations
(June
2021)

321 Gang, Inc
Aerospace Corporation, The
Airbus
AM General LLC
Analog Devices, Inc.
ARAS Corp
Australian National University
Aviation Industry Corporation of China
BAE Systems
Ball Aerospace
Bechtel
Becton Dickinson
Blue Origin
Boeing Company, The
Bombardier Transportation
Booz Allen Hamilton Inc.
C.S. Draper Laboratory, Inc.
California State University
Carnegie Mellon University SEI
Change Vision, Inc.
Colorado State University SE Programs
Cornell University
Cranfield University
Cubic
Cummins Inc.
Cybernet MBSE Co, Ltd
Defense Acquisition University
Deloitte Consulting, LLC
Denso Create Inc
Drexel University

Eindhoven University of Technology
EMBRAER
ENAC
Federal Aviation Administration (FAA)
Ford Motor Company
Fundacao Ezute
General Dynamics
General Electric Aviation
General Motors
George Mason University
Georgia Institute of Technology
IBM
Idaho National Laboratory
ISAE - Supaero
ISDEFE
ITID, Ltd
Jacobs
Jama Software
Jet Propulsion Laboratory
John Deere
Johns Hopkins University
KBR
KEIO University
L3Harris Technologies
Leidos
Lockheed Martin Corporation
Los Alamos National Laboratory
ManTech International Corporation
Maplesoft
Massachusetts Institute of Technology (MIT)

MBDA (UK) Ltd
Missouri University of Science & Technology
MITRE Corporation, The
Mitsubishi Heavy Industries, Ltd
NASA
National Reconnaissance Office (NRO)
National Security Agency Enterprise Systems
Naval Postgraduate School
Nissan Motor Co, Ltd
No Magic Inc. (Dassault Systemes)
Northrop Grumman Corporation
Pacific Northwest National Laboratory
Pennsylvania State University
Peraton
Petronas Nasional Berhad
Prime Solutions Group, Inc
Project Performance International (PPI)
QRA Corp
Raytheon Corporation
Roche Diagnostics
Rolls-Royce
Saab AB
SAIC
Sandia National Laboratories
Siemens
Sierra Nevada Corporation
Singapore Institute of Technology
Skoltech
SPEC Innovations
Stellar Solutions

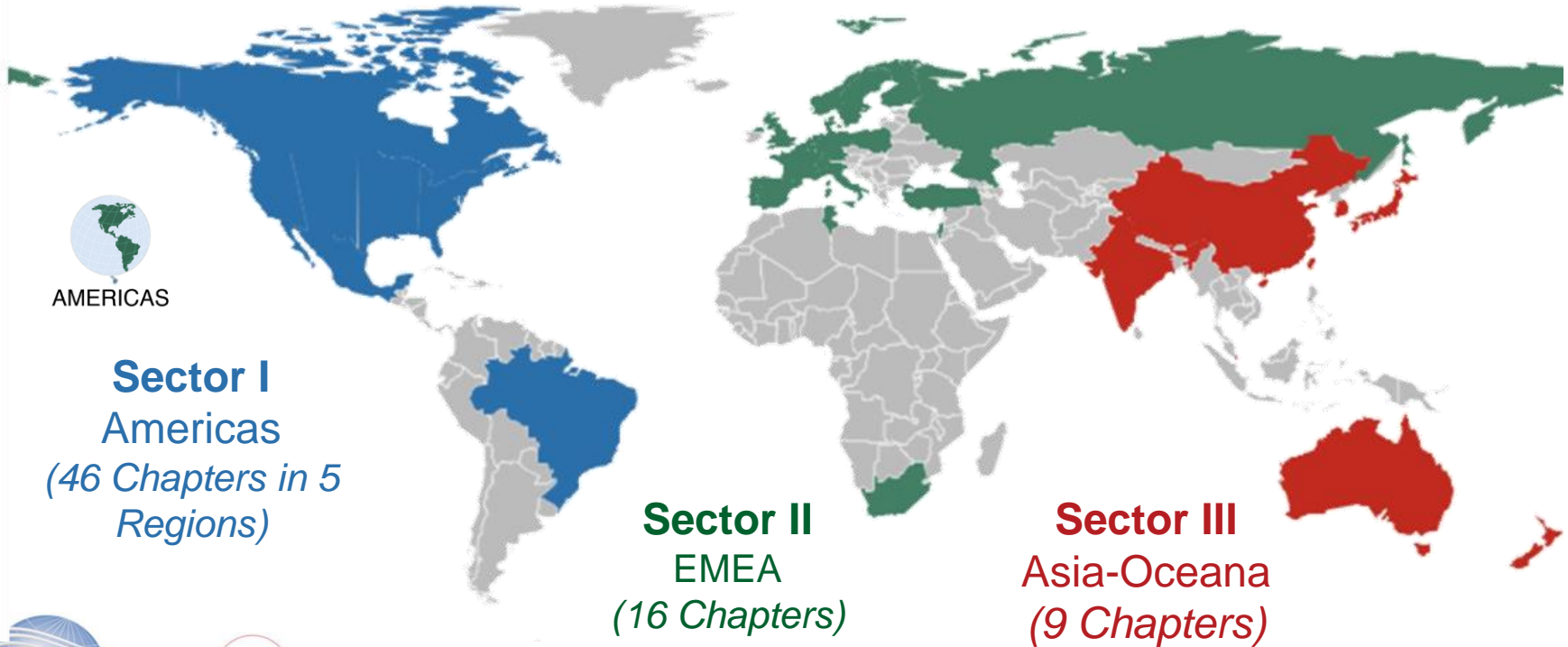
Stevens Institute of Technology
Strategic Technical Services LLC
Swedish Defense Materiel Administration
Systems Planning and Analysis
Thales
Torch Technologies
Trane Technologies
Tsinghua University
TUS Solution LLC
UC San Diego
UK Ministry of Defense (MoD)
University of Alabama in Huntsville
University of Arkansas
University of Connecticut
University of Maryland
University of Maryland, Baltimore County
University of Michigan, Ann Arbor
University of New South Wales
University of Southern California
University of Texas at El Paso (UTEP)
University of Washington ISE
US Department of Defense (DoD)
Veoneer
VG2PLAY
Vitech
Volvo Construction Equipment
Woodward Inc
Worcester Polytechnic Institute- WPI
Zuken Inc



