

Model Based Systems Engineering

Led by **Matthew Hause**

Thursday-Friday, 10-11 May 2018, 8:00 a.m. – 5:00 p.m.

Workforce Training Center, Albuquerque, NM

Brought to you by the INCOSE Enchantment Chapter, Albuquerque NM

Tutorial: Model Based System Engineering

This tutorial presents an overview of MBSE, its history, goals, and SysML modeling techniques for system engineering activities on a variety of project types and sizes. This will include case studies on best practice, lessons learned and actual ROI from government and industry organizations. It will also have an overview of the Systems Modeling Language (SysML) and Enterprise Modeling. Group exercises will take place after the presentation of each set of concepts to ensure that students understand the concepts. Attendees work in small groups to complete a number of worked examples, providing hands-on experience of applying the techniques and re-enforcing the concepts.

Attendees Will Learn:

- Essential SysML concepts, terminology and notation
- The purpose and use of SysML diagrams
- How SysML diagrams are organized and the relationships between diagrams
- How to create SysML models
- How SysML models can feed into software design
- How Enterprise models can feed into systems design

Participants will receive: Copy of all presentation material; all course exercises and solutions; and document of course completion.

Course Objectives:

- How to build a model and define the underlying systems
- Included will be emphasis on working with requirements
- Provide an understanding of the principles and concepts inherent in SysML

- Describe the structure and content of SysML
- Enable attendees to apply SysML modeling techniques by group exercises

Pre-requisites:

- Experience of systems engineering
- An awareness of visual modeling is useful, but not essential

THE PRESENTER



Matthew Hause is a PTC Engineering Fellow and GTM Technical Specialist, the co-chair of the UPDM group a member of the OMG Architecture Board, and a member of the OMG SysML specification team. He has been developing multi-national complex systems for over 35 years. He started out working in the power systems industry and has been involved in military command and control systems, process control, manufacturing, factory automation, communications, SCADA, distributed control, office automation and many other areas of technical and real-time systems. His roles have varied from project manager to developer. His role at PTC includes mentoring, sales presentations, standards development, presentations at conferences, specification of the UPDM profile and developing and presenting training courses. He has written over 100 technical papers on architectural modeling, project management, systems engineering, model-based engineering, human factors, safety critical systems development, virtual team management, product line engineering, systems of systems, systems and software development with UML, SysML and Architectural Frameworks such as DoDAF and MODAF. He has been a regular presenter at INCOSE, the IEEE, BCS, the IET, the OMG, AIAA, DoD Enterprise Architecture, Embedded Systems Conference and many other conferences. He was recently a keynote speaker at the Model-based Systems Engineering Symposium at the DSTO in Australia. Matthew studied Electrical Engineering at the University of New Mexico and Computer Science at the University of Houston, Texas.

MEETING DETAILS

Time: Registration is 7:30 – 8:00 a.m.;
Tutorial is 8:00 a.m. – 5:00 p.m.

Date: Thursday-Friday, May 10-11, 2018

Place: Room 207, Workforce Training Center (WTC),
5600 Eagle Rock Ave. NE Albuquerque, NM 87113,
<http://www.cnm.edu/depts/wtc/index.html>.

Directions: From Junction of I-40 and I-25 in
Albuquerque take I-25 North to exit 233, Alameda
Boulevard. Take a left and cross the freeway. See
map to left.

Package: The tutorial cost includes **soft-copy
downloadable** tutorial notes, lunches and snacks.

Registration & Payment: Register via EventBrite:
<https://www.eventbrite.com/e/model-based-systems-engineering-tutorial-tickets-43493988691> INCOSE
members: \$250; non-members: \$350; students: \$0.
You will receive an email receipt from EventBrite,
which will act as your confirmation. If you do not
receive a confirmation, have trouble registering or
paying, or to register and pay by check, contact Mary
Compton at mlcompt@sandia.gov.

Contact: Other questions? Contact Ann Hodges at alhodge@sandia.gov

