

System of Systems Engineering Collaborators Information Exchange (SoSECIE)

**February 22, 2022
11:00 a.m. to Noon Eastern Time**

System of Systems Engineering (SoSE) Conference and Industry Perspectives and the Role of SoSE: INCOSE and IEEE Collaborations

***M. Mo Jamshidi, Ph.D., D.Egr
Garry Roedler
Paul Hershey, Ph.D.***

Abstract

This webinar will provide a brief history of collaborations between The International Council on Systems Engineering (INCOSE) and the Institute of Electrical and Electronic Engineers (IEEE), as well as others, in addressing the evolving needs and use of Systems of Systems Engineering (SoSE). To help address the growth of SoSE and focus its evolution to meet the industry needs, including the defense sector, the joint IEEE-INCOSE forum was born in 2006, which is now known as the SoSE Conference. The SoSE conference has provided an outstanding venue in which to share and vet new SoSE ideas and collaborate with colleagues from defense and aerospace industries systems and more. As a result, it has helped to focus SoSE research and standardization for SoSE and build broader community collaboration to help position SoSE to be ready to address future needs.

Biographies

M. Mo Jamshidi is a F-IEEE, F-ASME, AF-AIAA, F-AAAS, F-TWAS F-NYAS, F-EASA. He received BSEE (Cum Laud) at Oregon State University in 1967, the MS and Ph.D. in EE from the University of Illinois at Urbana-Champaign in June 1969 and February 1971, respectively. He holds honorary doctorate degrees from the University of Waterloo, Canada, 2004, Technical University of Crete, Greece, 2004 and Odjar Yourdu University, Baku, Azerbaijan in 1999. Currently, he is the Lutcher Brown Endowed Distinguished Chaired Professor at the University of Texas, San Antonio, TX, USA.

He was an advisor to NASA for 10 years (including with 1st MARS Mission and 7 years with NASA HQR), 9 years with US AFRL, and 8 years with USDOE and 1 year EC/EU. Currently he is a consultant on US Army Science Board. He has over 800 technical publications including 75 books (11 textbooks, 1 history of science and poetry), research volumes, and edited volumes in English and five foreign languages. He is the Founding Editor or co-founding editor or Editor-in-Chief of 5 journals including *IEEE Control Systems Magazine* and the *IEEE Systems Journal*. He has graduated or advising 67 PhD and 85 MS students. Among them four PhD's among Native Americans, ten PhDs among Hispanic and eight PhD's among African Americans. His former students are successful professionals in 28 nations around the world.

He is the recipient of IEEE Centennial Medal 1984, WAC Medal of Honor, 2014, US Army Achievement and Service Medal, 2021, Two Lifetime Awards in Systems Engineering (IEEE-USA and Systems Society of India), fellow of European Academy of Sciences and Arts, among many other awards and honors. He is a member of the University of Texas System Chancellor's Council. He is currently involved in research on system of systems engineering with emphasis on robotics, drones, biological and smart grid, machine learning and AI applications in control and navigation. He has about 125,642 citations on Google Scholar.

Garry Roedler is a retired Lockheed Martin Senior Fellow, Past President of the International Council on Systems Engineering (INCOSE), and past Vice-chair for the NDIA Systems Engineering Division. He has over 35 years of systems engineering (SE) experience that spans the full life cycle and includes technical leadership roles in both programs and business functions. He is also an INCOSE Fellow, holds systems engineering certification at the Expert Systems Engineering Professional (ESEP) level, and received many prestigious awards, including the Lockheed Martin Nova Award, INCOSE Founders Award, IEEE Standards Association Lifetime Achievement Award, and the NDIA Ferguson Systems Engineering Excellence Award. Garry has held key leadership roles in several industry associations and standards development organizations, including editor of ISO/IEC/IEEE 15288, Systems Life Cycle Processes and several other standards related to Systems Engineering and System of Systems Engineering; and key editor roles for the Systems Engineering Body of Knowledge (SEBoK), the INCOSE Systems Engineering Handbook, and the INCOSE Systems Engineering Vision. This unique set of roles has enabled Garry to influence the technical co-evolution and consistency of these key Systems Engineering and System of Systems resources.

Paul Hershey works for Raytheon Technologies Company, where he is a Principal Engineering Fellow focusing on data analytics, autonomous systems, modeling and simulation, and cyber security. He has been a member of IEEE since 1980 and was elevated to IEEE Fellow in 2021. He received his Ph.D. and M.S. degrees in electrical engineering from the University of Maryland, College Park, MD, USA, and the A.B. degree in mathematics from the College of William and Mary, Williamsburg, VA, USA. Dr. Hershey has published 39 patents (granted) and over 60 peer-reviewed technical articles. Previously, he was an adjunct professor at George Washington University where he also served on the Curriculum Advisory Board. He presently serves on technical program committees for the IEEE International Systems Conference and the IEEE International System of Systems Engineering Conference. Dr. Hershey is a Distinguished Lecturer on data analytics for the IEEE Systems Council.

