INCOSE - NORTH TEXAS CHAPTER

Newsletter

INCOSE North Texas Chapter is here to serve the North Texas Community and surrounding areas, including parts of Oklahoma. Whether you live here or just like the chapter, all are welcome to join us.

North Texas Chapter
The Lone Star State

Chapter News

May 2025

We are looking forward to meeting you in person at

INCOSE North Texas Chapter at the MBSE Cyber Systems Symposium 2025

It was great seeing everyone at the conference. I hope it was informative for all.

Lockheed Martin F35 Factory Tour & Social Event

Join us for our Tour and Social Event on Monday, June 23, 2025!! Spots are limited, so be sure to register by the deadline.

Details are listed below:

Tour Event

- **Tour & Social Event Date:** Monday, June 23, 2025
- **Time:** 6:00 p.m. -7:00 p.m.
- **Address:** 1 Lockheed Blvd, Fort Worth, TX 76108
- **Limitations**: 20 people
- **Age & Restrictions:** Anyone of any age but 18+ will need to bring an ID. Must be US Citizens
- ***If you are interested, contact Dawn Handley who will need more information to submit a visit request:** dawn.handley@lmco.com*
- **Last Date to Register:** June 9, 2025

Social Event:

- **Social Event:** Woodshed Smokehouse
- **Time:** 7:30 p.m. - 9:30 p.m.
- **Address:** 3201 Riverfront Drive, Fort Worth, TX 76017

SEP Prep Classes

- Host: Long.s.dong@lmco.com
- Course Start Date: June 18th
- Course End Date: August 27th
- 19 Sessions
- Tuesday/Wednesday, 11-12 Central
-

SMU Paper Exam (Sep/Oct timeframe)

SMU Campus located at 6251 Airline Rd, Building Junkins, Dallas, TX 75205

- Test Date 1: September 20
- Test Date 2: October 18

PAPER Exam will be paid for by INCOSE NTX

Do you like Free Stuff?

Each month's chapter meeting attendance record will be used to create drawing entries. At the end of each quarter a drawing will be held for INCOSE swag from the [INCOSE Merchandise Store](#), value up to $35 dollars. Join the monthly meetings get entries, up to 3 entries per quarter.

Presenting at a conference this year? Let us know

Email ntxinfo@incose.net with where you are presenting and what your topic is. If you are passionate about it, let us know if you would like to present it at a chapter meeting.

Thank you to everyone who responded to the Spring Chapter Survey! It really helps us to make this the best chapter.

Guest Article:

New this month, article from guest contributor Dr. Carla Sayan

Agentic AI in Systems Engineering: Architecting the Future with INCOSE North TX

Engineering is undergoing a profound transformation, particularly within INCOSE, where systems engineers gather to advance the future of the discipline. While foundational principles—stakeholder alignment, traceability, and lifecycle thinking—remain central, a new force is redefining engineering workflows: agentic artificial intelligence (AI). In 2025, we are witnessing the emergence of what is being recognized as the "year of the agent". An agent is a system that integrates a large language model (LLM), a knowledge base, and a suite of tools to deliver intelligent, context-aware outputs. These agents actively manage the selection and execution of tools to deliver intelligent, context-aware outputs. AI is now a real-time collaborator, particularly within the demanding domain of requirements engineering, where precision must coexist with constant change.

Consider a Chief Engineer, leading a team on a complex defense system. One year after the Preliminary Design Review (PDR), the team is contending with evolving stakeholder needs, new compliance directives, and a surge in System Change Requests (SCRs). Traditional methods—manual updates in DOORS and static traceability matrices—are no longer sufficient. To address this, the Chief engineer integrates a Requirements Agent powered by Retrieval-Augmented Generation (RAG). In this AI-augmented workflow, the day begins with a system capable of ingesting structured design documents, CAD exports, and unstructured meeting notes. The Requirements Agent operates in two phases. First, a semantic retriever contextualizes the engineering problem by querying a curated knowledge base—drawing from historical requirements, SCRs, and regulatory documents. Then, a large language model, fine-tuned on authoritative sources like ISO/IEC/IEEE 29148:2018 and the INCOSE SE Handbook, generates candidate requirements aligned with both compliance and design intent. Unlike conventional NLP systems, RAG retrieves externally verified content before generating any output, ensuring requirements are evidence-based traceable verifiable, and defensible.

