



CHICAGOLAND



INCOSE Chicagoland Chapter Meeting Agenda

August 18, 2022

Please MUTE your phone



Agenda

- **6:30 – 7:00 PM CT – Welcome and Announcements**
- **7:00 – 9:00 PM CT – Guest Speaker**



NEW SCHAUMBURG MEETING LOCATION

**1501 Woodfield Rd Suite
300N, Schaumburg, IL 60173**



Actalent is an operating company of Allegis Group, the global leader in talent solutions.

www.ActalentServices.com



Actalent at a Glance



4,500+
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Supported



1,100+
Dedicated
Recruiters



27,500+
Consultants
Engaged



2.5 Billion
In Revenue



- AND -
20
Delivery Centers
Across North America,
EMEA, APAC and India

Capabilities

Sciences

Healthcare +
Clinical Research +
Laboratory Sciences +

Engineering

Power & Utilities +
Software & Systems +
Product & Manufacturing +
Construction Management +
Environmental, Architecture +
& Civil



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Actalent Solutions

Workforce Solutions and Services that **Make an Impact**



Contract Talent

Gain access to the right expertise with an Actalent Contract Talent solution. Whether you're looking for a partner to contribute to a critical project, support a business expansion or you lack a certain capability in-house, we help you get the work done. We keep our consultants engaged and offer continuous learning opportunities to hone their skills, so they are ready for the next big assignment.



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Transformation is constant and fueled by experts passionate about change. Actalent provides comprehensive Engineering, Laboratory, and Clinical Services to help advance the future. When you require specific technical or scientific expertise or an operational end-to-end solution, our people answer the call. Flexible delivery models ensure you have the support where and when you need it to achieve your goals.



bb7 is excited and honored to host the June INCOSE event at our corporate headquarters located at 5407 Fen Oak Drive in Madison, WI.

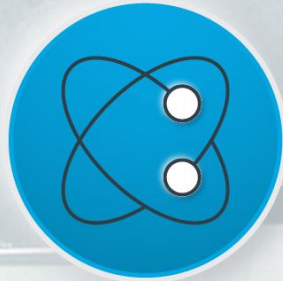
YOUR BIG IDEA
JUST GOT REAL

bb7 CAPABILITIES



DESIGN

DISCOVERY + RESEARCH +
TREND ANALYSIS + UI/UX



ENGINEERING

MECHANICAL + ELECTRICAL
+ EMBEDDED SYSTEMS



TECHNICAL TALENT

ACCESS TO TOP TALENT +
CUSTOMIZED SOLUTIONS



PROTOTYPING + TESTING

MODEL MAKING + CUSTOM TESTING +
FABRICATION

OUR PASSION IS CRAFTING
TRANSFORMATIVE PRODUCTS
FROM GREAT IDEAS.

WE ARE AN INNOVATIVE PRODUCT
DEVELOPMENT FIRM THAT
TRANSFORMS PROBLEMS INTO
PROFITABLE PRODUCTS.

ISO 9001:2015
CERTIFIED

ISO 13485:2016
CERTIFIED



Get to Know Your Fellow Chicagoland SEs

Please participate in a short poll



CHICAGOLAND MEMBERSHIP UPDATE



15 Renewing Members

Thank You for renewing your membership!

Renewed Members

First Name	Family Name	Company
Stephen	Perich	AbbVie, Inc.
Pierre	VanHuyssteen	Korry Electronics Co.
Anthony	Raike	Collins Aerospace
Clinton	Middaugh	Sierra Space
Bela	Kiraly	Natus Medical
Arsh	Bhatnagar	Fluor Corporation
Zhongmin	Du	Eaton
Charles	Johnson	Leonardo DRS
Jeremy	Feldstein	Northrop Grumman
Aaron	Armstrong	QinetiQ INC
xiaoxiao	lu	
Ashutosh	Kumar	
Kevin	Kissel	Progress Rail
Keith	Hair	Ford Motor Company
Nizamuddin	Ahmad	Raytheon Technologies



5 New Members

Thank You for joining!

