INCOSE 2003
TUTORIALS FAQ Sheet

What sort of people present Tutorials?

If you have expertise in an interesting facet of engineering, enjoy presenting, teaching and interacting with others on your topic of expertise, we want to hear from you.

If you also know of a potential presenter or can recall a really interesting and perhaps entertaining training/tutorial session that you have attended, send us the presenter's details or encourage them to visit this site and consider submitting a tutorial.

What are the terms and conditions of agreement?

Terms for Instructing an INCOSE 2003 Tutorial:

Full-Day Tutorial:

One Instructor per **full-day Tutorial** will receive the following in exchange for meeting the Tutorial Conditions as outlined below:

$600 US plus $25 US per paid Tutorial registrant up to a maximum of $2,100 US, **and**

Reimbursement for the cost of one night's accommodation.

Half-Day Tutorial:

One Instructor per **half-day Tutorial** will receive the following in exchange for meeting the Tutorial Conditions as outlined below:

$300 US plus $12.50 US per paid Tutorial registrant up to a maximum of $1,050 US, **and**

Reimbursement for the cost of one night's accommodation.

General:

In the event that the instructor cannot accept payment, alternative acceptable reimbursements to an equivalent value may be considered.

Conditions for Instructing an INCOSE 2003 Tutorial:

Currently being drafted and will be handed out at the time of selection notification (Friday, 15th November 2002).

What are some of the topics that have been requested by past attendee's?

The following is a list of requested Tutorial topics suggested by attendee's at past INCOSE symposiums. One of these topics or a collection of these topics may fall within your area of expertise.

Even if you can't find something that directly matches your area of expertise, we're still very interested in any topics that are novel or will challenge current thinking within the many facets of Systems Engineering.

General Systems Engineering Topics

- The case for Systems Engineering - converting the skeptics, convincing management, success factors for introducing.
- Commercial application of the systems approach, specific focus on an industry that has not had a long history of using the systems approach (e.g.: a non aerospace or defense industry).
- Practical tips for solving typical Systems Engineering issues.
- The harmonization of Systems Engineering & Software Engineering - bridging the gap.
- Case studies of project failures and successes - what are the characteristics?
- Overcoming resistance to the introduction of Systems Engineering - changing the culture.
- The System Development Life-cycle (SDLC) - from concept to decommission.
- Systems Engineering for Managers - making systems thinking a part of business objectives.
- Business methods for System Engineering (how to measure Systems Engineering improvements and return on investment)
- Object-oriented systems engineering techniques - use of UML, OOA, OOD etc.
- Modeling and simulation techniques for complex systems
- Introduction to the currently available systems standards (EIA-632, EIA-732, IEEE1220, etc.)
- An introduction to Capability Maturity Models (CMM's), and how they will improve business.
- Systems Engineering techniques for e-business and internet-based systems.
- Bad excuses and the denial of the systems approach - what are the counter arguments?
- Systems Engineering for the IT & Telecommunications industry.
- Patterns in Systems Engineering.
- Rapid application development techniques for software-Intensive system developments.
- Methods of selection, integration and testing of Commercial Off The Shelf (COTS) product to form a system.
- Systems-level analysis techniques – e.g.: Object Oriented, Functional and Data Flow Analysis, UML, etc
- Case studies on engineering and the law - the legal ramifications of poor quality.
- Basic System Engineering Techniques, their usage and limitations.
- Politics and Systems Engineering - how to understand and deal with the imperatives of government business.
- The clash between business and engineering imperatives - who should win, how should they be managed, who's accountable?
- How to create a Systems Engineering Management Plan (SEMP) for your organization.

- Alternative techniques to hierarchical-based specification and development approaches.

Specification & Design

- The difference, relationships and traceability between requirements and design.
- Workshop on requirements writing from user level to solution.
- What are the attributes of good and bad quality requirements.
- How to elicit requirements from the user and transform these into system requirements.
- Use case and scenario techniques for requirements elicitation- e.g.: Co-operative Requirements Engineering With Scenarios (CREWS) initiative.

Verification & Validation

- Planning the integration & test phase of a program.
- Independent verification & validation life-cycle techniques (IV&V).
- Test & evaluation (analysis, metrics)
- Methods of automated testing.

Project Management

- The differences between Project Management and Systems Engineering.
- Project management of software-intensive systems.
- Methods for project managing geographically-displaced development teams working on the one system product.
- How to perform decision, issue and risk management.
- Workshops on project management techniques.
- How to create and manage work breakdown structures and schedules.
- How to evaluate, manage and deliver a tender proposal.

