INCOSE CHICAGOLAND

CHAPTER MEETING - MAY 21, 2026

Using Architecture and MBSE to Develop Validated Requirements

Ron Carson, PhD, ESEP - INCOSE Fellow

Abstract

This presentation addresses how to translate the architecture data in an MBSE database into validated requirements. We review basics regarding "requirements" and "validation", identify several requirements templates, and show, using Vitech CORE, how to validate and map the architecture data into the elements of the several requirements templates. This process was used in Dr. Carson's University of Washington graduate courses in "Systems Architecting and Model-Based Systems Engineering".

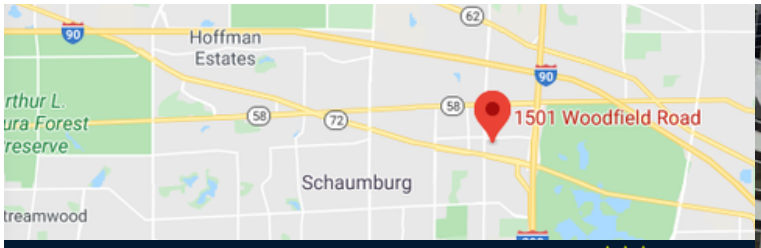
EVENT DETAILS

LOCATION

1501 E. Woodfield Rd.
Suite 300E
Schaumburg, IL 60173
3rd Floor Conference Room
and
Online through **Zoom**

AGENDA

6:00 - 6:30 CT
Networking
6:30 - 7:00 PM CT
Announcements
7:00 - 8:15 PM CT
Feature Presentation and Q&A



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For more information, go to https://incosechicagoland-2026-05.eventbrite.com

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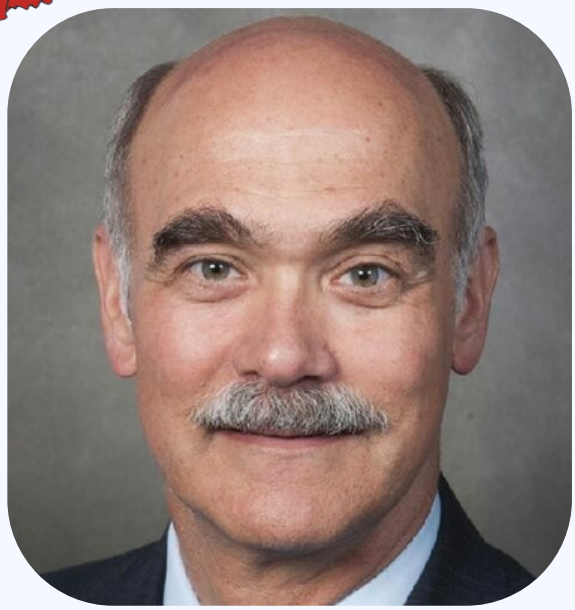

Using Architecture and MBSE to Develop Validated Requirements

About Dr. Ron Carson

Dr. Ron Carson is a Fellow of the International Council on Systems Engineering, a certified Expert Systems Engineering Professional (ESEP®), and he is currently a Course Facilitator for Certification Training International, training experienced and aspiring systems engineers to pass the INCOSE Systems Engineering Professional certification examination. Dr. Carson maintains a YouTube channel, "Ron on Requirements" (https://www.youtube.com/channel/UC8oARCrOZ7_wv5vgEEeTrnw), with presentations of his papers on system requirements analysis, architecting and model-based systems engineering, and systems engineering measurement.

Education: Dr. Carson has a PhD from the University of Washington in Nuclear Engineering (Experimental Plasma Physics), and a BS from the California Institute of Technology in Applied Physics.

Work History: Dr. Carson retired in 2015 as a Technical Fellow in Systems Engineering after 27 years at The Boeing Company, working on commercial airplanes, satellite communications to mobile platforms, and various defense systems. He has been an Adjunct Professor in Engineering at Seattle Pacific University ("System Design"), the University of Washington ("System Architecture and Model-Based Systems Engineering"), and the Missouri University of Science & Technology ("Systems Engineering Management"). He is the author of numerous articles regarding requirements analysis and systems engineering measurement, and is the developer of numerous industry systems engineering training courses. He has been issued six US patents in satellite communications, and two patents regarding "Structured Requirements Generation and Assessment".

For more information, go to https://chicagoland.incose.org/