2019

Annual **INCOSE**

international workshop

Torrance, CA, USA

January 26 - 29, 2019

Natural Systems

www.incose.org/iw2019

Natural Systems

MEMBERS
23

CO-CHAIRS
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INCOSE CONNECT ADDRESS

https://www.incose.org/incose-member-resources/working-groups/analytic/natural-systems

INCOSE WEB PAGE

https://sites.google.com/site/incosenswg/

Charter Summary

WG PURPOSE/MISSION

Evaluate changes to Systems Eng. processes & communications to take advantage of Natural Systems, including broader relationships between SE---Science--Tech.

WG GOAL(S)

1. Assess State-of-the-Discipline regularly.
2. Cultivate a NS Community of Practice.
3. Share Best Practices & Success Stories.
4. Better understand SE interactions with Natural Systems.
5. Investigate enhancements to SE processes and practices.
6. Grow in numbers and scope.

WG SCOPE

The Natural Systems Working Group includes members from industry, academia, and government. Our work focuses on systematic approaches to Natural Systems inquiry in SE and tools for bio-inspired design and their application to the SE process.

IW Outcomes

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- Delivered 6 substantive programs
- Identified 4 areas of inquiry for activities in 2019 and beyond
- Outlined potential project areas in each area of inquiry
- Initiated conversations with prospective project contributors
- Developed connections with process enablers
- Discussed concepts and planning for project outputs

Planned Work past IW

PLANNED ACTIVITIES

- Working group planning session
- Update WG Charter and Website
- Pursue and plan joint activities with multiple working groups
- Discussions
- Webinars
- White Papers
- Conferences
- Outreach

PLANNED WORK PRODUCTS

- Increase familiarity with architectures
- Improve ability to analyze and model natural and engineered domains
- Increase familiarity with modules from living systems
- Recommendations for stakeholder requirements and concept of operations processes
- Recommendations for validation, verification, and systems failure/pathology processes
- Increase familiarity with MBSE and Architecture Standards and Natural Systems aspects
- Collect cases pertinent to NS and SE interactions
- Document systematic approaches to NS in SE
- Support SE design practices considering NS