Systems Philosophy and its Relevance to SE

The Systems Science Working Group is exploring how Systems Philosophy can be used to support expansion of the theoretical foundations of Systems Engineering (SE). This webinar will provide an overview of our plans for work in this area and explore some of the challenges and opportunities of this project.

Systems Philosophy is a branch of philosophy concerned with developing a scientific worldview based on the systems paradigm.   The significance of this for SE is that the development of a systems-scientific worldview can be used to support the development of a General Systems Theory (GST). GST is a theory encapsulating the objective principles underlying the behaviours that recur across multiple kinds of systems ("systemic isomorphies") and also the schema ('gestalt') that connects them. The development of a fully-fledged GST should be a key ambition for SE, because SE does not have a unifying theory that can guide the further development of SE's theoretical foundations in a principled way.

The webinar will explore how Systems Philosophy can aid the development of GST, and how a GST can help unify and expand the theoretical foundations of SE. Taken together, Systems Philosophy and GST can be used to develop a "General Systems Transdiscipline" (GSTD), which will greatly extend the capacity of SE to deal with complexity.

For more details about the "Systems Philosophy for SE" project, please visit our webpage at https://sites.google.com/site/syssciwg/projects/o-systems-philosophy. Also, you might be interested in attending our workshop on Saturday, July 11th in Seattle, right before the INCOSE Symposium.

Biography:

David Rousseau PhD BEng FRSA is the Founder and Director of the Centre for Systems Philosophy in Surrey, UK, the Editor-in-chief of Systema (the journal of the Bertalanffy Centre for the Study of Systems Science (BCSSS), and a visiting Fellow of the Centre for Systems Studies in the University of Hull. He is a Council Member of the International Society for the Systems Sciences (ISSS) and the ISSS Special Integration Group (SIG) Chair for Systems Philosophy and the ISSS SIG Chair for Research towards General Theories of Systems. His early career involved more than 20 years in senior management, programme management and systems engineering roles in the aerospace and semiconductor industries. In 2007 he returned to academia, where he studied Philosophy of Mind and investigated exceptional human experiences from a scientific systems-philosophical perspective. His current research is focused on the unity of knowledge, the modelling of the nature of Nature, the ontological foundations of moral intuitions, and the development of a General Systems Transdiscipline.