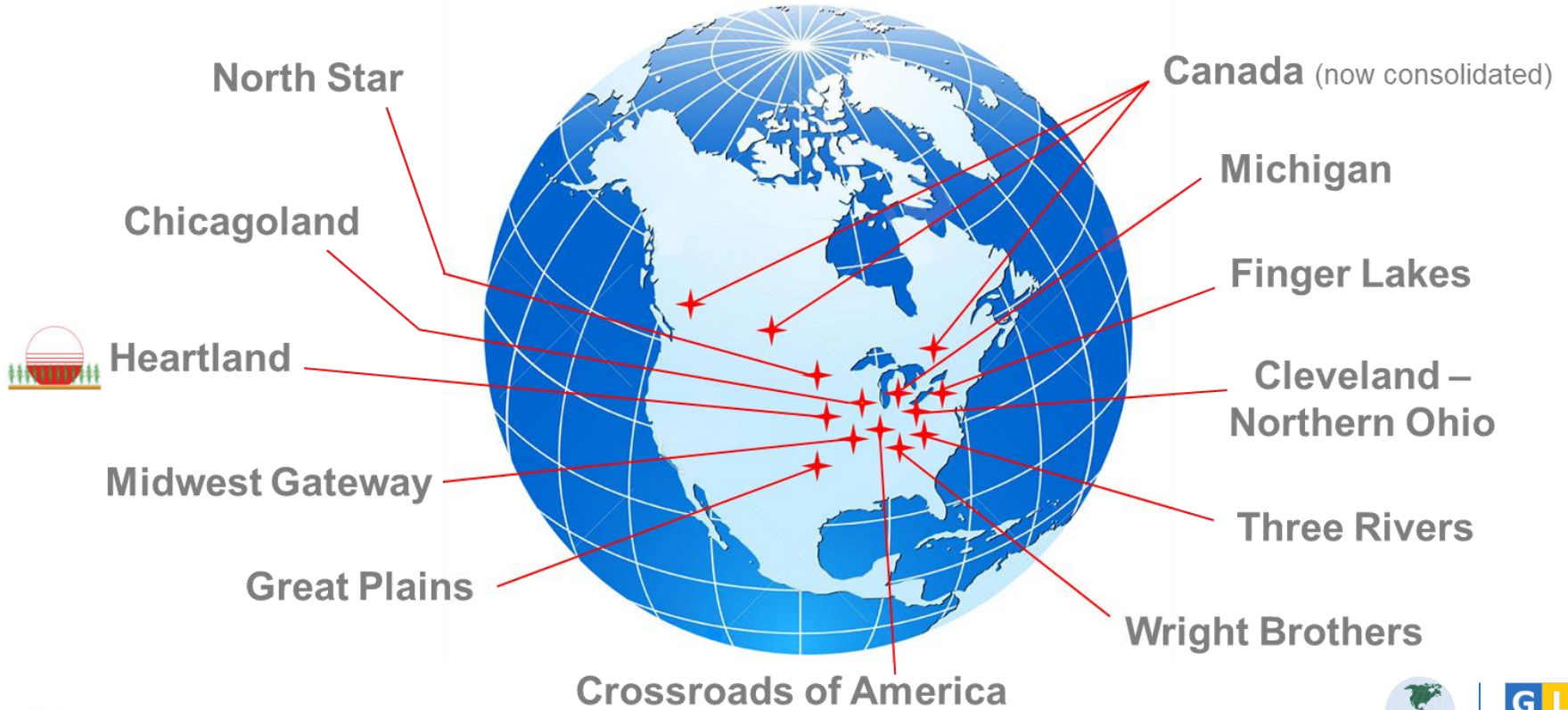
The International Council On Systems Engineering (INCOSE)

Three Sectors with 74* Chapters in 35 Countries

* Some emerging (new) chapters not shown below.