For example, envision a propulsion system redesign. The Requirements Agent pulls performance data from similar systems and drafts updated requirements. If discrepancies from established standards are detected, the agent notifies engineers—enabling early risk identification. Midway through the day, a change request modifies thermal subsystem parameters. Instantly, the Requirements Agent launches an impact analysis, tracing dependencies, highlighting inconsistencies, and recommending updated linkages. Rather than requiring manual edits, the agent is envisioned to synchronize with the MBSE environment via APIs, updating SysML diagrams and verification plans —though this capability is not yet standard practice. It points to the direction future workflows are headed.

The autonomy of the Requirements Agent is contingent on the use case and user preferences. While capable of semi-autonomous operation—synthesizing data, ensuring traceability, and supporting decision-making—human oversight is necessary in mission-critical contexts. Engineers validate AI reasoning, ensure compliance, and maintain mission alignment. This is not full automation but targeted augmentation.

The INCOSE North Texas Chapter is actively engaging the community for feedback and inviting expert speakers to contribute to this ongoing dialogue. To support your education in AI and ML we've identified the following key resources:

- **Book**: *AI-assisted Model-Based Systems Engineering (MBSE) with SysML* by Brian Moberley, Doug Rosenberg, and Tim Weilkiens.
- **Course**: Applications of Generative AI with LLM in Aviation and Aerospace by Barclay Brown.
- **Course**: **Generative AI Online Course MIT** (*MIT Professional Education*)
- **Course:** IBM Generative AI Engineering Professional Certificate (*Coursera*)
- **Course**: **Applied Generative AI Certificate Program** (*Johns Hopkins University*)
- **Speaker sessions** featuring INCOSE members currently enrolled in Generative AI programs offering firsthand insights from those actively engaged in these cutting-edge courses.

Join us in shaping the future of AI-assisted systems engineering by exploring these resources and contributing to this transformative conversation.

Author's Note: Carla Sayan, Ph.D. a Certified Systems Engineering Professional (CSEP) through INCOSE and Certified Architect at RTX, serves as the Digital Transformation Lead for the F135 Engine Core Upgrade at Pratt & Whitney. She earned her B.S. from the University of Texas at Arlington and both her M.S. and Ph.D. from the University of Arizona. She is based in the North Texas Region.

Join Us for this months Chapter Meeting!

Chapter Meeting May 13, 2025 5:30-7pm CST

Join us online: [INCOSE NORTH TEXAS CHAPTER MEETING](#)

This Month's Presentation

Presenter: Marco Forlingieri

Topic: MBPLE: The Feature-Based Path to Product Lines Success

Abstract: Join us for the presentation as Marco presents a clear and concise guide to MBPLE, with industrial case studies described in his book. Model-Based Product Line Engineering (MBPLE) is the only theoretical and practical foundational book on MBPLE that brings together the topics of model-based systems engineering (MBSE) and feature-based product line engineering (PLE). It examines how PLE can benefit from a model-based and model-centric approach and, in turn, how MBSE combined with holistic PLE can boost model reuse and improve the MBSE business case.

The book combines both management and engineering aspects to deliver comprehensive coverage of the subject and real-life challenges and implementations of MBPLE, discussing adoption obstacles faced by engineering organizations and how to overcome them to ensure a successful MBPLE deployment.

Bio: Marco Forlingieri is Senior Director for PLE Services at PTC, leading worldwide the PLE technical services, with several years of experience in PLE and MBSE domains across Asia, Europe and US. He is also chair of the INCOSE PLE International Working Group and leading author of the book "MBPLE: The Feature-Based Path to Product Lines Success".

Next Month's Presentation

Join us in June for our next speaker: Dr Long Dong

Topic: SEP Prep

Abstract: Introduction to the SEP Prep Course that kicks off in June. Join the exam prep course to prepare for the September and October course offerings. Can't make the paper exams, the prep course also prepares you for the online exam option.

