# System of Systems

www.incose.org/IW2021

## CO-CHAIRS

Judith Dahmann (MITRE)
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## INCOSE WEB PAGE

https://connect.incose.org/WorkingGroups/SystemofSystems/Pages/Home.aspx

## INCOSE CONNECT ADDRESS

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

273 Members

# Charter Summary

## WG PURPOSE/MISSION

The purpose of the working group is to advance and promote the application of Systems Engineering to Systems of Systems (SoS), often referred to as SoS Engineering (SoSE).

BKCASE describes SoS Engineering as ?an opportunity for the systems engineering community to define the complex systems of the 21st Century. While systems engineering is a fairly established field, SoSE represents a challenge for the present systems engineers at the global level. In general, SoSE requires considerations beyond those usually associated with engineering to include socio-technical and sometimes socio-economic phenomena.?

SoS and SoSE are topics that interest a significant number of INCOSE members globally, both individuals and organizations. Therefore we believe that a WG forum to share understanding of SoS and SoSE issues, good practice and background, and contribute to maturing BKCASE will provide a service to the wider INCOSE community.

## WG GOAL(S)

The goal of the working group is to expand and promote the body of knowledge of SoS and SoSE its benefits within the Systems Engineering community.

# Charter Summary

## WG SCOPE

This WG addresses the application of Systems Engineering to all types of Systems of Systems (SOS) in all domains. We see diversity as particularly important in this knowledge area, as do the WG members.
Activities will generally cover the following:

- Understand and share what we mean by SoS in our various contexts
- Develop guidance and advice
- Inform and up-skill practitioners
- Exert influence on BKCASE, SE Handbook, SE Vision 2035, Standards etc.
- Develop the practice of SE for SoS.
- Work in partnership with other groups addressing aspects of SoS (e.g. INCOSE WGs, IEEE, NDIA).
- Understanding and applying insights from relevant research

## OUTCOMES (PRODUCTS/SERVICES)

The intended deliverables planned by the SOSWG are as follows:

1. SoS webinar series, a program of monthly webinars, open to all INCOSE members, as a forum to share information on SoS.
2. SoS inputs to SEBoK, SE Handbook, SE Vision 2035
3. SoS inputs to International Standards e.g. ISO/IEC/IEEE 21839, 21840, 21841
4. SoS technical products that share information for practitioners and aspiring practitioners e.g. SoS Primer, Guide to SoS standards
5. SoS Panels, Research Roundtables and Papers at INCOSE conferences and related technical conferences e.g. IEEE SOSE.

# IW Outcomes

## IW OUTCOMES

By the end of IW2021 (Friday 5th Feb) we will have held:

- Two business meetings summarising achievements and status for both established and new members
- Two interactive workshop sessions with the Complexity Working Group (1st and 2nd Feb) exploring how the complexity concepts apply to and can inform systems of systems engineering
- Progressed our contributions to SE Handbook 5th Edition, SE Vision 2035, SEBoK and SE standards
- and planned our work for the period up until IS 2021

## PLANNED ACTIVITIES AFTER IW

- Issue notes and minutes from the IW so all our members can stay part of what we are doing
- Continue to mature the insights from working with the Complex Systems Working Group
- Continue our SoS Webinar series, and hopefully, the transition to a new coordinator (volunteers welcome)
- Participate in IEEE SOSE 21 (June 14-18)

# IW Outcomes

## PLANNED WORK PRODUCTS AFTER IW

- Likely output from the collaboration with the Complex Systems Working Group
- Interactive session led by SoSWG at IEEE SOSE 21