



2020

Annual **INCOSE**
international workshop

Torrance, CA, USA

January 25 - 28, 2020

Systems Science

www.incose.org/IW2020

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99 active & 255 Wg
Community

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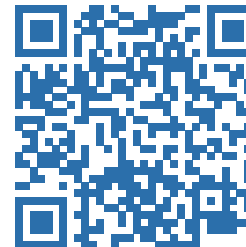
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INCOSE WEB PAGE



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Charter Summary



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WG PURPOSE/MISSION

Promote the advancement and understanding of Systems Science and its application to SE. Systems science provides a more rigorous, underlying basis to the empirically derived practices to systems engineering that have evolved over time.

WG GOAL(S)

1. Highlight linkages between Systems Science theory and the empirical practice of Systems Engineering. (e.g. short, mid or long?term)
2. Promote awareness of Systems Science, its origins, and its possible futures.
3. Encourage advancement of Systems Science principles and concepts.

WG SCOPE

This WG addresses the Systems Science that provides an underlying foundation for all Systems Engineering (SE) throughout the life?cycle.

IW Outcomes



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IW Outcomes

1. In-depth review of the progress on FuSE/F4SE with the group, and obtained inputs on the plans for the coming year.
2. Joint session with NSWG, where they shared the exemplar approach to understanding design, and how the resulting understanding can facilitate outside-in problem solving.
3. Two more foundational systems phenomena, Value Selection and Model Trust, were identified as keys to facilitating the link between systems knowledge and application to systems practice.
4. Focus on application of SS to SE, including systems modelling, social systems design, communication across contexts, and using category theory to model and analyze an aircraft system.

Planned Work past IW



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PLANNED ACTIVITIES

1. Participation at CSER by co-leading SS Workshop with F4SE project team
2. Participation and leadership at ISSS, INCOSE IS, and IFSR Conversations in July at South Africa.

PLANNED WORK PRODUCTS

1. White paper on the systems science basis of current systems engineering practice.