The NorthCoast Interfacer

President's Corner

I was recently reading an article published in *The Bent*, titled *What I Wish I had Known When I Graduated from College*. [1] In it, the author shares her insights gathered over the years of her career. All of those insights were good, but a couple resonated with me and are consistent with some of what I have shared in my past articles.

The first one listed, the most critical in her opinion, was **Communication Skills**. "The wise individual will then take every opportunity presented – and make more as necessary – to improve their writing, speaking, and listening skills." This Chapter would be a great place to practice and improve those skills. You could help with this newsletter or write articles for it, work on a chapter committee, and even present at a chapter meeting or student outreach.

Networking was listed as another item. As a systems engineer, what better than to network with other systems engineers, both in the chapter and within INCOSE. This can be at Chapter meetings, participating in INCOSE working groups, interacting with the leaders of other Americas Sector Chapters, and attending an International Workshop or International Symposium.

The third one I would like to highlight is **Continue to Learn**. In my August article, I discussed opportunities for that on-going learning, not only to increase your knowledge, but to also recharge your systems engineering batteries. The opportunities I had listed were chapter meetings, INCOSE workshops, symposia, webinars, and the new INCOSE Professional Development Portal. Participating in an INCOSE Working Group can also provide a learning opportunity.

Take advantage of the opportunities provided by INCOSE and this Chapter to improve your communication skills, network, and continue to learn. Yes, it may take some effort and a little time, but that's what it takes to improve at anything. 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

[1] Tietjen, J. 2004, "What I Wish I had Known When I Graduated from College", *The Bent of Tau Beta Pi*, Vol. CXV No. 4, Fall 2004, page 6

Chapter Meeting Recap– C-NO Café #6

Our September Chapter meeting was led by Dennis Rohn, who led us through a discussion of the transition, configuration management, and data management processes. We had five members in-person in addition to two on-line.

It was decided to skip an October meeting. Our next Chapter event is a membership event and chapter social. See information below and watch for an Eventbrite email regarding it.

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.

- Kagabo Wilson

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

C-NO Membership Event

Please join your fellow INCOSE members for an evening of fun and free food at Topgolf! The event begins at 6 PM on November 11, 2024 at Topgolf in Independence, Ohio. Appetizers* and 2.5 hours of golf will be provided by the INCOSE Cleveland-Northern Ohio Chapter. Guests are always welcome! Consider inviting your systems engineering colleagues.

Be on the look-out for an Eventbrite invitation and RSVP by November 1st to secure your spot!

*Additional food and beverages will be available for purchase

INCOSE 2025 International Workshop and 2025 International Symposium

INCOSE conducts two major event every year, the International Workshop and the International Symposium.

The 2025 International Workshop is scheduled for February 1-4, 2025 in Seville, Spain. More details can be found at the website (https://www.incose.org/IW2025) as they become available. The Workshop centers around technical working groups and other business meetings.

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. While the International Workshop tends to be working meetings, the International Symposium is focused on presentations of papers. The call for papers comes out in the fall and papers are due around the end of the year. One way to get involved if you don't want to write a paper, is to become a paper reviewer. They are always looking for more reviewers, and it doesn't require attending the Symposium to be a reviewer. The 2025 International Symposium will be held July 26-31, 2025 in Ottawa, Canada (https://www.incose.org/symp2025).

Virtual options are provided for both, if you cannot attend in person.

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://www.incose.org/inet/member-publications/se-journal, after logging in to the INCOSE domain.

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

- REGULAR ARTICLES
  - PRODEC for human systems integration of increasingly autonomous systems
  - Bacterial chemotaxis control process analysis with SysML
  - Mission-based design of UAVs
  - DTFL-DF: Digital twin architecture powered by federated learning decision forest to mitigate fire accidents in mining industry
  - Bio-inspired human network diagnostics: Ecological modularity and nestedness as quantitative indicators of human engineered network function
  - The evolution of systems engineering as a transdiscipline
  - Using functional decomposition to bridge the design gap between desired emergent multi-agent-system resilience and individual agent design
  - Systematic application of traffic-signal-control system architecture design and selection using model-based systems engineering and Pareto frontier analysis
- REVIEW ARTICLES
  - Requirements engineering in industry 4.0: State of the art and directions to continuous requirements engineering

Several years ago, the idea of systems engineering being transdisciplinary was introduced at one of the INCOSE Symposia or Workshops. The article listed above, *The evolution of systems engineering as a transdiscipline*, "presents a framework for understanding the architecture of SE in the light of how it has, and continues to evolve towards increasing relevance for solving humanity's most pressing problems." [2] The authors of this paper make several good points and describe how systems engineers should be using methods, tools and process to develop elegant solutions. The elegant solution is the goal, not the process or the side artifacts of performing the process, such as a set of requirements. Or another way to say it, is that systems engineers should be engineering the system, not just leading the systems engineering process.

[2] Pennotti M, Brook P, Rousseau D. The evolution of systems engineering as a transdiscipline. Systems Engineering. 2024;27:899–910. https://doi.org/10.1002/sys.21757

Volunteer Opportunities

In past 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.

As mentioned above, elections will be occurring soon for 2025 officers, however there is a need for additional volunteers to serve in other roles. We have been without a Program Chair and a Communications Chair in 2024 and would be good to fill these in 2025. There are also Membership Chair and webmaster roles that members could fill.

The Board would welcome anyone interested in giving a hand, in one of these roles or even a one-time activity. 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 October 17, 2024, as part of their Leadership Breakfast Series, they will have guest speaker, Tadas Bartkus, a senior researcher at the Ohio Aerospace Institute, and as a NASA contractor, who will speak on *Aircraft Icing and NASA's Approach to Understanding It*. For more information, see: https://www.cesnet.org/news-and-events-1. They also have a Multigrids Working Group Inaugural Meeting coming up on October 23, 2024 and their 73rd Annual CES Design & Construction Conference and Trade Show in February 2025

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. They have several events coming up, including: Leading a Global Project: Essential Skills for Leading a Global Team, Building Workstreams for an Effective Project Plan Using Proggio, and PMIxAI - Your Gateway to the Future of AI-driven Project Management. More information can be found on their website: https://pmineo.org/.

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 archives. This is program featured topics each month to introduce our new members to various communities, initiatives, and individuals that make INCOSE thrive and are now available to be replayed.

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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