New Members

First Name

Natalia

Keith

Stephen

Paul

Tanya

Family Name

Pablo

Hair

Gibney

Cafferata

Barlow

Company

ICU Medical

Ford Motor Company

BlueBridge Technologies

Progress Rail Locomotives

AbbVie Inc.

INCOSE: A Better World Through a Systems Approach

*The global professional association
for systems engineers*



International Council on Systems Engineering
A better world through a systems approach

www.incose.org

Vision and Mission

VISION: A better world through a systems approach

MISSION: To address complex societal and technical challenges by enabling, promoting, and advancing Systems Engineering and systems approaches

OBJECTIVE: Global leader for systems engineering professionals for career development

FUTURE: Lead the future of systems engineering, academically, in emerging domains, and in practice



Systems Engineering Vision 2035



incose.org/sevision

INCOSE-sponsored SE Vision 2035

- produced by leaders from systems community
- inputs from across industry, academia, and government

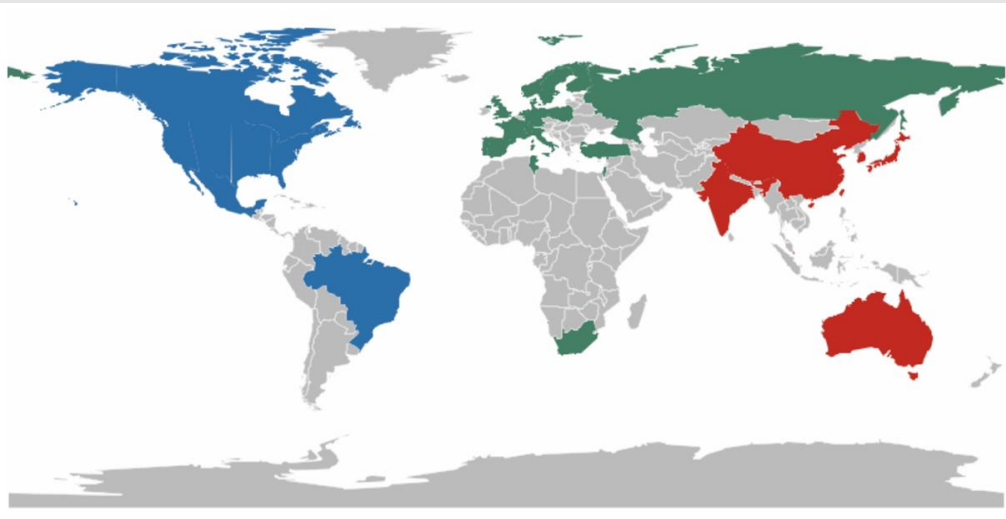
SE Vision 2035 addresses

- Global Context for SE
- Current State of SE
- Future State of SE
- Realizing the Vision

Please work with INCOSE to help realize this vision.

Complete SE Vision 2035 available as website and pdf
www.incose.org/sevision.

INCOSE: The International Council on Systems Engineering



- Connect systems engineers professionals
- Educational tools
- Resources they need
- Networking events
- Virtual platforms
- Handbooks and publications
- Career development
- Advancement through products and services
- Developing global community
- Problem solving through systems approaches
- Forward thinking
- State-of-the art
- Certification

Global Impact



Why Join INCOSE?

INCOSE – global SE professional society
– providing **opportunity for life-long learning** in systems approaches

Community of peers, **resources** for your **career**, and a place to be a **leader**

INCOSE members stand out and are often sought after **experts**. They learn from each other.

