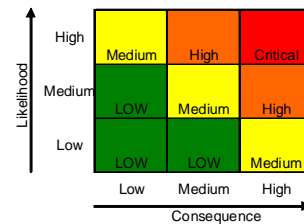


## Risk Management . . . Using Decision Theoretic Approach to Risk Management A Full-Day Tutorial Saturday April 25, 2009

Version 3 of the INCOSE System Engineering Handbook introduces some decision theoretic concepts for decision management, but does not explicitly apply these to management of risk. Since management involves making decisions regarding risks, these concepts provide a useful methodology for managing risk. This tutorial explores methods for making rational decisions in an environment of uncertainty; i.e., one where variability exists but its characteristics are not known. Methods for transforming the environment of uncertainty to an environment of risk (where variability is characterized), expected value, transformation of outcomes to a utility measure, eliciting subjective probability



measures, the value of information, and sensitivity analysis will be presented in the context of managing risk.

### This tutorial will be useful if you:

- Actively perform system engineering,
- Are preparing for the Certified System Engineering Professional examination,
- Work in program/project management,
- Provide input to program schedules,
- Generate cost estimates,
- Prepare or provide input to System Engineering Management Plans,
- Generate risk estimates,
- Prepare or provide input to Risk Management Plans and activities, or
- Participate in or provide support for program decisions.

Location: Jacob's Conference Center  
 Schedule: 7:30 – 8:30 Registration & Continental Breakfast  
 8:30 – 12:00 Part 1  
 12:00 – 12:30 Lunch – **included in tutorial fee**  
 12:30 – 4:30 Part 2

Cost: \$75 to \$195 (see registration form). **Fee includes bound presentation material**

Mail the registration Form on the last page with your check payable to HRC INCOSE, P.O. Box 5696, Huntsville, AL 35814. Reservations will not be confirmed via email after payment is received. You must register by April 10, or pay an additional \$50 late fee at the door (if seating is available).

Attendance is limited. Reservations are on a first come, first serve basis.

## Topics Covered in the Course

- Introduction
- The Risk Management Process
- Decision Structures and Models
- Uncertainty and Subjective Probability
- Utility Measures of Preferences
- Determining the Value of Information
- Handling Conflicting Objectives
- Multi Attribute Outcomes
- Confidence through Sensitivity Analysis

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**Dr. Thomas P. Tytula** received the BS Degree in Aeronautical Engineering, with High Honor, from Auburn University in 1960, the Master of Science in Engineering with Operations Research Major in 1972 and the Ph. D. with Systems Engineering Major in 1978, both from the University of Alabama in Huntsville (UAH). He attended the Massachusetts Institute of Technology in 1968-69 as a Fellow in the Center for Advanced Engineering Studies Systematic Analysis Program. He worked for the Army Missile Command for 33 years, retiring in 1988. After retirement he served as Associate Professor of Industrial and Systems Engineering and member of the graduate faculty at UAH, where he taught Systems Engineering, Statistics, Design and Analysis of Experiments, Industrial Forecasting, Simulation and Product Assurance. He was coordinator for the Systems Engineering curriculum and developed the Product Assurance syllabus. While at UAH Dr. Tytula participated in Dr. W. Edwards Deming's seminars on quality and served as a facilitator at three of those seminars. After leaving UAH in 1995, Dr. Tytula has provided consulting services in Quality, Statistics, and Systems to government agencies and contractors in the Huntsville area. Dr. Tytula served as the first president of the Huntsville, Alabama, Regional Chapter of the International Council on Systems Engineering and has been an active participant in the chapter's activities since its foundation.

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## 25 April 2009 Risk Management Tutorial Registration Form

Name:

Email:

Phone:

Check Applicable:

- I am not a U.S. Citizen (Escort arrangements required)
- Current INCOSE Member
- Employee of Tutorial Sponsor (Jacobs Engineering)
- Full time student

Tutorial attendees:

Current INCOSE Member.....	\$120
Employee of Tutorial Sponsor.....	\$140
Full-Time Student.....	\$ 75
NOT listed above.....	\$195

Required documentation at door

- Membership Card or Number
- Jacobs Badge
- Current ID card

Tutorial Fee enclosed (includes lunch and manual):                   \$ \_\_\_\_\_

Please indicate whether you will attend the HRC-INCOSE March Meeting, for meal and facility planning purposes:                    Yes

Please send completed form and check payable to HRC-INCOSE to:                   HRC-INCOSE  
P.O. Box 5696  
Huntsville, AL 35814

Please address questions to: Chris DeRock (256-289-1412) or [chris.derock@incose.org](mailto:chris.derock@incose.org)

*Jacobs Conference Center  
Location & Parking*

1500 Perimeter Parkway, Suite 100  
Huntsville, AL 35806


Beverly Turner,  
Conference Center  
Coordinator  
(256) 890-6609  
Beverly.Turner@jacobs.com

**PARKING:** Turn right into the 1500 Perimeter parking area; proceed past the turnaround to the south (rear) of the building; conference center parking is the large lot at the south end of the building (closest to the conf center, highlighted in yellow).

**ENTRY:** From the parking lot, enter at the south door to the building & proceed down the hallway to the foyer, then turn right into the suite; or walk around the rear of the building along the pond & enter at the patio entrance, turning left into the suite.

**DRIVING DIRECTIONS:** From *Redstone Arsenal*, drive north on Rideout Rd, exit at US72W toward Athens; turn right at light onto Perimeter Pkwy. **From Airport**, drive East On I-565 toward Huntsville; take Exit 14 to Research Park Blvd; exit at US72W toward Athens; turn right at light onto Perimeter Pkwy.

**JACOBS**  
ESTS Group



**INCOSE Region V  
Huntsville Chapter**

