The NorthCoast Interfacer

President's Corner

Who's on first, What's on second and I Don't Know is on third. That is a classic Abbott and Costello comedy routine about baseball. If you've never seen it, I'm sure it can be found on YouTube. Major League baseball, which is in full swing right now (pun intended), is a team sport. I was thinking about how our chapter is a lot like a baseball organization.

There are a few chapter members who are selected to fill certain roles in the field, but all of the members, still sitting on the bench are important. Their support of those "on the field" are needed and they need to be ready to fill a position in the field, should it be needed. And just like baseball players always need to practice and learn, so do systems engineers. Chapter meetings and other events provide the opportunity for members to practice and learn, so that they can "up their game." As just like baseball has scout who go out to find new talent, we need chapter members to scout and invite others to join the team.

In this newsletter you will find information on learning opportunities and opportunities to get on the "field," along with recaps of past "games."

I challenge each of you to stay curious and participate in our chapter meetings, events and activities, invite colleagues to attend with you, and encourage them to join INCOSE.

As usual, if you have any suggestions for chapter meeting topics, event, or activities, feel free to reach out to us.

- Dennis Rohn
2024 C-NO Chapter President

June Chapter Meeting – C-NO Café #3

Join us for the June 2024 INCOSE Cleveland-Northern Ohio (C-NO) Chapter Meeting, on June 10, 2024, starting at 6:00 pm. This month's meeting will be held as a hybrid meeting with in-person attendance at the Cuyahoga County Library - North Olmsted Branch, in the Small Meeting Room. Join us for a great opportunity to network with fellow systems engineering enthusiasts and learn from one another. This is the third in our series of discussions focused on systems engineer processes as defined in the INCOSE Systems Engineering Handbook.

This month we will concentrate on the architecture process and are fortunate to have Caitlyn Singam, who contributed to that section of the Systems Engineering Book of Knowledge (SEBoK). She 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. See her full bio in the meeting announcement/flyer.

Don't miss out on this chance to expand your knowledge, share your experiences, and ask questions of like-minded professionals.

Pizza will be provided starting around 5:30 PM for those in person. For those attending virtually, connection information for a Microsoft Teams meeting will be sent via email as part of registration confirmation. Registration is through Eventbrite at:

https://www.eventbrite.com/e/incose-cleveland-northern-ohio-chapter-june-2024-meeting-tickets-915482371417

We look forward to seeing you there.

We would like to grow attendance at our meetings. Most meetings are free and open to anyone with an interest in systems engineering. Consider inviting a colleague to join you and pass meeting information along to anyone else in your organization who may be interested. Typically, there will be a flyer posted on our webpage with the meeting information. Feel free to download it and post it near your office.

Future chapter meetings are planned for the second Monday of every month, unless there is some conflict or scheduling issue. The July meeting will be Monday, July 8. 2024. The in-person location will be near Columbus, at a library in Hilliard, OH. We are thinking of holding the August meeting at noontime, as an all-virtual event. Watch fore details for both of these.

Girls Take Flight – April 13, 2024

Girls Take Flight is the annual science, technology, engineering, and math (STEM) education event for Brownies and Junior Girl Scouts (1st through 5th grade). It has been held at Case Western Reserve University (CWRU) each year as a result of a partnership between CWRU, NASA Glenn Research Center (GRC), and the Girl Scouts of North East Ohio (GSNEO) that began in 2009. Each year, volunteers from NASA GRC, CWRU, and local engineering, education, and aviation organizations serve between 75 and 250 Girl Scouts with hands-on projects, experiments,

Dennis Rohn and Carl Dister at the event

and demonstrations to inspire a love of science and engineering.

This year, the Cleveland-Northern Ohio Chapter Board of Directors decided to make this event part of our Systems, Science, Technology, Engineering, Arts, and Math (SySTEAM) outreach. Dennis Rohn, Carl Dister, and Amber Waid volunteered at the event, which was held on the afternoon of Saturday, April 13th.

INCOSE Cleveland-Northern Ohio Chapter volunteers walked Girl Scouts through the engineering process while the Scouts built bridges from paper in hopes of holding the most weight (in the form of pennies) as possible.

- Amber Waid

NASA Holds Systems Engineering Workshop

During the week of May 6th, the NASA John H. Glenn Research Center (GRC) hosted the annual Agency Systems Engineering workshop in downtown Cleveland, Ohio. NASA hosted over 200 in person and many virtual systems engineering professionals from across the Agency for 3 days to share their knowledge and to build professional connections. Each day, the participants were engaged by a series of presentations, panel discussions, and exercises intended to engage the participants with emerging trends in systems engineering, as well as share experiences from both NASA and industry.

Topics included discussion on early career empowerment to the changing SE environment due to increasing complexity and continued adoption of digital tools. The application of SE in the aerospace industry was discussed during a panel discussion with representatives from Boeing, Airbus, and Northrup Grumman and it was gratifying to see that industry was all in with SE. The discussion of MBSE and its increased use was presented with a presentation on the update to the standard MBSE model used by NASA as well as a topic on how to build advocacy for MBSE implementation.
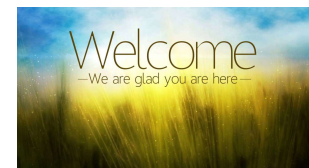
Perhaps one of the most interesting areas was seeing how artificial intelligence (AI) was emerging as a very powerful tool for SE with demonstrations of ChatGPT along with some NASA-exclusive AI tools building off the commercial technology. All in all, it was a very successful workshop.

- Joel Knapp and Amber Waid

Welcome to New Chapter Members

Welcome to new Chapter members since our last Newsletter! The Board of Directors hopes the Chapter can aid you in your professional development and looks forward to getting to know you.