INCOSE members create **products**, produce **events**, represent in international forums

INCOSE members increase body of knowledge, **advance practice** of SE

Network with over 19,000 members in 76 countries

Increase your professional stature with INCOSE SE Professional **Certification**



Chapters and Working Groups (WG)

- Connecting people – the heart of INCOSE
- Best ways to increase your circle of influence or work on an issue
 - INCOSE Chapters
 - Working Groups



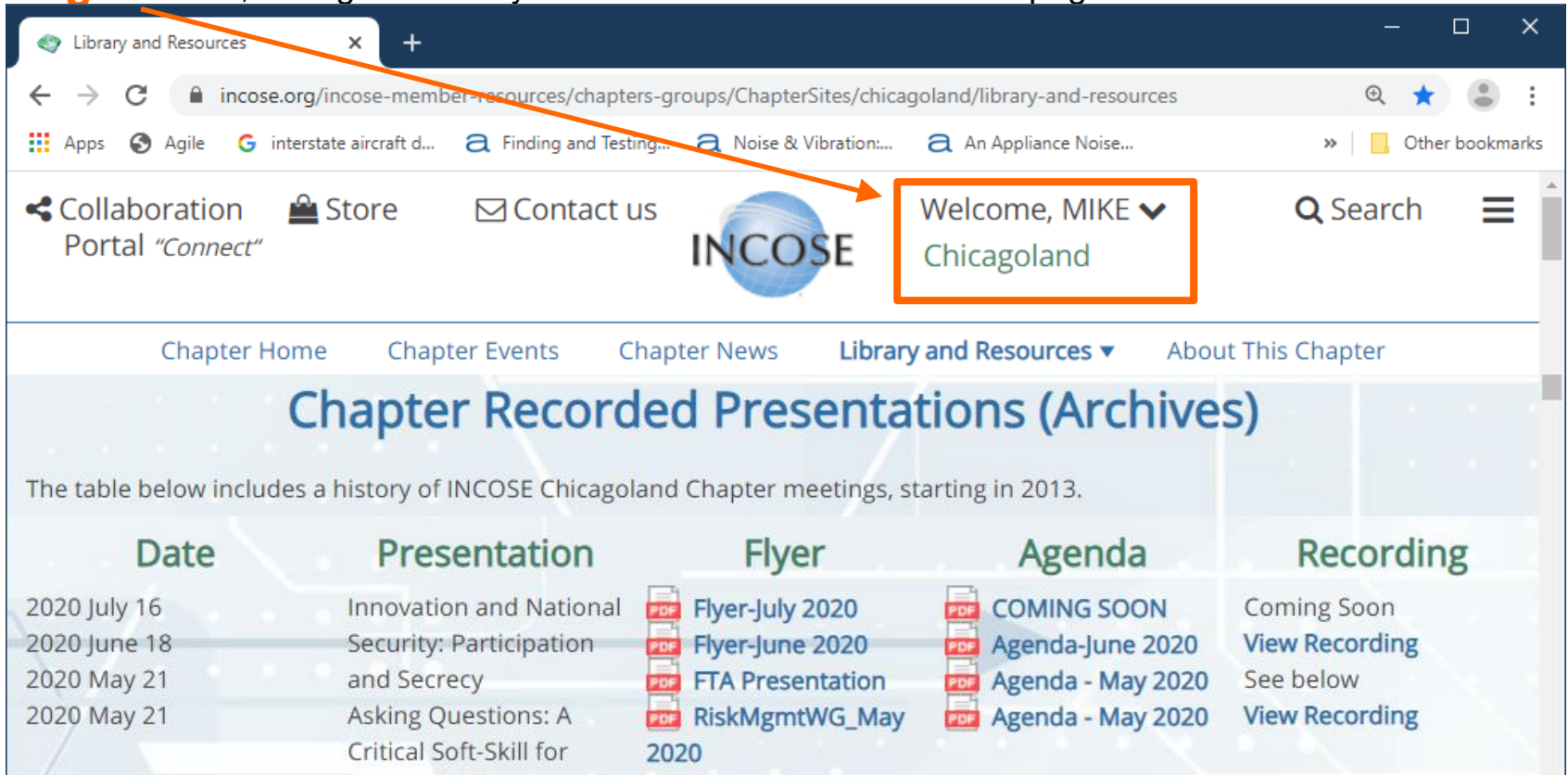


Benefits of INCOSE Membership









Professional Development (cont.)