The 12 Chapters of the INCOSE Americas Great Lakes / North-Central (GLNC) Region



INCOSE Announcements (International)

IS2021: Completed



31st Annual **INCOSE**
international symposium

VIRTUAL EVENT
July 17 - 22, 2021

Was originally planned as a hybrid event, Honolulu, HI

IW2022: Next Int'l Event



2022
Annual **INCOSE**
International Workshop
Premier Systems Engineering Workshop



185 DAYS
18 HOURS
38 MINUTES
0 SECONDS

Join us for
the Annual **INCOSE** International Workshop
Premier Systems Engineering Workshop

Jan. 29 2022 January 29 to February 1, 2022



Hybrid Event
Torrance, CA, USA



32nd Annual INCOSE International Symposium

Call for Submissions
is Open

June 25-30, 2022
Detroit, Michigan, USA



www.incose.org/symp2022

Mobility Systems: Land, Sea, Air and Space



**INCOSE 14th Annual GLNC
Regional Conference**

Detroit, MI, USA

Nov 30 – Dec 3, 2021

Hybrid Edition

The Westin Book Cadillac^{*}

Historic[†] Luxury Hotel and Conference Center

^{*} A Marriott Hotel

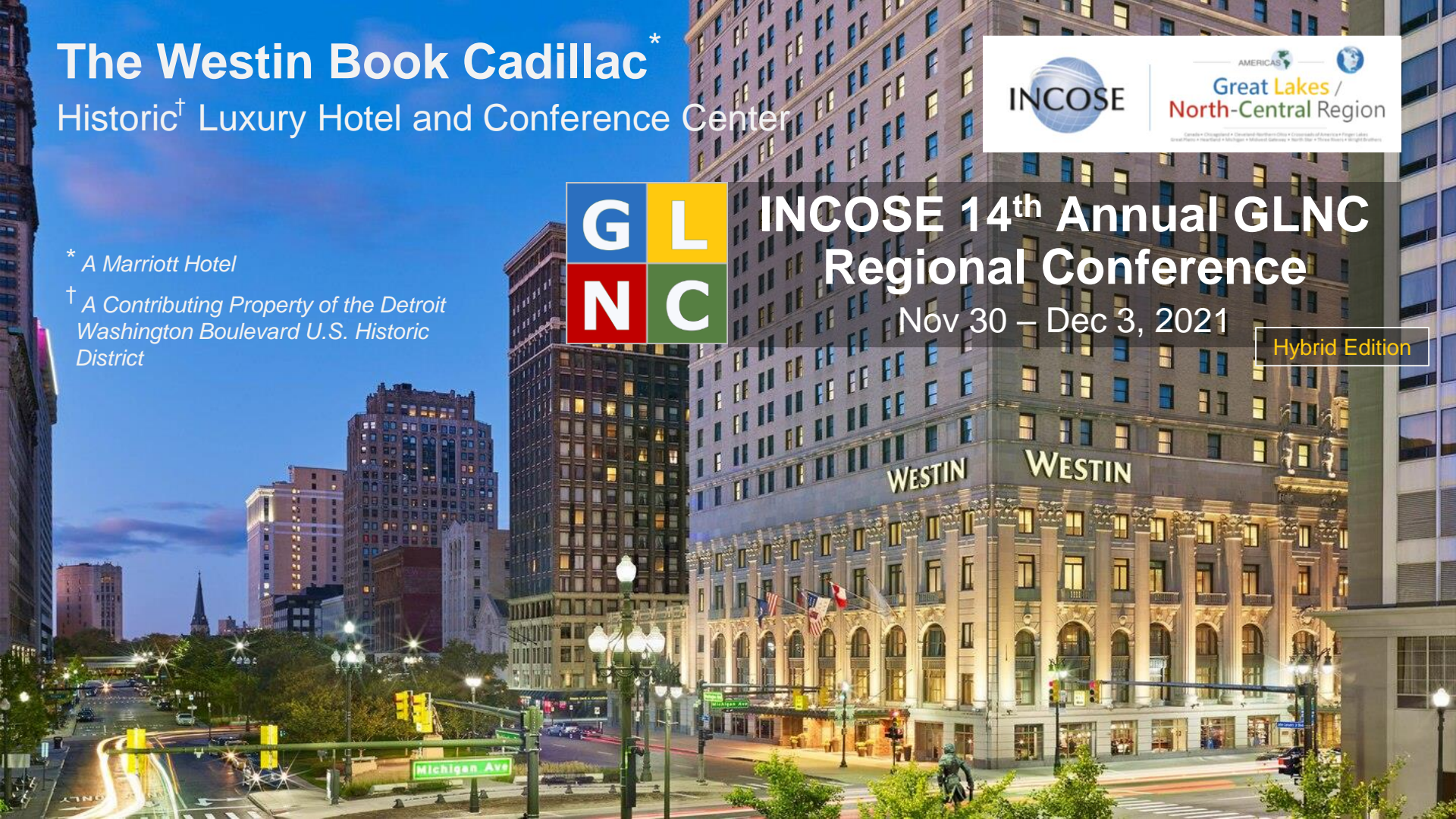
[†] A Contributing Property of the Detroit
Washington Boulevard U.S. Historic
District



