



The NorthCoast Interfacer



2008, 2017



2009-2013, 2015-2016, 2018-2019



2014

President's Corner

The world has experienced a disruption this past year with COVID-19, with a human, social, and economic impact we have not seen for several generations. It is our hope for some nearing clear skies, but we will likely be dealing with the residual effects of the pandemic for several years to come. However, as with any disruption, new markets emerge and transformation occurs. As an example, we are likely facing a permanent fundamental shift from in-person office work environments to remote telework. The enterprises that move quickly to embrace the newly created positives of disruption are those that thrive in the end.

Troy Peterson gave an excellent presentation at our March Chapter meeting on digital transformation. The topic and discussion captured my attention and prompted me to sign up for a 4-week online short course on digital transformation from the University of Virginia, Darden School of Business. The key takeaway for me from this course is to disrupt yourself, or face the consequences of disruption by others. Disruptions are inevitable; disruptions are not always bad and often good. Throughout history, we have benefited from technology disruptions that have fundamentally changed our way of life in positive ways (combustion engine, electricity, etc.). Big data, computing power, data storage, and interconnectivity are all growing exponentially and driving a technology disruption across the globe never before seen. We now can reimagine how we engage our stakeholders and how we do business with digital technology on our side. In order to maintain viability, our commitment to digital transformation must be exponential as well. As systems engineers, we have a unique opportunity to help lead our respective organizations in digital transformation, with the proper focus on stakeholder needs and the end user experience, process efficiency, and an overall elegant design approach.

I encourage everyone to consider joining one of our INCOSE working groups, such as Digital Engineering Information Exchange, Artificial Intelligence Systems, and Agile Systems and Systems Engineering.

As always, please do not hesitate to reach out to any one of us for with your feedback on how we can better meet your needs as a chapter member.

All the best to you and your family and friends. And, disrupt yourself.

- Tim Schuler

C-NO President

WANTED: Great Ideas for Upcoming Chapter Meeting Topics



We are always looking for topics and presenters of interest for future chapter meetings. Perhaps **you** have an idea for a particular topic and would like to present it or lead a panel discussion at an upcoming meeting? Maybe you have an idea for a tutorial you'd like to share, or for a seminar or workshop that you think might be beneficial to the membership?

Please feel free to contact Marian Cronin at marian.f.cronin@nasa.gov or 216-433-2660 with your ideas!

Welcome to New Chapter Members

Welcome to our new members from February and March! The Board of Directors hopes the Chapter can aid you in your professional development, and looks forward to getting to know you.

- Alyssa Bell

-Dennis Rohn

Cleveland-Northern Ohio Chapter Membership Chair

14th Annual INCOSE Americas North-Central and Great Lakes Regional Conference (NC-GLRC14) Recap

The 14th Annual INCOSE North-Central and Great Lakes Regional Conference (NC-GLRC), which was expanded this year to include a few additional chapters in the north-central North America region was conducted as a virtual conference over nine days in April. There were over 200 registered attendees.



The conference featured a Professional Development Day (PDD) on Friday, April 9, 2021, with presentations, workshops and tutorials spread across Monday, April 12 through Saturday, April 17. The PDD was available to employees of CAB companies free of charge. Most sessions were recorded and are available to full conference registrants through May 17.

One new feature this year was a Student Career Fair. Companies could purchase a booth for recruiting purposes and students could visit the booths, upload resumes and schedule live sessions with the companies.

There are plans to conduct an in-person conference in the October 2021 timeframe in Detroit. Watch for details.

INCOSE International Symposium 2021

You likely saw in a message from the INCOSE President that a decision was made to conduct the 2021 International Symposium (IS) as an entirely virtual event. This follows on with the success of the 2020 IS, which was the first entirely virtually IS. The



live programming will occur from 08:00-17:00 EDT. Saturday and Sunday, July 17-18, will feature tutorials, and Plenary sessions and paper presentations will begin on Monday, July 19. Like last year, the registration fees are significantly less than for past in-person International Symposiums. Registration and preliminary program are available on the IS2021 website: <https://www.incose.org/symp2021/home>. Consider participating in this excellent opportunity to hear about efforts and new trends in the systems engineering community.

SAE International EDGE Research Report Opportunity

The following is being passed along from INCOSE TechOps through our Sector Director:

SAE International has approached INCOSE to see if we would be interested in working with them to create at least one SAE EDGE Research Reports. Each report is designed to identify unsettled critical issues and stimulate further discussion and research toward necessary frameworks, practices, and protocols related to the mobility industry.

More information about existing EDGE reports can be found here: <https://www.sae.org/publications/edge-research-reports>, including links to download the reports. Please note that each report costs \$120 to purchase (\$108 if you are an SAE member).

The list of topics gives a view of the scope of the areas of technology and domain that SAE is interested in for future EDGE Research Reports. For this opportunity, they must relate to the mobility industry, specifically aerospace, on-road ground vehicles (automobile, truck and bus), and off-road ground vehicles (construction and agricultural).

The report would be available on the SAE International site, and INCOSE will provide a link to the SAE site and advertise the EDGE report in the INCOSE store.

This is an opportunity for an INCOSE Working Group or Chapter (or an individual or team) to propose a topic for an SAE EDGE Research Report, and then receive funding from SAE International to produce it according to its template. SAE International is looking to publish EDGE reports initiated in 2021 by the first quarter of 2022. All final editing and publication will be managed by SAE International; the author team submits the manuscript of the report.