- Todd Harless
- Andrew Hillier
- Trevor Youngman

To all members, I would encourage you to invite co-workers and other systems engineers you know to join INCOSE and become active in the Chapter.

- Dennis Rohn
Cleveland-Northern Ohio Chapter Membership Chair

INCOSE 2024 International Symposium

The INCOSE symposium has a rich history that dates back to 1991, and has continued uninterrupted every year to the present. INCOSE's Annual International Symposium is the largest worldwide annual gathering of people who do systems engineering. The program attracts an international mix of professionals at all levels, and includes practitioners in government and industry, as well as educators and researchers. The benefits of attending the Symposium include the opportunity to share ideas, network, build competency, pursue certification, contribute to the advancement of the profession through collaboration on tools, processes and methodologies, learn about new offerings in training and education, and forge new partnerships.

The 2024 International Symposium will be held July 2 to 6, 2024 in Dublin, Ireland. A full and exciting program is planned for the first four days, followed by a day of tutorials. If you can't make it to Dublin, a virtual option is also available.

The INCOSE Systems Engineering Journal

One of the INCOSE member benefits, is the opportunity to read articles in the INCOSE Systems Engineering Journal. It is an international scholarly journal and a primary source of multidisciplinary information for the systems engineering and management of products and services, and processes of all types. The issues can be accessed via: https://incose.onlinelibrary.wiley.com/toc/15206858/2024/27/3, after logging in to the INCOSE domain.

The following articles can be found in the May 2024 issue.

- REGULAR ARTICLES
  - Early stakeholder modeling and analysis: New mobility services (Product Service Systems of Systems)
  - A team-centric metric framework for testing and evaluation of human-machine teams
  - Model-based systems engineering approach to the study of electromagnetic interference and compatibility in wireless powered microelectromechanical systems
  - Engineering systems analysis of mobility in Odawara city: New transportation services impacts on community engagement
  - A reliability evaluation method for complex systems based on the editable GSPN and adaptive Monte Carlo simulation
  - Impact of computer users on cyber defense strategies

- o A comparative experiment between textual requirements and model-based requirements on proxies for contractual safety
  - o Enterprise architecture contribution in distributed agile software development
  - o How to early integrate operational diagnosis objectives in model-driven engineering processes: A methodological proposal based on fault and behavior trees
- REVIEW ARTICLE
  - o A survey and analysis of drone detection systems using a systems approach superposed on scenarios

Volunteer Opportunities

In the last two newsletters, we mentioned that there are opportunities for individuals to get involved with the Chapter. Some of those opportunities can be one-time efforts, or on-going small efforts. Some examples include: coordinating a chapter meeting location, coordinating food for a chapter meeting, preparing this newsletter, writing an article for this newsletter, leading a discussion at a chapter meeting. There are many more.

There are four needs to highlight here:

1. The Chapter Bylaws require a review periodically to see if any updates are needed. This is the year for that review, which will begin in mid-July. Amber Waid, Chapter Vice-President will be leading the review, but additional chapter members are needed to be part of the team. If interested in helping in this important activity, please contact Dennis Rohn and Amber Waid.
2. Later this summer a Nominations and Elections Committee will be established to run the election process for 2025 Chapter officers. One member has typically taken this on, but it would be good to had additional helpers.
3. In September, that Nominations and Elections Committee will be looking to put a slate of officers together for 2025. Please consider filling one of these vital roles. Information on the roles can be found in the Bylaws and Operating Plan, or by contacting Dennis Rohn. Watch for a call from the Nominations and Elections Committee in September.
4. Just as important, are other non-elected positions in 2025. We have been without a Program Chair and a Communications Chair in 2024 and would be good to fill these in 2025. It is also time to start thinking about identifying an assistant webmaster, who could take over in the future.

The Board would welcome anyone interested in giving a hand. Contact us if interested. As the idiom goes, many hands make light work.

Associated Groups

As has been mentioned, the Chapter is an Affiliate Member of the Cleveland Engineering Society. They have an event coming up later this month that may be of interest. On June 20, as part of their Leadership Breakfast Series, they will have guest speakers Carol Thaler and Trisha Brown,

Biomimicry Specialists with Great Lakes Biomimicry, who will talk on Biology's R&D: Enhance Your Sustainability Strategy. For more information, see:

https://www.cesnet.org/events-2-1/leadership-breakfast-series-great-lakes-biomimicry

The Chapter is also looking to strengthen a connection with the Project Management Institute Northeast Ohio so we will be trying to pass along information on their events. In the evening, on July 17, they have a program entitled Artificial Intelligence (Ai) & Human Factors. For more information, see: https://pmineo.org/calendar?eventId=38731. They also have other events listed on their website.

Welcome Center Cafes

Do you ever wish you knew a little bit more about INCOSE? Whether you are a new member or have been a member for several years, you might want to check out the New Member Welcome Center Cafes. This is a program with a new featured topic each month to introduce our new members to various communities, initiatives, and individuals that make INCOSE thrive.

Details can be found at: https://www.incose.org/engage-with-incose/new-member-welcome-center. If you want to see past cafes, they can be found in the New Member Welcome Center Cafe Archive (https://www.incose.org/engage-with-incose/new-member-welcome-center/new-member-welcome-cafe-archive).

Like us on Facebook

If you are on Facebook, search for Cleveland-Northern Ohio INCOSE Chapter and "like" us.

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Vice-President:
Amber Waid

Secretary:
Sam Ciccone

Treasurer:
Brian Hallett

At-Large Directors:
Anna Sanford
Joel Knapp