INCOSE 14th Annual GLNC Regional Conference

Nov 30 – Dec 3, 2021

Hybrid Edition





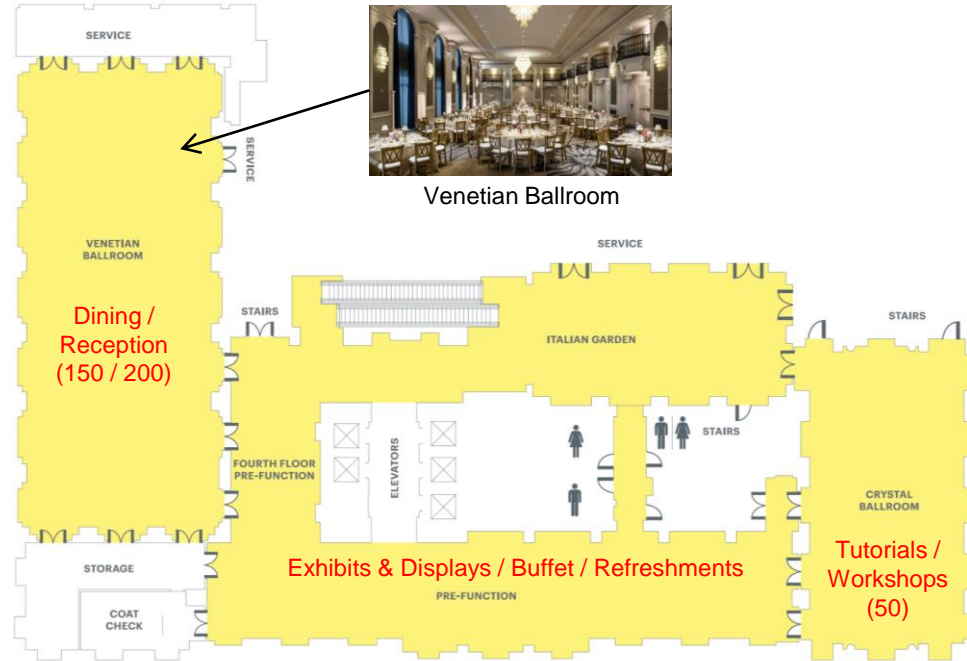
Woodward Ballroom
(Conference Plenary Room)

General Layout: Function Rooms – Book Cadillac

Fourth Floor



Venetian Ballroom



Second Floor



Woodward (A+B) Ballroom





Standard Guestroom 1924



Standard Guestroom 2021



The GLNC has contracted for
90 room-nights @ \$212 USD



INCOSE 14th Annual GLNC Regional Conference



**Employer Virtual
Booth Set-up Now in
Process (Sep/Oct)**

2nd GLNC Virtual Student Systems Engineering (SE) Career Fair



Fall 2021 Virtual Student SE Career Fair

Nov 10 – Dec 10*



Explore the World of
Opportunities in
Systems Engineering

- Entry Level
- Internships

FREE to all students and recent graduates.

VALIDATION Test Flyer (Oct 10 – Nov 10)

Nov 10 – Dec 10 (24/7)

Live Interactions:

- Browse Company Virtual Booths
 - Use Chatbots/IT to Connect
 - Visit INCOSE Welcome Center
 - **Upload Your Resume**
 - Coaching Sessions: Nov-Dec
 - Interviews & One-on-Ones
- Round 1: Nov 30–Dec 3
Round 2: Dec 6-10

Engage with INCOSE Corporate Advisory Board (CAB) and GLNC event-affiliated systems engineering (SE) employers:



VALIDATION Flyer

The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization founded to develop and disseminate the transdisciplinary principles and practices that enable the realization of successful systems. INCOSE 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. [www.incose.org]



... and more!

VISIT SE CAREER FAIR

Powered by **XOR** <http://secareerfair.xor.ai/incose>

Program Directors Corner

Virtual Chapter Meetings



Lunch and learn series

A promotional poster for an Agile MBSE Lunch and Learn Series. It features a photo of Bruce Powel Douglass, Ph.D., pointing. The text includes 'Agile MBSE', 'Lunch and Learn Series with Bruce Powel Douglass, Ph.D.', 'A FREE Virtual Event Registration Required', 'Win an autographed copy of Bruce's newly released Agile MBSE Cookbook!', 'Session 1', 'Introduction to Model-Based Engineering: What does a good model smell like?', and the date 'Wed Sept 22, 2021 12:30 - 1:30 PM EDT'. Logos for 'Agile Model Based Systems Engineering' and 'INCOSE' are also present.