Meeting June 10, 2025, 5:30-7:00pm

- CHECK US OUT ON LINKEDIN! Join the [INCOSE- North Texas Regional Chapter](#) LinkedIn Group. Stay up to date on chapter events, opportunities and the Systems Engineering world.

- Potential NTX Chapter member presenters

Chapter members, we are looking for interested individuals to speak to the NTX chapter in 2024. If you are interested, please email us at ntxinfo@incose.net to express your interest and we will provide you all available dates (no worries, you will have ample time to prepare). This opportunity can get you PDU points toward your INCOSE certification and help the NTX Chapter achieve Platinum Circle status!

WELCOME NEW and RENEWED MEMBERS

Family Name	First Name	Company
Allen	Angela	Lockheed Martin Corporation
Frazier	Cherie	
Freeman	Ernest	Collins Aerospace
Irwin	Jess	Raytheon Technologies

INCOSE Membership Autorenewal

NTX Team, there is a great opportunity to auto-Renew your INCOSE membership. If you are interested, navigate to the INCOSE.org page in the Profile Home section, select in the Membership tab, below my

membership the is a link that will lead you to your billing information to make a the selection to auto renew your membership.

If you would like to become a member or need to renew your membership, visit the [INCOSE membership page](http://www.incose.org/about/Membership) (http://www.incose.org/about/Membership). After becoming a member, watch for new member emails and join the monthly new member café's.

Congratulations to the newest SEPs in North Texas

- Let us know if you've been certified at ntxinfo@incose.net

Shout out to your community work in North Texas

- Let us know what you are up to - send your community involvement to ntxinfo@incose.net

If you have published an article or plan to give a presentation, we encourage you to share the news. Send a summary of it to Danyel at ntxinfo@incose.net and we will include it in the newsletter.

Upcoming Events

Event	Date
MBPLE: The Feature-Based Path to Product Lines Success Presented by INCOSE Member: Marco Forlingieri	May 13, 2025
Systems Engineering 101 & SEP Prep Course Presented by INCOSE Member: Long Dong	June 10, 2025
Lockheed Martin's F35 Factory Tour and Social Event	June 23, 2025
Requirements Practice Presented by INCOSE Member: Richard Beasley	July 8, 2025
INCOSE IS in Ottawa Canada (Virtual Option)	July 26-31, 2025
System Thinking applied to Higher Education Curriculum Presented by INCOSE Member: Reza Rahdar	August 12, 2025
MBSE Tutorial	August 15, 2025
Metrocon	November 13, 2025

Let us know of anything coming up by sending a note to ntxinfo@incose.net

Ambassadors

If you would like to promote the chapter and host meetings at your facility, contact Seth Sherman at ntxinfo@incose.net to volunteer as an Ambassador and you will be provided with orientation material.

POCs and Locations are:

- Monique Jobe, CAE - Arlington
- Wesley Simon, Lockheed Martin MFC – Grand Prairie
- Justin C' de Baca, Lockheed Martin - Fort Worth
- Joel Collins, Lockheed Martin - Fort Worth
- Leejo George, Collins - Richardson
- Sean Densford, Dassault

Don't see your facility on the list? If you would like to host a meeting, let us know at ntxinfo@incose.net.

Chapter Resources

- **PDU Information:** INCOSE Systems Engineering Professionals (SEPs) should be tracking their professional development activities throughout their certification period. They should keep a log of these activities and additional supporting information in case they are audited. Upon completion of certification or renewal, SEPs should download the latest forms to assist with their next renewal activity.

More information available at: Renewing Certification (incose.org)

- **2035 System Engineering Vision available (free resource!)**

This 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

Available at https://www.incose.org/about-systems-engineering/se-vision-2035

- **The NTX Chapter Yammer site**. - Now called Viva Engage!