Tools, Processes, Metric Collection

- Evaluation and selection of large CASE tools such as requirements management, configuration management, systems analysis, modeling and simulation tools - how to deal with vendors and "vendor-speak".
- Case studies based on experiences with the introduction of new processes and tools into the organization.
- Understanding the pro's and con's of software based tools - what are the emergent effects of tools when they're introduced into the development environment?
- Process modeling and process management
- How to introduce tools & processes into hostile environments.
- Introduction to the various quality system standards such as IS09001 and the many industry specific variants, such as AS9000, QS9000, TL9000 etc
- How to perform measures of effectiveness.
- How to introduce and manage metric collection and analysis processes
- Software metrics / software project measurement; quality management
- Quality Systems - How to develop, what are the standards other than ISO9001
- Metric collection across all facets of the system life-cycle

What are some of the topics that have been presented in the past?

Here's a list of topics that have been presented at the past four Symposiums.

While we would like to see some new original topics for INCOSE 2003, topics similar to those presented at past Symposiums will be given equal consideration as these are often popular and well received.

2002			
	Title	**Author**	**Duration**
1	Maximizing the Systems Aspect of SE	Brian Mar and Bernard Marais	Full Day
2	Managing Requirements	Ivy Hooks	Full Day
3	Process Modeling in a Systems Engineering Context	Tyson Browning, Ernst Fricke, and Herbert Negele	Full Day
4	Grand Systems Verification	Jeff Grady	Full Day
5	Fault Analysis for Systems Engineers	Ronald Carson	Full Day
6	OT&E: Validating the Users' Need	Michael Harris	Full Day
7	Essential Principals and Processes for Systems Engineering	Richard Harwell	Full Day
8	Requirements & Modeling: A Structured Approach	James Martin and Steven Heidorn	Full Day
9	Applied Statistical Decision Theory for Systems Engineering	Mark Powell	Full Day
10	Knowledge Engineering for Systems Engineering	John Velman	Full Day
11	System Safety for Systems Engineers	Mark Ekman and Paul Werner	Full Day
12	Competitive Systems Engineering: How to Do Systems Engineering in Hot Competition. Detailed Pragmatic and Unconventional Techniques	Thomas Gilb	Full Day
13	Leveraging Six Sigma in Systems Engineering	Jeannine Siviy and M. Lynn Penn	Half Day
14	Making Systems Engineering Intelligent	Jack Ring, Wayne Wymore, and Allen Fairbairn	Half Day
15	Applying Decision Analysis Techniques to Risky Decisions	Michael Whitehorne	Half Day
16	Systems Engineering, Architecting and Business Process Engineering (BPR)	Howard Eisner	Half Day
17	Systems Engineering: What is the Minimum Set?	Derk Bol	Half Day
18	EMC (Electromagnetic Compatibility) – An Inseparable Part of Electronic System Design Program	Eli Recht, Elya Joffe, and Alex Axelrod	Half Day

19	Systems Engineering Fundamentals	Cihan Dagli and Elliot Axelband	Half Day

2001			
	Title	**Author**	**Duration**
1	World Class Systems Engineering	Dr. Jerome Lake	Full Day
2	Process Modelling in a Systems Engineering Context	Dr. Tyson Browning	Full Day
3	Program Management and Systems Engineering	R. C. Zittel	Full Day
4	Decision Making and Risk Management	Dr. Brian Mar and Bernard Morais	Full Day
5	Object Oriented Systems Engineering Method (OOSEM)	Abraham Meilich, Sanford Friedenthal, and Howard Lykins	Full Day
6	Systems Engineering and Agile Enterprise	Jack Ring and Wayne Wymore	Full Day
7	System Evaluation	Wolter Fabrycky	Full Day
8	The Systems Engineering Environment	Leonard Kara and Lori Pajerek	Full Day
9	Practical Systems Measurement	Donald Gantzer and Larry LaBruyere	Half Day
10	Introducing IEEE 1471, Recommended Practice for Architecture Descriptions for Software-Intensive Systems	David Emery	Half Day

2000			
	Title	**Author**	**Duration**
1	How to Hold a Good Requirements Review	Ivy Hooks	Full Day
2	Object Oriented Systems Engineering Method	Sanford Friedenthal +	Full Day
3	Technical Management Using Analytical Evaluation	Eric Honour	Full Day
4	Creativity and Innovation for Systems Engineers	Dr. Arthur J. Cropley +	Full Day
5	Unified Modeling Language - a Systems Engineering Modeling Language with Broad Utility	Michael E. Crow	Full Day
6	World Class Systems Engineering Based on Standards and Guides	Dr. Jerome G. Lake	Full Day
7	Applying the Vee Model: A decade of Awareness, a Future of Implementation	Dr. Kevin Forsberg	Full Day
8	The Fast Track to Systems Engineering	Dr. Rob Collins	Full Day
9	An Introduction to Simulation Based Acquisition	Steve Olsen +	Half Day
10	Practical Systems Measurement	Donald J. Gantzer +	Half Day