An example of an EDGE Research Report can be made available to help understand the scope of the task and the style of the content.

If you are interested in creating an SAE International EDGE report, please inform Andy Pickard, Andrew.C.Pickard@rolls-royce.com, who is the INCOSE Point of Contact with SAE International.

Upcoming INCOSE Related Events

The list below provides a sampling of upcoming webinars and events that may be of interest to INCOSE members. Now that most chapters are holding virtual events, it is easy to join if a topic is of interest. Many are listed on the INCOSE Events Page: <https://www.incose.org/events-and-news/events>, in addition to the Systems Exchange Cafés.

- July 17-22, 2021 – Annual INCOSE International Symposium (IS 2021) (Virtual)
<https://www.incose.org/symp2021>
- September 17-19, 2021 – 2021 Western States Regional Conference (San Diego, CA)
<https://www.incose.org/wsrc/wsrc2021/home>
- October 4-7, 2021 – NDIA Systems and Mission Engineering Conference (Orlando, FL)
- October 4-7, 2021 – 3 2nd Aerospace Testing Seminar (virtual)
<https://web.cvent.com/event/4b27ecb0-7295-41ce-b882-6e3f78a16951/summary>
- October 5-12, 2021 – 7th Annual Systems Engineering in Healthcare Conference (Minneapolis, MN)
<https://www.incose.org/hwg-conference/>

Webinars (various dates and times – ET shown)

- Aerospace Corporation Systems Engineering Forum
<https://web.cvent.com/event/3edc0c45-0b77-416a-9bc7-9ffc1b1c0bb6/websitePage:234cac89-c2c2-4805-a879-7af49a83d1b8>

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| 5/11/2021 | 8:00 AM | Model Portfolio Management (MPM) Guide |
| 6/15/2021 | 8:00 AM | Integrated Digital Engineering Prototyping Testbed Hub (InDEPTH) Overview |
| 7/20/2021 | 8:00 AM | Designing for Principles (DfP) |
| 9/14/2021 | 8:00 AM | Model Based Mission Assurance and Flight Worthiness (MBMA & FW) |

- Digital Twin Consortium

<https://www.digitaltwinconsortium.org/webinars.htm>

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| 5/6/2021 | 11:00 AM | Open Collaboration to Drive Digital Twin Adoption |
| 5/19/2021 | 11:00 AM | Digital Twins optimizing manufacturing supply chain - a use case with Michelin |
| 5/26/2021 | 11:00 AM | Digital Twins for Predictive Earth Modeling |

- INCOSE Systems Exchange Cafés (check time conversions)

<https://www.incose.org/about-incose/community/virtual-cafe>

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| Fir | Every Other Tuesday | 7:00 PM |
| Oak | Every Other Wednesday | 3:00 AM |
| Maple | Every Other Friday | 11:00 AM |

- PHOENIX Integration Virtual Events covering Multi-Disciplinary Analysis & Optimization (MDAO), Model Based Systems Engineering (MBSE), and Digital Mission Engineering (DME)

<https://www.phoenix-int.com/model-based-engineering-enabling-the-vision/>

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| 5/4/2021 | 1:00 PM | MDAO Best Practices |
| 5/5/2021 | 2:00 PM | Digital Engineering Basics: Product Model Trade Studies (Part 2) |
| 5/13/2021 | 1:00 PM | MBSE TBD (Northrop Grumman) |
| 5/18/2021 | 1:00 PM | Design Space Visualization: Visually gaining design insight |
| 5/26/2021 | 2:00 PM | Digital Engineering Basics: MBSE to Wire Harness Design (Part 3) |
| 6/10/2021 | 1:00 PM | Introduction to MBSE: Systems Modeling Expressing Design Intent With Rigor |
| 6/15/2021 | 1:00 PM | Probabilistic Analysis – Taking into Account Uncertainties |
| 7/8/2021 | 1:00 PM | Connecting ModelCenter Workflows to the systems model |
| 7/15/2021 | 1:00 PM | MBSE TBD (Aerojet) |
| 7/22/2021 | 1:00 PM | Design Space Exploration of a High-Altitude Aerial Platform “Mothership” |
| 7/27/2021 | 11:00 AM | Using ModelCenter® Explore for ADAS validation |
| 8/4/2021 | 1:00 PM | MBSE TBD (Northrop Grumman) |
| 8/19/2021 | 1:00 PM | MBSE TBD (Northrop Grumman) |
| 9/1/2021 | 1:00 PM | Requirement Validation and Trade studies from System Model |
| 9/18/2021 | 1:00 PM | Digital Mission Engineering (SecDef) |
| 9/21/2021 | 6:00 PM | MBSE Automotive - Honda |
| 10/5/2021 | 1:00 PM | MBSE TBD (Northrop Grumman) |
| 10/14/2021 | 1:00 PM | Digital Mission Engineering (AGI) |
| 10/19/2021 | 1:00 PM | Hooking Up and Calling Analysis from a Behavioral Diagram |
| 10/26/2021 | 1:00 PM | Digital Mission Engineering (Parsons) |
| 11/16/2021 | 1:00 PM | Digital Mission Engineering (SAIC) |

- Systems Engineering Research Center

<https://sercuarc.org/serc-talks/>

-Dennis Rohn

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



2021 Chapter Officers:

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Dennis Rohn

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At-Large Director:

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