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**Systems Thinking Workshop: Learning How to Think About  
Systems in a Holistic Manner**

(Friday, 19 June 2015)

Albuquerque, NM

(a) please fill out and email this registration form to [INCOSEEnchantment@comcast.net](mailto:INCOSEEnchantment@comcast.net)

Name: \_\_\_\_\_

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Designate the amount paid:

	<b>INCOSE Member</b>	<b>Non- Member</b>	<b>Student</b>
<b>TUTORIAL: Systems Thinking</b>	\$200	\$250	\$0

(b) Payment Methods:

- Payment by CREDIT CARD: can **only** be accepted via the link at the INCOSE Enchantment web site: [www.incose.org/enchantment](http://www.incose.org/enchantment) - go to the Tutorials page under the Library and Resources home-page tab. Credit card payment will **not** be available at the door.
- Payment by CHECK: mail your check, payable to "INCOSE Enchantment Chapter," with a copy of this registration form to:

Spring 2015 Tutorial  
INCOSE Enchantment Chapter  
P.O. Box 50516  
Albuquerque, NM 87181

TO SUMMARIZE: Please (a) submit this form by email (whether paying by check or credit card) and (b) pay on-line or by check. You will receive an email receipt which will act as your confirmation. If you do not receive a confirmation or have trouble paying, please contact Mary Compton at [mlcompt@sandia.gov](mailto:mlcompt@sandia.gov)

For any other questions, email Ann Hodges at [alhodge@sandia.gov](mailto:alhodge@sandia.gov).

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INCOSE Enchantment web site: [www.incose.org/enchantment](http://www.incose.org/enchantment)

## *Systems Thinking Workshop: Learning to Think About Systems in a Holistic Manner*

Led by **James Martin**

Friday, 19 June 2015, 8:00 a.m. – 5:00 p.m.  
Workforce Training Center, Albuquerque, NM

*Brought to you by the INCOSE Enchantment Chapter, Albuquerque NM*

### **Tutorial: Systems Thinking: Learning How to Think About Systems in a Holistic Manner**

System thinking has been touted as the “Fifth Discipline” in Peter Senge’s famous book by that name. However, this is usually limited to the use of systems coupling diagrams and system archetypes to help understand the nature of feedback and complex system behavior. You will need more than these tools to fully appreciate how to think clearly about systems in a truly holistic manner. This workshop will teach you some essential principles and concepts of systems and how to use these in a “systemic” fashion to improve your ability to think about systems in a holistic manner. You will learn about the PICARD Theory and the Seven Samurai Framework. You will see how the Knowledge Pyramid helps you understand how systems convert data into information that is used for the discovery of knowledge to be used in making better decisions. The workshop will let you spend about half of our time together working exercises in your team to fully understand and appreciate these ideas.

**Participants will receive:** a) Instruction: A variety of creative and analytic tools will be introduced. b) Course Notes: Each student will receive a set of course notes for reference. c) Practice: Students will have an opportunity to practice Systems Thinking skills in classroom exercises.

#### ***Learning Objectives:***

- Use various systems thinking frameworks
- Apply systems thinking principles and concepts
- Better see the “whole” solution to complex problems

#### ***Topics:***

1. The Concepts of System and Holism as a Basis for Systems Thinking
2. On the Use of Concepts and Principles for Improving SE Practice
3. How to Conceptualize Systems... Using the PICARD Theory

#### ***The course is aimed at:***

- Engineers of all Disciplines
  - Managers
  - Leaders and decision makers
4. Seven Samurai Framework for Holistic Appreciation of the Whole Solution
  5. Using the Knowledge Pyramid as a Framework for Modern Systems

## THE PRESENTER



James Martin is an enterprise architect and systems engineer working for The Aerospace Corporation developing solutions for information systems and space systems. He was a key author on the BKCASE project in development of the SE Body of Knowledge (SEBOK). His main SEBOK contribution was the articles on Enterprise Systems Engineering. Dr. Martin led the working group responsible for developing ANSI/EIA 632, a US national standard that defines the processes for engineering a system. He previously worked for Raytheon Systems Company as a lead systems engineer and architect on airborne and satellite communications networks. He has also worked at AT&T Bell Labs on wireless telecommunications products and underwater fiber optic transmission products. His book, Systems Engineering Guidebook, was published by CRC Press in 1996. Dr. Martin is an INCOSE Fellow and was leader of the Standards Technical Committee. He received from INCOSE the Founders Award for his long and distinguished achievements in the field. He is founder and current leader of the Systems Science Working Group for INCOSE.

## MEETING DETAILS

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

**Date:** Friday, June 19, 2015

**Place:** Room 103, 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 tutorial notes, lunch and snacks.

**Payment:** Please (a) submit the attached form by email and (b) pay by check or on-line (see Tutorials under Library tab at [www.incose.org/enchantment](http://www.incose.org/enchantment)). You will receive an email receipt, which will act as your confirmation. If you do not receive a confirmation or have trouble paying, contact Mary Compton at [mlcompt@sandia.gov](mailto:mlcompt@sandia.gov)

**Contact:** Other questions? Contact Ann Hodges at [alhodge@sandia.gov](mailto:alhodge@sandia.gov).

