26th annual **INCOSE**
international symposium

Edinburgh, UK
July 18 - 21, 2016

Call for Papers, Panels & Tutorials

The Annual INCOSE International Symposium is the premier international forum for Systems Engineering. Participants network, share ideas, knowledge and practices, and learn more about the most recent innovations, trends, experiences and issues in Systems Engineering.

The symposium in 2016 will focus on the following theme:

Achieving excellence through Systems Engineering

Within the scope of this theme we are seeking paper, panel/roundtable and tutorial submissions to address the following systems engineering sub-themes:

Delivering Capability using Systems of Systems

Topics in this sub-theme include but are not limited to:

- Enterprise architecture
- Architecture frameworks
- Capability Systems Engineering
- Enterprise Systems Engineering
- Systems Engineering and P3M (Portfolio, Programme and Project Management)
- Developing open systems with off-the-shelf procurement
- Technical governance of systems of systems
- Service-based Systems Engineering
- Challenges in the systems landscape of tomorrow (emergence of the Internet of Things, Cyber-physical systems, Autonomy and Big Data)

Ubiquitous SE

Topics in this sub-theme include but are not limited to:

SE in Society

- SE in STEM Education (Science, Technology, Engineering, Mathematics).
- Systems Thinking outside of engineering
- Sustainable society
- Getting SE into policy

SE Domains

- Aerospace & Defence
- Automotive
- Biomedical
- Construction
- Cyber-physical systems
- Energy
- Infrastructure
- Intelligent cities
- Internet of Things
- Resource Management
- Software
- Transportation

Developing effective systems people

Topics in this sub-theme include but are not limited to:

- # Academic education
- # Professional training
- # Systems engineering career development
- # Professionalization
- # SE Leadership
- # Developing SE individual competence
- # Developing SE organisational competence
- # Soft skills for Systems Engineers
- # Systems for non-systems people

Advancing the state of the art

Topics in this sub-theme include but are not limited to:

- # Agile SE
- # Lean SE
- # Technology Management
- # MBSE
- # Soft SE techniques
- # Systems thinking
- # Novel systems engineering tools and tool integrations
- # Speciality engineering integration
- # Sustainable systems
- # Innovating within the Systems Lifecycle
  - # Requirements engineering
  - # Systems Architecture
  - # Systems Integration
  - # Verification and validation
  - # Transit to Use
  - # Operations and Maintenance
  - # Disposal

Call for Papers

INCOSE encourages authors to submit high quality draft papers addressing the themes outlined above or other topics relevant to systems engineering. The INCOSE manuscript template shall be used to prepare close-to-final papers between 8 and 15 pages (including graphics, references and biography). The close-to-final papers shall be submitted in English using the Online Submission Process and shall describe original work that has not previously been presented at an INCOSE symposium. Joint authors shall nominate a single point of contact. Papers that do not conform to the submission instructions and manuscript template found at www.incose.org/symp2016 may be rejected without review.

Ideally a draft paper should cover the full scope from theory to full scale theory validation. However, papers presenting research proposals coupled with initial results will also be considered.

Each draft paper will be reviewed by at least 3 members of the INCOSE review team, and judged on a range of parameters including clarity of expression and effective communication of ideas. In particular the paper shall "provide usable information or insight to enable INCOSE members to improve their application of Systems Engineering" or "provide innovative and novel techniques that enhance the execution and effectiveness of Systems Engineering for a single or multiple industries and domains".

Evaluation criteria can be found on the symposium website.

Accepted papers are published in the Proceedings of the Symposium and in the INCOSE I-pub technical library.

See www.incose.org/symp2016 for more information.

Call for Panels/Roundtables

Interested practitioners, researchers, managers and others in the field of Systems Engineering can create meaningful dialogues by sharing their knowledge in a panel or roundtable session during the symposium. Panel/roundtable proposals are solicited to facilitate such dialogues:

A panel follows the traditional conference format where a number of panelists present their views on, and debate, a controversial subject. The panelists should be selected carefully to produce a stimulating dialogue.

In the roundtable format the chairperson introduces a subject with the objective of involving both the other presenters and the audience in the discussion. A roundtable is summarised in a written report and typically fed into working groups for further activities.

The following requirements and constraints apply for developing your proposal:

- The panel/roundtable shall focus on a topic of interest to the Systems Engineering community.
- The panel/roundtable proposal shall specify the topic of the panel and planned panelists, outline the themes and topics that will be presented in the panel, and include a one-page draft position statement and bio from each panelist. Panel participants may include policy makers and leading authorities from within and outside the INCOSE community.
- In order for a panel proposal to be accepted, it shall contain at least two contrasting/opposing viewpoints or positions.
- The panel proposal shall specify the panel moderator, who shall be the point of contact for the proposal. Panel sessions are 1 hour 30 minutes to 2 hours in length.
- For Panel sessions at least half the time SHALL be dedicated to discussions and audience interaction.
- The panel proposal shall use the panel/roundtable proposal template, be in MS Word v. 6.0 or later format, and be submitted according to instructions on the symposium website.

Each panel submittal is reviewed by at least 3 members of the INCOSE review team. The evaluation criteria are found at the symposium website www.incose.org/symp2016.

For accepted panels the moderator is required to provide a final one to four page position statement from each panelist.

The position statements will be published in the symposium proceedings.

Call for Tutorials

Interested practitioners, researchers, managers and other experts in the field of Systems Engineering can create meaningful dialogues by sharing their knowledge in a Tutorial during the symposium.

If a tutorial is selected for inclusion in the symposium, then the presenters (up to a maximum of 2 per tutorial) will be eligible for a discounted rate when they register for the event; however, this does not include the annual INCOSE membership fee, or any other expenses. A tutorial agreement, which includes financial and cancellation agreements, will be forwarded at the time of acceptance notification.

Tutorial proposals for the following three types of classroom forums will be considered.

1. **Professional Development Tutorial:** intended for both practicing systems engineers who want to expand their systems engineering skills and seasoned professionals who are new to INCOSE concepts of systems engineering. It is important not only to instill in the student a new skill, but also to make it clear how that skill can add real value to the student's enterprise.
2. **Advanced Technology Tutorial:** intended for practicing systems engineers; introduces new technologies that have the potential to add real value to systems engineering practice; however, that potential may not as yet have been demonstrated.
3. **Best Practices Implementation** – intended for practicing systems engineers who are interested in understanding how to apply systems engineering best practices with a domain specific emphasis.

The following requirements and constraints apply for developing your proposal:

Half (4 hr) or full (6-8 hr) day classroom formats.

The tutorial shall contain appropriate student exercises and interactions.

The presenter(s) shall document his/her expertise in the domain, and experience as a lecturer.

The tutorial <u>shall</u> not contain a sales presentation for the presenter or the presenter's company and <u>shall</u> not contain proprietary data.

The tutorial proposal shall demonstrate the nature of the value for the students.

The tutorial proposal shall use the tutorial proposal template, be in MS Word v. 6.0 or later format, and submitted according to instructions on the symposium website.

Each tutorial submittal is reviewed by at least 3 members of the INCOSE review team. Evaluation criteria are found on the symposium website www.incose.org/symp2016.

The tutorial presentation itself shall be in electronic form based upon Microsoft PowerPoint application software, and shall be made available to the students in electronic format. The tutorial presentation shall also be made available to the symposium attendees in electronic format for publication on the symposium proceedings electronic media.

> **IMPORTANT DATES**
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> Latest Submission Date for Review: **November 8, 2015**
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> Acceptance Notification of Review Results by **February 2016**
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> Final Manuscript Submission Due: **March 2016**