3. Recordings of speakers at Chapter Meetings from previous months

Log in first, then go to Library and Resources tab of our home page



The screenshot shows the INCOSE Chicagoland website. An orange arrow points from the text 'Log in first' to the 'Welcome, MIKE' dropdown menu in the top navigation bar. The dropdown menu is highlighted with an orange box and shows 'Chicagoland' below the name. Below the navigation bar, the 'Library and Resources' tab is selected in the main menu. The page title is 'Chapter Recorded Presentations (Archives)'. Below the title, a table lists the history of INCOSE Chicagoland Chapter meetings, starting in 2013.

Date	Presentation	Flyer	Agenda	Recording
2020 July 16	Innovation and National	 Flyer-July 2020	 COMING SOON	Coming Soon
2020 June 18	Security: Participation	 Flyer-June 2020	 Agenda-June 2020	View Recording
2020 May 21	and Secrecy	 FTA Presentation	 Agenda - May 2020	See below
2020 May 21	Asking Questions: A	 RiskMgmtWG_May 2020	 Agenda - May 2020	View Recording
	Critical Soft-Skill for			

Corporate Advisory Board (CAB)

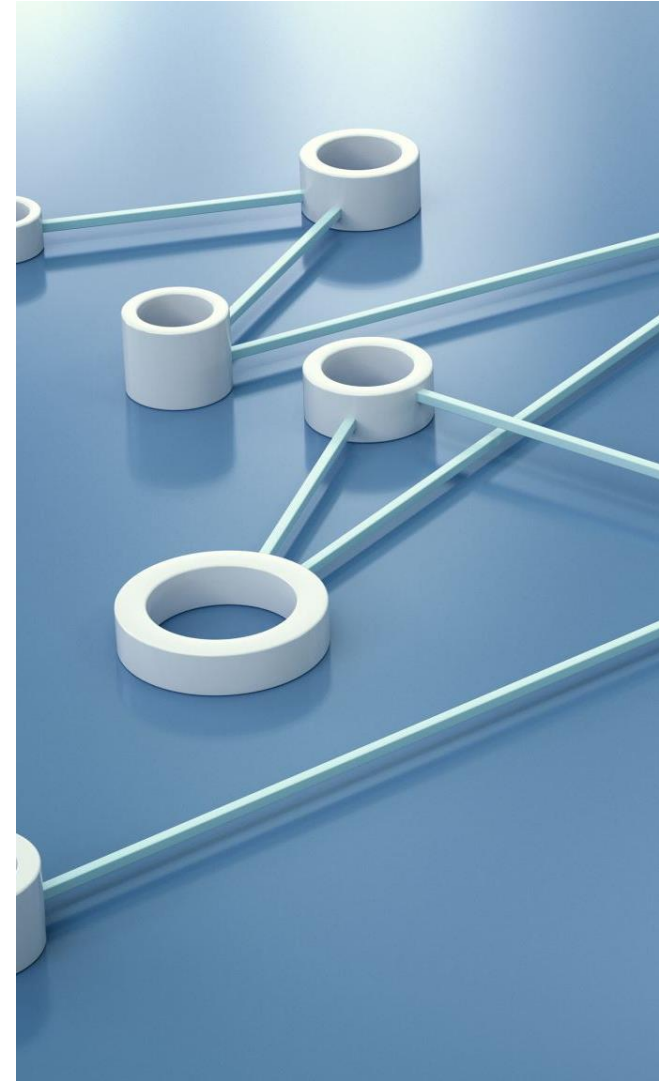
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graph LR; A[Corporate Advisory Board (CAB)] --> B[INCOSE CAB is Voice of Customer to INCOSE leadership.]; B --> C[CAB strategically guides technical leadership, leading to INCOSE products and influence to standards];
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INCOSE CAB is Voice
of Customer to
INCOSE leadership.

