Cleveland-Northern Ohio Chapter Meeting – June 10, 2024

Welcome to all members and guests!

Agenda - C-NO Café #3

- Welcome and Announcements   6:00 pm ET
  - Dennis Rohn, President, C-NO Chapter

- Architecture   6:15 pm ET
  - Caitlyn Singam

- Q & A   7:15 pm ET

- Adjourn   7:30 pm ET

Upcoming C-NO Chapter Meetings

- July 8, 6:00 PM Hybrid – Café #4
  - Columbus Metropolitan Library – Hilliard Branch, 4500 Hickory Chase Way, Hilliard, OH

- August 12, 12:00 PM (tentative) Virtual – Café #5

2024 C-NO Chapter Officers

- President: Dennis Rohn

- Vice President: Amber Waid

- Secretary: Sam Ciccone

- Treasurer: Brian Hallett

- At-Large Director: Anna Sanford

- At-Large Director: Joel Knapp

Why Join INCOSE?

- INCOSE is the global Systems Engineering professional society – providing the **opportunity for life-long learnin**g in systems approaches.

- A community of peers, **resources** for your **career**, and a place to be a **leader.**

- INCOSE members stand out and are often sought after as **experts**. INCOSE members share practices and learn from each other.

- INCOSE members create **products**, produce **events** and represent the organization in international forums.

- INCOSE members increase the body of knowledge and **advance the practice** of systems engineering.

- **Network** with over 21,000 members in 75 countries.

- Increase your professional stature with the INCOSE Systems Engineering Professional **Certification.**

Mission and Vision

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.

Membership Benefits

A global network of colleagues who understand systems engineering

Certification Opportunities

Access to quarterly e-Publications, *INSIGHT* and *Journal of Systems Engineering*

Electronic version of the Systems Engineering Handbook

Collaborate with experts and practitioners **worldwide**

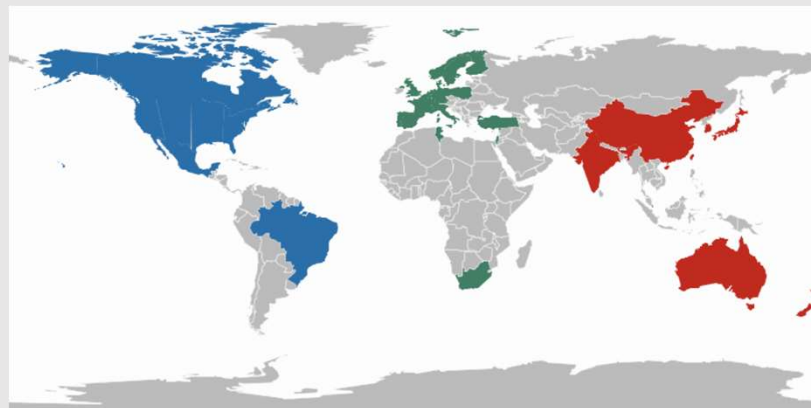Exclusive access to INCOSE Connect, the collaborative space for **INCOSE** Members Only

Member discounted registration to the International Workshop and International Symposium.

65 Chapters Worldwide

Chapters play an essential role in the achievement of INCOSE's goals and objectives:

- Organizing a multitude of professional and social programs
- Attracting new members from industry, government and academia
- Supporting technical activities striving to advance the state and art of systems engineering
- Showcasing INCOSE as the international authoritative body on systems engineering that it is.

LEARN MORE
incose.org/chapters

Working Groups

INCOSE has over 50 active Working Groups. Some of the Working Groups are:

- Artificial Intelligence Systems
- Automotive
- Human Systems Integration

- MBSE Initiative
- Natural Systems
- PM-SE Integration

- Requirements
- Smart Cities
- Social Systems

Working groups are the resource practitioners need.

Discuss, collaborate, share in person, and online with a wide diversity of interests.

Create products to advance the state, art and practice of systems engineering.

Help develop and review international standards

Bring value to other INCOSE stakeholders in your interest area

WGs run events, workshops, panels and much more

Systems Engineering vision 2035

This Systems Engineering Vision was sponsored by INCOSE and produced by a team of leaders from the systems community, with inputs from across industry, academia, and government. The Systems Engineering Vision 2035 addresses:

- The **Global Context for Systems** Engineering
- The **Current State of Systems Engineering**
- The **Future State of Systems Engineering**
- **Realizing the Vision**

We encourage you to work with INCOSE to help realize this vision.

The complete **Systems Engineering Vision 2035** is available as a website and PDF

LEARN MORE: incose.org/sevision

Initiatives

FuSE

FuSE refines and evolves the SE Vision 2035 across competencies, research, tools and environment, practices, and applications; identifies critical gaps towards the vision realization and initiates and supports relevant actions; fosters involvement and collaboration within and outside of INCOSE; and educates, shares success, and expands.

The Technical Leadership Institute (TLI) is a global network of INCOSE members committed to improving technical leadership skills to better address the complex sociotechnical challenges of the twenty-first century. TLI members come from a wide range of countries.