Topic planning in progress



"Chapter Meeting Documents" on Website: www.incoe.org/Heartland



HEARTLAND CHAPTER

Links to Zoom Recordings of Past Meetings are Posted on Our Website



31st Annual INCOSE International Symposium
virtual event
July 17 - 22, 2021

INCOSE INTERNATIONAL SYMPOSIUM

JULY MEETING

Join the Heartland Chapter at the INCOSE INTERNATIONAL SYMPOSIUM Virtual Event, July 17-22, 2021

2021 - QUARTER 3

Trends in Systems Engineering
Thurs Aug 12, 2021
7:00 - 8:30 PM CDT

A FREE Virtual Event
Registration Required

Dr. Rick Heffner
Caltech Center for Technology and Management Education

Caltech INCOSE

- August 12_2021_Flyer
- August 12_2021_Presentation
- August 12_2021_Video Recording

MBSE Three Ways: A Trio of Studies to Satisfy Any Appetite
Thursday Sept 9, 2021
7:00 - 8:30 PM CDT

A FREE Virtual Event
Registration Required

Casey Mead
Caltech Center for Technology and Management Education

INCOSE Caltech

- September_09_2021_Flyer
- September_09_2021_Presentation
- September_09_2021_Video Recording

Sector Americas NC-GLRC
INCOSE Chapters Regional Conference
14th Annual INCOSE American North-Central and Great Lakes Regional Conference (NC-GLRC) 14th
Exploring and Inspiring the Resilient and Sustainable Future of Our Region
Systems Engineering Capability and Competency
"Security Systems - Land, Sea, Air and Space"
April 9-17, 2021

APRIL MEETING

Join the Heartland Chapter at the 14th Annual INCOSE Americas Sector NC-GLRC, April 9-17, 2021

2021 - QUARTER 2

Spectacular Views of the City
A Comparison of Smart City Models
Thurs May 13, 2021
7:00 - 8:30 PM CDT

A FREE Virtual Event
Registration Required

Jon W. Munnery
INCOSE Smart Cities Initiative

INCOSE Caltech

- May 11_2021_Flyer
- May 11_2021_Presentation
- May 11_2021_Video Recording

How Systems Engineers Can Influence Without Authority
Thursday June 10, 2021
7:00 - 8:30 PM CDT

A FREE Virtual Event
Registration Required

Tim Boyd
Caltech Center for Technology and Management Education

INCOSE Caltech

- June 10_2021_Flyer
- June 10_2021_Presentation
- June 10_2021_Video Recording

Systems Thinking: A Foundation for Product Development
Thursday Jan 19, 2021
7:00 - 8:30 PM CDT

A FREE Virtual Event
REGISTER On-Line

Dr. Rick Heffner
Caltech Center for Technology and Management Education

Caltech INCOSE

- Jan 19_2021_Flyer
- Jan 19_2021_Presentation
- Jan 19_2021_Video Recording

2021 - QUARTER 1

Machine Learning: Classifiers to Understand Emergent Behavior in Complex Systems and System-of-Systems
Thurs Feb 9, 2021
7:00 - 8:30 PM CDT

A FREE Virtual Event
Registration Required

Dr. Ramakrishnan Ramani
Principal Systems Engineer
Honeywell Technology Solutions

Caltech INCOSE

- Feb 9_2021_Flyer
- Feb 9_2021_Presentation
- Feb 09_2021_Video Recording

What Every Systems Engineer Should Know About Project Management
Thursday March 9, 2021
7:00 - 8:30 PM CDT

A FREE Virtual Event
Registration Required

Dr. Rick Heffner
Caltech Center for Technology and Management Education

Caltech INCOSE

- Flyer_March_09_2021
- March 09_2021_Presentation
- Mar 09_2021_Video Recording

“LUNCH & LEARN SERIES” on Website: www.incoe.org/Heartland

AGILE MBSE

LUNCH AND LEARN SERIES WITH DR . BRUCE POWEL DOUGLASS

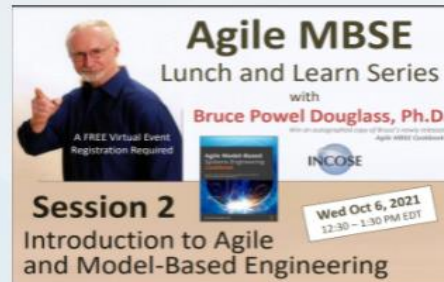
Sep 2021 - Feb 2022



Agile MBSE
Lunch and Learn Series
with
Bruce Powel Douglass, Ph.D.
A FREE Virtual Event
Registration Required
INCOSE
Wed Sept 22, 2021
12:30 - 1:30 PM EDT
Session 1
Introduction to Model-Based Engineering:
What does a good model smell like?