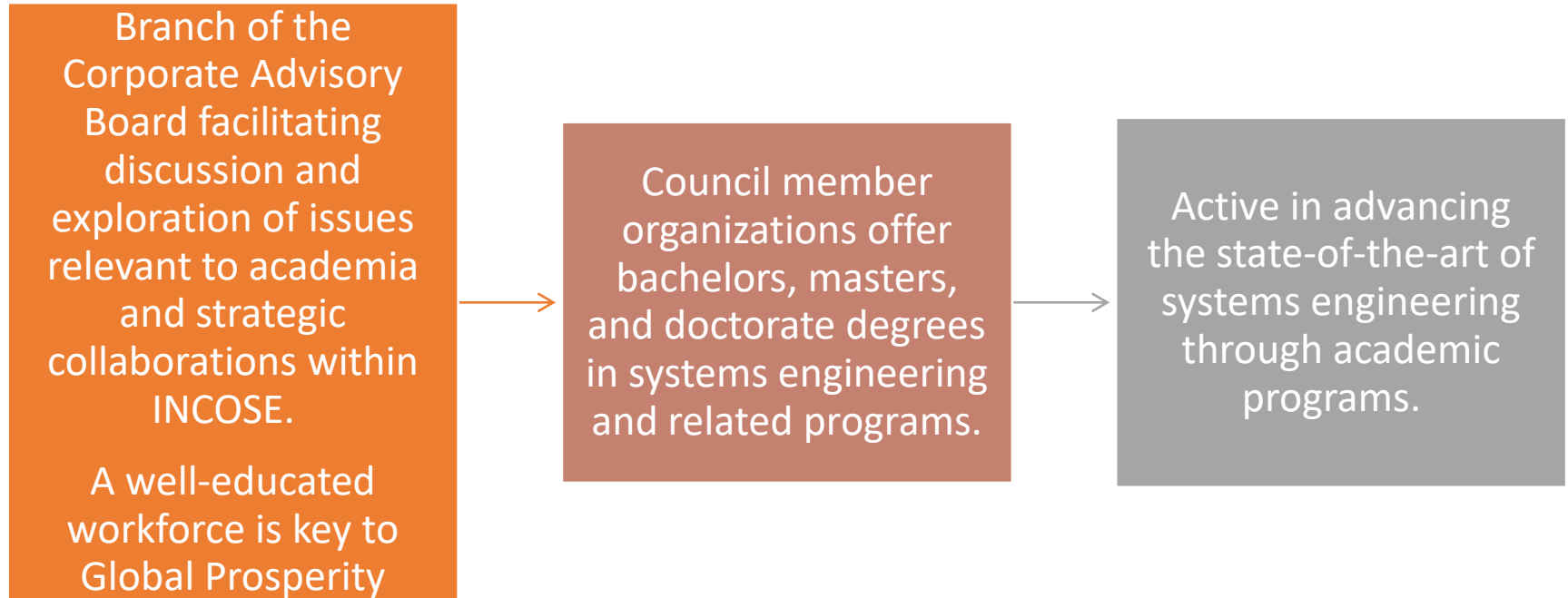
CAB strategically
guides technical
leadership, leading
to INCOSE products
and influence to
standards

WHY JOIN THE INCOSE CORPORATE ADVISORY BOARD?

- Allows your organization to guide direction of SE
- Employees gain access to state-of-the-art products
- Align with fellow industry leaders, grow your global footprint
- Learn how other industry leaders apply SE to solve business problems
- Gain better access to talent through your INCOSE network



Academic Council



INCOSE Student Divisions

- Undergraduate / graduate students enrolled in accredited curriculum
- Want active involvement in INCOSE

Student Divisions operate under INCOSE chapter, require:

- 1) interested student body,
- 2) faculty member and member of INCOSE willing to act as Division mentor and, and
- 3) active sponsorship and participation by INCOSE chapter

Certification

		
Associate Systems Engineering Professional	Certified Systems Engineering Professional	Expert Systems Engineering Professional
College students and those new to systems engineering may be qualified as Associate Systems Engineering Professionals (ASEP).	Working engineers who can perform independently in a variety of systems engineering functions can be recognized as Certified Systems Engineering Professionals (CSEP).	Individuals who solve the most challenging, technical problems and are seen as leaders in their community can become Expert Systems Engineering Professionals (ESEP).
LEARN MORE	LEARN MORE	LEARN MORE



SEP Certification Mentors

If:

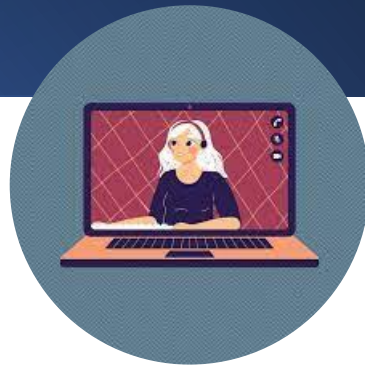
- you are an INCOSE member, and
- you are interested in becoming certified as a Systems Engineering Professional (SEP), and
- you have questions about the certification process

Then:

- you can contact one of our SEP Certification Mentors for assistance in getting your questions answered:

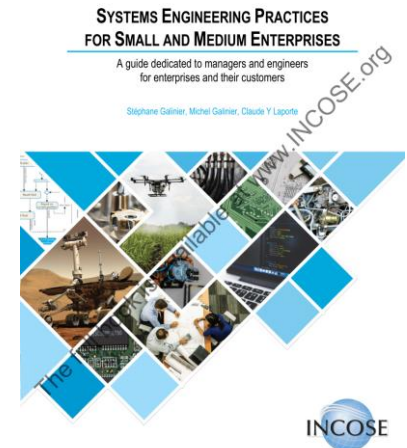
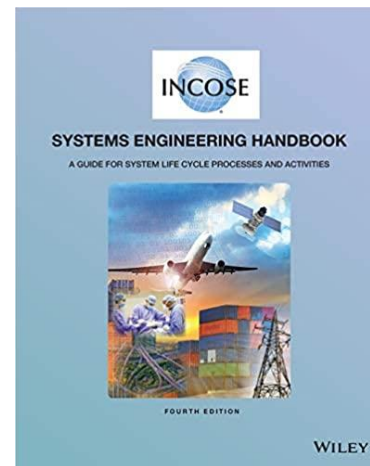
INCOSE Member	SEP Level achieved	Email Address
Steve Perich	CSEP	chitownse2@yahoo.com
Russell Kubychек	CSEP	crk022@gmail.com
Chris Freund	ASEP	cfreund7@gmail.com

Conferences and Connections



- <https://www.incose.org/events-and-news>

Publications



<https://www.incose.org/products-and-publications/se-handbook>

INCOSE Foundation

Committed to rewarding skills through scholarships for those engaged in finding solutions to complex technical challenges at all stages of their education or career.



Offers possibilities for people to pursue goals that anticipate the future – for them and for the world.



Scholarships Include:

ISEF, the International Science and Engineering Fair INCOSE Award to a pre-college student

The Chesapeake Chapter Award

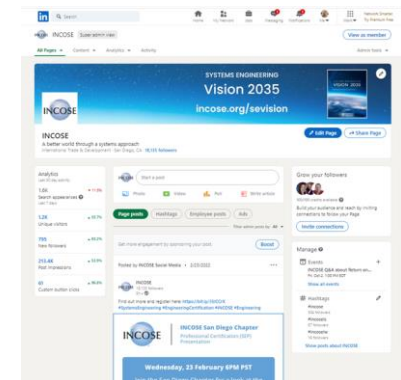
The Stevens Doctoral Award for Promising Research in Systems Engineering to a PhD Candidate

The James E. Long Award for Post Doctoral work

Engage with INCOSE Follow us on social media

Follow, like, comment, and share on all INCOSE social media platforms.

- LinkedIn:
<https://www.linkedin.com/company/44559/>
- LinkedIn Group:
<https://www.linkedin.com/groups/7499834/>
- Facebook
- Twitter
- Instagram
- More to come



Membership Benefits



A global network of colleagues who understand systems engineering



Certification opportunities



Access to quarterly ePublications, *INSIGHT* and *Journal of Systems Engineering*



Electronic version of the Systems Engineering Handbook



Collaborate with experts and practitioners **worldwide**



Exclusive access to INCOSE Connect, the collaborative space for **INCOSE** Members Only



Member discounted registration to the International Workshop and International Symposium.