LEARN MORE:
incose.org/tli

SySTEAM aims to promote a more just, equitable, and transparent approach to education in general, and interdisciplinary systems thinking/systems engineering competencies in particular, aimed at reducing disparities in educational quality, access, and competency attainment.

LEARN MORE:
incose.org/systeam

EWLSE's mission is to create an open systems engineering environment welcoming to all; promote the demonstrated value of women as systems engineers and leaders; engage women in engineering and systems engineering at all levels of education around the world; and enable increased participation and retention of women in systems engineering leadership.

LEARN MORE:
incose.org/ewlse

Professional Certification

If you have just started practicing – or want to start practicing – systems engineering, then ASEP is for you. This certification is for people at the beginning of their career as a systems engineer. The ASEP has "book knowledge" but not yet significant experience as a systems engineer.

If you are a practicing Systems Engineer with more than five years of systems engineering professional work experience, then CSEP is for you.

If you are a systems engineering leader with recognized systems accomplishments and have many years of systems engineering professional work experience, then ESEP is for you.

LEARN MORE:
https://www.incose.org/certification

Corporate Advisory Board

Corporate Advisory Board membership allows organizations to guide the direction of the discipline.

- Employees can gain access to the state-of-the-art products.
- Align with peers and fellow industry leaders, grow your global footprint, and learn about how other industry leaders are applying systems engineering to solve business problems.
- Gain better access to talent – find and hire competent, certified Systems Engineers through your INCOSE connection

The INCOSE Corporate Advisory Board (CAB) is the Voice of the Customer to the INCOSE leadership.

The CAB provides strategic guidance to technical leadership, leading to the development of systems engineering products and input to standards to meet their needs.

LEARN MORE: incose.org/cab www.incose.org/cleveland | 13

Academic Council

A branch of the Corporate Advisory Board facilitating discussion and exploration of issues relevant to academia and strategic collaborations within INCOSE.

A well-educated workforce is key to Global Prosperity.

Council member organizations offer bachelors, masters, and doctorate degrees in systems engineering and related programs.

Active in advancing the state-of-the-art of systems engineering through academic programs.

Resources

Conferences and Events

International Symposium 2024

International Workshop 2025

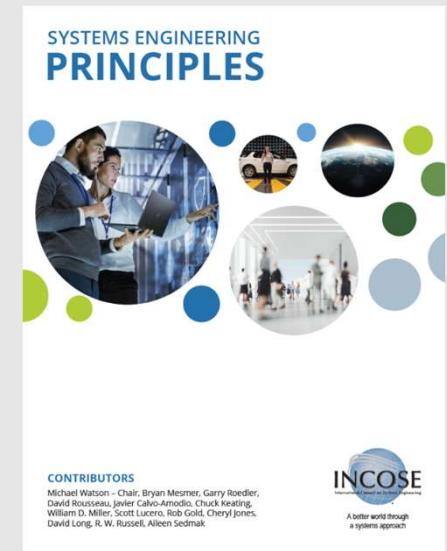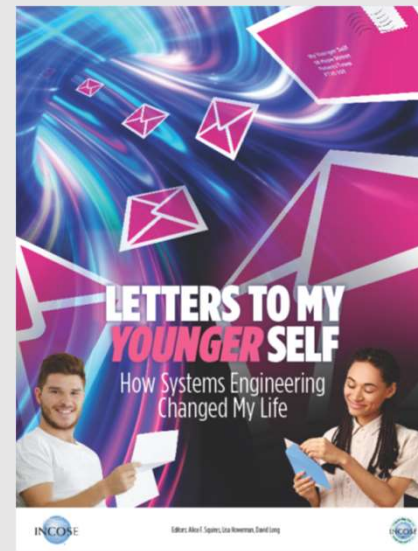**Human Systems Integration 2024**

Europe, Middle East, Africa (EMEA) Workshop and Systems Engineering Conference (WSEC) 2023

LEARN MORE:

incose.org/events

Publications

LEARN MORE:

https://portal.incose.org/commerce/store

The 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

Tonight's Topic - Architecture

Caitlyn A. K. Singam, M.Sc., is an INCOSE-accredited systems engineer and the lead for the INCOSE SySTEAM Initiative (incose.org/systeam), an international group of volunteers working to promote and standardize the integration of systems competencies into STEM and STEAM curricula. In addition to her volunteer work with INCOSE, Caitlyn is a researcher who has been invited to present her work to local, national, and international audiences, including ranking officials at NASA headquarters and the headquarters of the US Food and Drug Administration (FDA). Her research focuses on designing and implementing original concepts for biological and aerospace systems, including creating a signal-routing algorithm that challenged and demonstrated superior performance to NASA's "gold standard" bundle protocol approach for disruption-prone satellite networks in deep space (for which she won a "Best Paper" award at the 16th International Conference on Space Operations) as well as developing scientific and legal critiques of international planetary protection strategy and policy, which she was invited to present and discuss with an audience of international space agency department heads and senior academics at the 2022 International Astronautical Congress in Paris, France. With a goal of making science and engineering more accessible and welcoming to all, Caitlyn also volunteers her time advocating for greater access to advanced educational programs in her home state of Maryland and improvements in leadership developments pathways across the global systems engineering community.

www.incose.org/cleveland