11	Model-Based Development for Real-Time and Embedded Systems	Dr. Bruce Powel Douglas	Half Day
12	Process Engineering, Systems Architecting, and Organization Design Using the Design Structure Matrix	Dr. Tyson R. Browning	Half Day
13	Architecting Embedded Systems with Patterns	Dr. Bruce Powel Douglas	Half Day
14	Integrating Process Improvement Using the FAA Integrated Capability Maturity Models	Linda Ibrahim	Half Day
15	System Validation and Verification	Jeff O. Grady	Half Day
16	Using Creativity and Innovation Techniques to Enhance the Requirements Process	Dr. Edward Sim	Half Day
17	APE-233, The Systems Engineering STEP-Based Data Exchange Standard	Dr. Sylvain Barbeau +	Half Day

1999			
	Title	**Author**	**Duration**
1	Writing Good Requirements	Ivy Hooks	Full Day
2	Commercial Systems Engineering	Dr. John Clausing	Full Day
3	Processes for Engineering Systems Based on Standards and Guides	Dr. Jerome Lake	Full Day
4	The Fast Track to Systems Engineering	Dr. Rob Collins	Full Day
5	Doing Trade-off Studies with Multicriterion Decision Making Techniques	Dr. Terry Bahill	Full Day
6	The Everything-else Box - It's Uses and Abuses: A Generic Approach to Any Form of Systems Engineering	Dr. Brian W. Mar +	Full Day
7	Requirements Based Product Family Engineering	Dr. Mike Mannion	Full Day
8	Concept Analysis - Modeling, Technology and Organization Change	Dr. Dave Oliver	Full Day
9	System Validation and Verification	Jeff Grady	Full Day
10	Program Management and Systems Engineering	Prof. Randy Zittel	Full Day
11	Integrated Process Improvement using the FAA Integrated CMM	Dr. Linda Ibrahim	Half Day
12	Performing A Baseline Assessment to Manage Risks Using Risk Matrix	Anne Willhite +	Half Day
13	Coordinating and Facilitating Shared System Development	Derek Hatley	Half Day
14	The Systems Engineering STEP-Based Data Exchange Standard: SEDRES & AP-233: Business & Managerial Overview	Dr. Julian Johnson	Half Day
15	Specifying and Measuring Quality in Use	Dr. Nigel Bevan	Half Day

16	Requirements Driven Management	Tom Gilb	Half Day
17	Basics of the EIA Systems Engineering Capability Model	Kerinia Cusick	Half Day
18	Practical Systems Measurement	Christopher Miller +	Half Day

How do I make a submission?

Get a copy of the Submission Template from the Tutorials web page at http://www.incose.org/symp2003.

The template contains instructions on how to fill out a really great proposal.

Once you have filled out the submission template, it can be faxed or e-mailed to:

Christine Kowalski
Professional Conference Management, Inc (PCMI).
7916 Convoy Court
San Diego, CA 92111 USA
Tel: +1 858-565-9921
Fax: +1 858-565-9954
E-mail: incose@pcmisandiego.com

How will my submission be evaluated?

Your submission will be evaluated by members of the evaluation team which will be comprised of the Symposium Tutorials Chair and Co-Chair and volunteers from the INCOSE Technical Board, Universities and general members of INCOSE.

Evaluation scores shall be collated, and those with the highest scores will be offered an invitation to present.

A group of Tutorials will also be selected and placed on reserve in case we receive a cancellation.

If you're interested in assisting with the evaluation process rather than submitting a proposal, please get in touch with the Tutorials Chair at:

Eric Chukwu
US Marine Corp Systems Command
Tel: +1 703 784-4472
Fax: +1 703 784-4287
E-mail: ChukwuEU@mcsc.usmc.mil

What sort of facilities will the conference supply?

The symposium will provide the following list of facilities for presenters.

- Laptop (See spec below)
  OS- MS Windows XP,
  CD-ROM (non DVD), floppy.
- Computer Projector
- Screen
- Laser Pointer
- Microphone
- Podium

Please note that the American AC power supply is 220 VAC, 60Hz.

What are the key dates for the Tutorial submission process?

Proposals Due:	Monday, 14 October 2002
Selection Notification:	Friday, 15 November 2002
Tutorial Agreements Signed:	Friday, 3 January 2003

What are the presentation times for Half-Day and Full-Day Tutorials?

Half-Day Tutorials - Morning Session:

Start:	8:00 am
Finish:	12:00 pm

Half-Day Tutorials - Afternoon Session:

Start:	1:00 pm
Finish:	5:00 pm

Full-Day Tutorials:

Start:	8:00 am
Finish:	5:00 pm