SESSION 1 : INTRODUCTION TO MBSE

[SESSION 1 FLYER](#)



Agile MBSE
Lunch and Learn Series
with
Bruce Powel Douglass, Ph.D.
A FREE Virtual Event
Registration Required
INCOSE
Wed Oct 6, 2021
12:30 - 1:30 PM EDT
Session 2
Introduction to Agile
and Model-Based Engineering

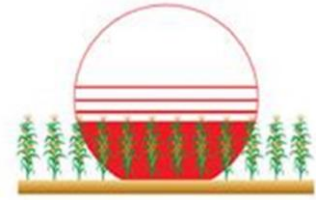
SESSION 2: INTRODUCTION TO
AGILE & MBSE

[SESSION 2 FLYER](#)

[REGISTER TO ATTEND](#)



Monthly chapter meetings



HEARTLAND CHAPTER

Meetings are the Second Thursday of the Month

- Save the Date
- Virtual meeting format
- No membership required, invite your friends and show them the value of an INCOSE membership!



Heartland Chapter Treasurers Report

Current Balance	
Checking	\$4,054.17
CD #1	\$10,026.21
CD #2	\$8,255.98
Total	\$22,336.36

Recent Income:

- Chapter Shares: \$336.00

Recent Expenses:

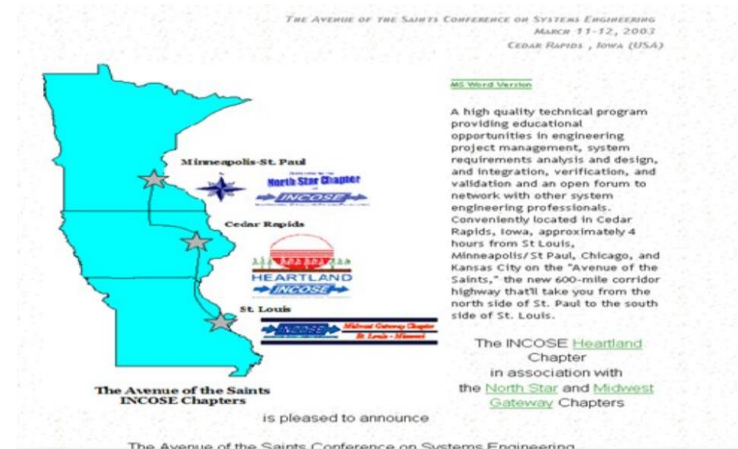
- MBSE L & L: \$1200-1500 (pending)



Heartland Chapter Status

Chapter History

- Founded in 1996 by Collins and few others in IOWA
- Received INCOSE Chapter Silver Award 8 years in a row (2003 – 2010)
- Around 400 + members joined the chapter since 1996
- Average Active Members per year – 50
- Significant Events in last 25 years
 - International Symposium in 2000
 - Avenue of the Saints Conference in 2003