How to Join INCOSE

1. Go to www.incose.org
2. Click on “Join us”
3. Provide information, including your company / institution. This helps the chapter identify programs that will be of interest to the greatest number of chapter members.
4. Select chapter affiliation – “Chicagoland”
5. Pay \$160 for 1-year membership (or select a longer term at a lower rate)

Student membership - \$50

Refer a new member? Get an Amazon gift card!

Email Mike Gut, Chicagoland’s Secretary, at gut_mike@hotmail.com

[Join us](#)[Login](#)[Search](#)

A better world through a systems approach



UPCOMING INCOSE EVENTS



Upcoming Board Meetings

Board Meetings on the first Thursday of each month

- Meetings are open to all members
- Next meeting: Thursday, September 1, 7:00 – 9:00 PM CT
(virtual mtg - attend via web conference)
- Plenty of opportunities to get involved!
 - Leadership and contributor opportunities available
 - Join us!

Interested in helping out?

Contact: John Bayless, Chapter President, via email:
john.bayless@brunswick.com



Benefits of Joining the Chapter Board of Directors

Expand your professional network and make new friends

Build professional capabilities

Elevate your personal brand

Support initiatives that are important to you

Your New Role	Imagine Your Name Here
Vice President	Open Position
Membership Chair	Open Position
Communications Chair	Open Position
Industry Outreach Representative	Open Position



Upcoming Chapter Meetings

Chapter Meetings on the third Thursday of each month

- September – The Glass Bead Game (Jon Mooney)
 - **6:00 PM Networking Event and Fall Seminar Raffle**
- October – Conflict, Persuasion, and Negotiation (Zane Scott)
 - **6:00 PM Networking Event and Fall Seminar Raffle**
- Seminar - Conflict, Persuasion, and Negotiation (Zane Scott)
- November – systems Engineering for Transit and Rail (Dale Brown)



INTRODUCTIONS



Personal Introductions

▪

Stay muted, then unmute when you want to speak, then mute yourself when finished

- Name, Title & Company / locale
- Are you an INCOSE member, and if so, for how long?
- Job opportunities at your company, if any, or announce if you are looking for an opportunity



CHICAGOLAND ND

Chapter Meeting – August 18, 2022



Topic: Individual Systems Thinking Elements, Rubrics & Relationships

Presenter: Divya Behl, University of Texas at Arlington (UTA)

Presentation Site: Onsite Actalent + Online

Date: Thursday, August 18, 2022

Agenda: 6:30 - 7:00 PM CT – Announcements & Introductions

7:00 - 8:15 PM CT – Feature Presentation and Q&A

Abstract

Systems thinking is a core competency for systems engineers. Individual systems thinking (IST) is described as the ability of an individual engineer to demonstrate systems thinking. Recent research defined IST capability elements and associated rubrics as well as relationships between the elements.

Researchers Divya Behl and Susan Ferreira performed an exercise to validate this research. Validators were provided with a validation package that contained the systems thinking capability model information and questions to answer about the model.

Divya will present the information about the IST model as well as the validation exercise. She will share some of the outcomes from the in-process validation feedback analysis. Results from the completed research are expected to help engineers and project managers to better understand IST and use this to benefit their projects.

About Our Speaker

Divya Behl is a Ph.D. student at the University of Texas at Arlington (UTA). Her research interests are associated to systems engineering and include systems thinking and program management. She has B.S. and M.S. degrees in Industrial and Systems Engineering from Northern Illinois University. She is the Vice President of Program Management at a company in the west suburbs of Chicago. She is presenting systems thinking research associated to her dissertation. She is working on the research with and is supervised by Dr. Susan Ferreira at UTA.

Dr. Susan Ferreira is an Associate Professor in the Department of Industrial, Manufacturing, and Systems Engineering at the University of Texas at Arlington. Her industry background includes working with Lockheed Martin Integrated Systems and Solutions, General Dynamics/Motorola, and Northrop Corporation. Dr. Ferreira's research interests include systems thinking, risk management, and model-based approaches to understand and solve complex problems.



FEATURE PRESENTATION

[Start recording]