Use your member's Incose.buzz email address to access the site. Yammer can be used to have announcements, discussions, ask questions, and conduct basic polls. We welcome you to join us in any of the discussions there. https://www.yammer.com/incose2.onmicrosoft.com/#/threads/inGroup?type=in_group&feedId=62479065088&view=all. A few of you have incose.net accounts while the

majority of our members received incose.buzz accounts. Check your email for the invitation to Yammer with your user name and password. People with incose.net accounts should log into office 365 and then go to Yammer. People with incose.buzz accounts should go straight to Yammer.

- **(Volunteers Needed)** Let us know if you are interested in becoming a NTX Yammer contributor to help promote Yammer by interaction though comments or briefing on INCOSE products. Other items of interest we would like to include are recaps of chapter meetings and op-eds on your experiences with INCOSE. If interested, please contact the Board at ntxinfo@incose.net.

- **Systems Engineering Tools Database (SETDB):**

In collaboration with Project Performance International (PPI), the INCOSE SETDB WG provides the Systems Engineering Tools Database (SETDB) for INCOSE and PPI members and stakeholders to assist with systems engineering tool searching and information collection.

The SETDB Working Group products are available on the SETDB YAMMER site and are available for all INCOSE members. They are not official INCOSE products, they are INCOSE Working Group products.

The SETDB Public Website is available at this link and a link to the SETDB is available on this web page

A SETDB link is also available on the INCOSE Website Landing page, and you can reach it directly at: www.systemsengineeringtools.com

- **INCOSE SEP Certification & Exam info videos!**

INCOSE has posted a series of one minute long videos on their YouTube Channel:

- **Intro to certification**: https://www.incose.org/systems-engineering-certification/
- **Computer Exam Step 1** – schedule the exam: https://youtu.be/9_mivBiwkPo
- **Computer Exam Step 2** -https://youtu.be/L1myzH9vEEk
- **Computer Exam Step 3** - https://youtu.be/0TRmwz-bALs

Board Meeting Minutes

Attendees:

President – Seth Sherman (Present)

President-Elect – Reza Rahdar (Present)

Vice President of Chapter Development – Reza Rahdar (Present)

Vice President of Technical Development – Jennifer Key (Present)

Treasurer – Michelle Maddox (Present)

Director of Information – Danyel Fiet (Not-Present)

Past President – Dawn Handley (Present)

Director at Large – Sarena Gazic (Not-Present)

Director at Large – Jerome Forbes (Present)

Ambassador – Justin C'. de Baca (Present)

Ambassador – Leejo (Not-Present)
Ambassador – Joel Collins (Present)

Minutes from the 6 May 2025 Board Meeting:

Board Meeting:

- (Review big picture schedule)
- Due Soon
  - Survey Results
- Lockheed (Advertise in newsletter, separate email and banner)
  - Tour Date: Monday, June 23
  - Time: 6-7PM
  - Address: 1 Lockheed Blvd, Fort Worth, TX 76108
  - How Many: Limited to 20
  - Who is invited: Anyone of any age but 18+ will need to bring an ID. Must be US Citizens
  - If you are interested, contact Dawn Handley who will need more information to submit a visit request: dawn.handley@lmco.com
  - Last Date to Register: June 9
- Location:
  - Woodshed Smokehouse
  - 3201 Riverfront Dr.
  - FT Worth, TX 76017
  - $1500 (15 people quoted at 31 per person, 465)
    - Vote for event: Yes
- Videos: VIMEO – no resolution - tbd
- Banner/Newsletter (Seth/Danyel) - updated banner
- SEP Prep Course (Long/SMU) and Sep Prep Exam (next month answer) - Seth to run down dates
- Tutorials
  - Follow up with Sean/No-Magic
    - August 15th (9 am – 4 pm)
    - November 14th (9 am – 4 pm)
- IEEE Metrocon (Michelle)
  - Abstract end of July
  - November 13th, 2025
- Not Covered
  - Training Packages for new board members
    - Tech Director
    - Chapter Development
  - By-Laws (Reza)
  - Event with SAE

Feel free to forward this email to others.

Warm Regards,

President – Seth Sherman

President-Elect – Reza Rahdar

Vice President of Chapter Development – Reza Rahdar

Vice President of Technical Development – Jennifer Key

Treasurer – Michelle Maddox

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