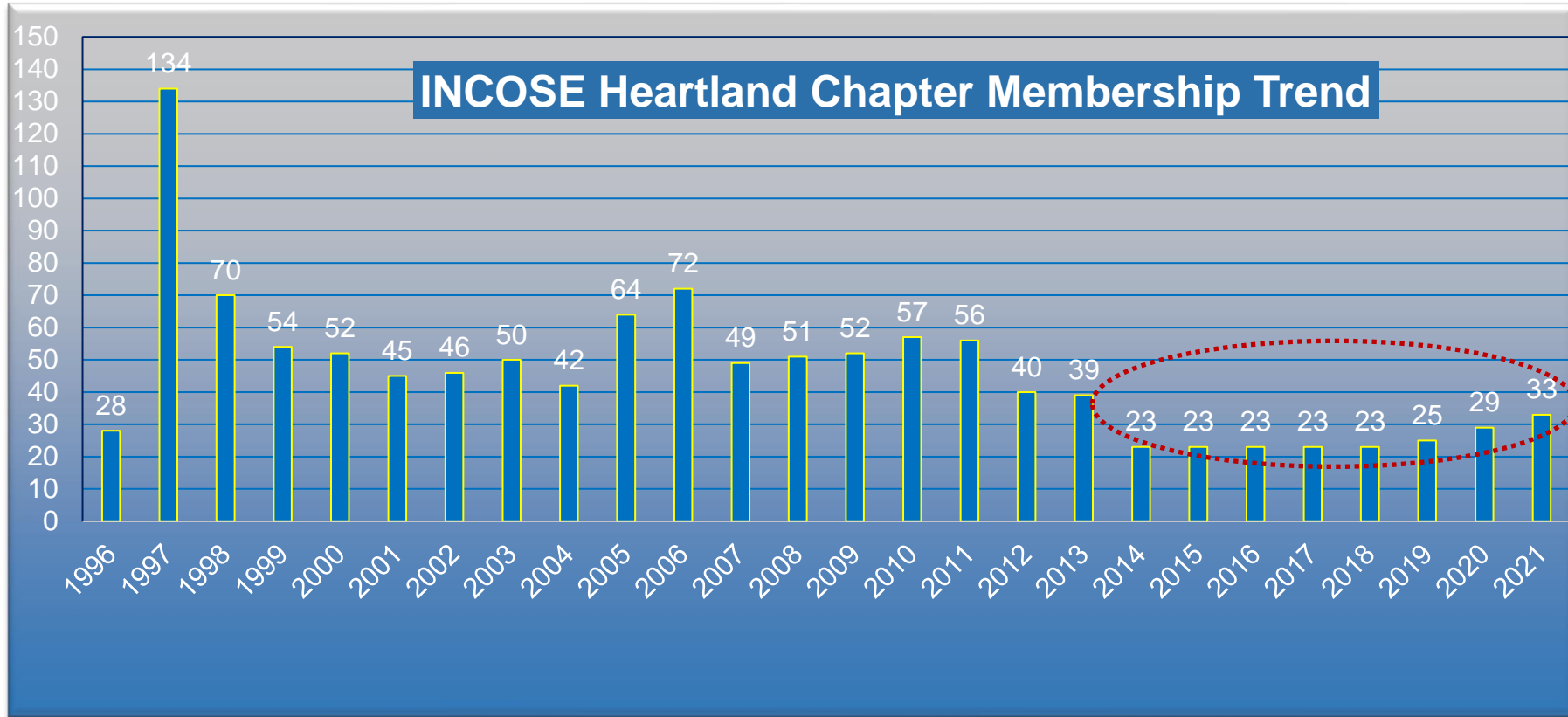
Heartland Chapter Officers

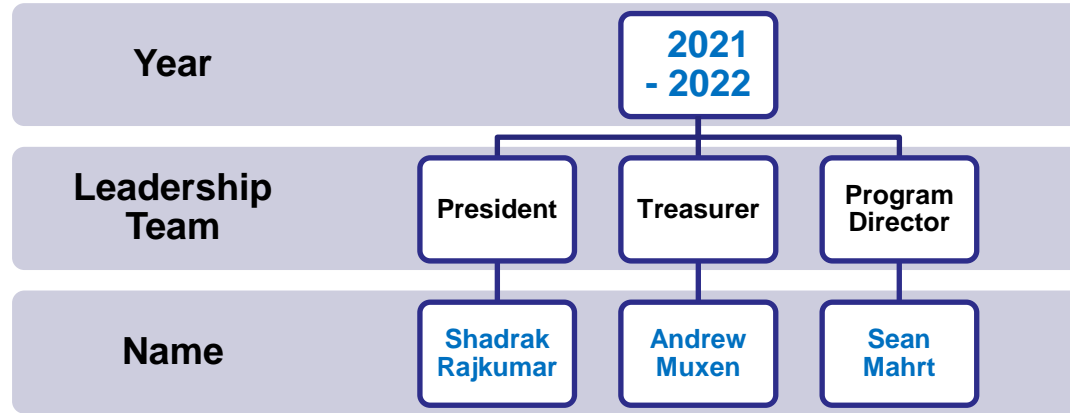
INCOSE Heartland Chapter

Historical Listing of Chapter Officers

	President	Vice-President/ Pres E	Secretary	Treasurer	Program Director	Chapter Awards	Significant Events
2021	Shadrak R Murugesan			Andrew Muxen	Sean Marht		Lunch & Learn Series with Dr. Burce
2020	Obi Odenigbo	Shadrak R Murugesan		Andrew Muxen	Sean Marht		
2019	Obi Odenigbo	Shadrak R Murugesan		Andrew Muxen			
2015-2018				David Ratzer			
2014	Chris Hansen	Brian Piddington	Open	David Ratzer			
2013	Brian Piddington	Chris Hansen	Jennifer Hunt	David Ratzer			
2012	Brian Piddington	Chris Hansen	Jennifer Hunt	David Ratzer			
2011	Raymond Jorgensen	Deborah McKenney	Kristen Brown	David Ratzer			
2010	Raymond Jorgensen	Deborah McKenney	Kristen Brown	David Ratzer		Silver	
2009	Greg A Johnson	Doug Dasgupta	Paul Huber	Raymond Jorgensen		Silver	
2008	Greg A Johnson	Doug Dasgupta	Paul Huber	Raymond Jorgensen		Silver	
2007	Jorge Buenfil	Greg A Johnson	Tony Thompson	Raymond Jorgensen		Silver	
2006	Jorge Buenfil	Greg A Johnson	Tony Thompson	Raymond Jorgensen	John Povacz	Silver	
2005	Anthony Thompson	Jorge Buenfil	Raymond Jorgensen	John Povacz	John Povacz	Silver	
2004	Anthony Thompson	Walid Shawbaki	Lisa Wilcox	John Povacz	John Povacz	Silver	
2003	Raymond Jorgensen	Bruce V Smith	Anthony Thompson	Bernard Lettington	John Povacz	Silver	Avenue of the Saints Conference
2002	Raymond Jorgensen	Bruce V Smith	Ian Philpott	Bernard Lettington	John Povacz		
2001	Eileen Arnold	Raymond Jorgensen	Ian Philpott	Bruce V Smith	Raymond Jorgensen	Honorable Mention	
2000	Eileen Arnold	Raymond Jorgensen	Ian Philpott	Bruce V Smith	Raymond Jorgensen		International Symposium - MSP
1999	Steve Wolf	Eileen Arnold	Ian Philpott	Opal Emdin	Raymond Jorgensen		
1998	Jake Jakoubek	Steve Wolf	Ian Philpott	Ian Philpott	Raymond Jorgensen		
1997	Amy Nowakowski	Jake Jakoubek	Ian Philpott	Steve Wolf			
1996	Amy Nowakowski	Jake Jakoubek	Ian Philpott	Steve Wolf			
1996	Chapter Founded						







Contact:
Heartland@incose.net

Open Positions

- Vice President
- Secretary
- Communication/Membership Director



Sep/Oct

Oct/Nov

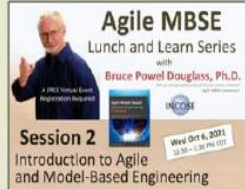
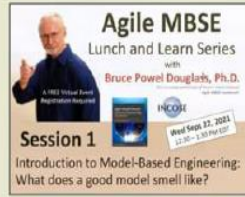
Nov/Dec

Jan/Feb

Heartland Chapter Status

Agile MBSE Challenge Team

Agile Modeling



Use Cases/Reqs



ICDs/Handoffs



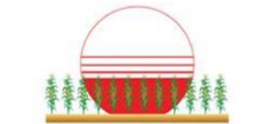
Testing/Patterns



- After Lunch & Learn series, we plan to start a Challenge Team to have Hands- On Experience on the Agile MBSE Approach.
- Interested members can send email to Heartland@incose.net
- Stay tuned for more details.

Sponsors :

Smith+Nephew



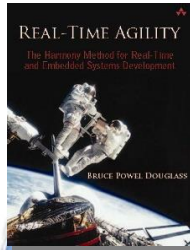
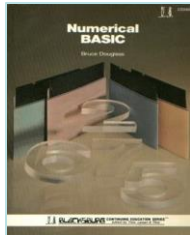
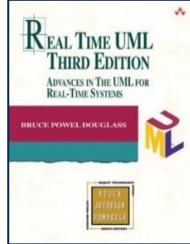
HEARTLAND CHAPTER



CANADA

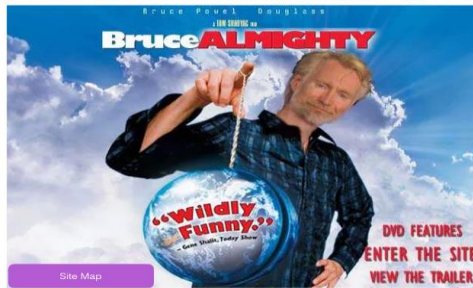


HEARTLAND CHAPTER



Real-Time Agile Systems and Software Development

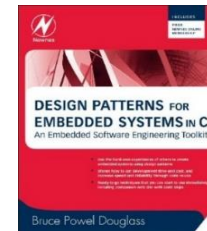
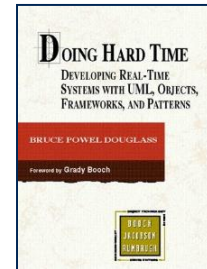
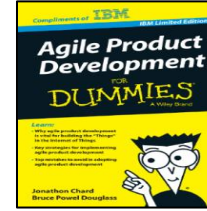
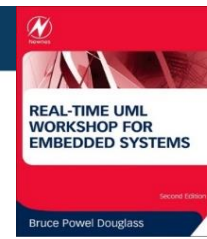
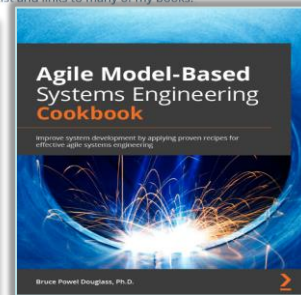
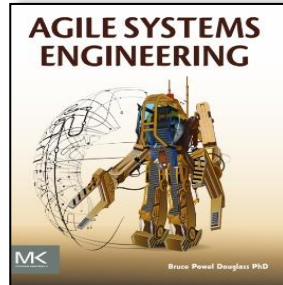
Welcome to www.bruce-douglass.com



You've found yourself on www.bruce-douglass.com, my web site on all things real-time and embedded.

On this site you will find papers, presentations, models, forums for questions / discussions, and links (lots of links) to areas of interest, such as

- Developing Embedded Software
- Model-Driven Development for Real-Time Systems
- Model-Based Systems Engineering
- Safety Analysis and Design
- Agile Methods for Embedded Software
- Agile Methods for Systems Engineering
- The Harmony agile Model-Based Systems Engineering process
- The Harmony agile Embedded Software Development process
- Models and profiles I've developed and authored
- List and links to many of my books.



Dr. Bruce Book Giveaway

Book Prize Rules:

- 1) Must be a Heartland Member
- 2) Random drawing during the Challenge team formation
- 3) Must be present to Win
- 4) Autographed by Bruce Douglass