

# Systems Engineering Methods Technical Committee

The mission of the System Engineering Methods TC is to address the integration of activities regarding aspects of multiple disciplines and specialty areas of systems engineering.

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## Upcoming Meeting

Nov 7, 2023 10:00AM (CT)

Zoom

<https://us02web.zoom.us/j/81711599262?pwd=aTF3ZmJ2Q2pCR0tMTXFkWUw4UWRtUT09>

Meeting ID: 817 1159 9262

Passcode: systems

Presenter

[Paul Hershey](#)

*Systems Engineering and Data Science*

### **Abstract**

Systems Engineering plays a key role in addressing the challenges of emergent complex systems. A complex system is one whose structure and behavior is not deducible, nor may it be inferred from the structure and behavior of its component parts. Emergent behavior is a new behavior that develops from the interactions among constituent systems. Complex system engineering provides methods to address these issues. Data Analytics is the science of analyzing raw data to make conclusions about the information derived from it. Many data analytics methods have been designed to autonomously transform raw data into information for human consumption. This presentation discusses how the combination of complex systems engineering and data science can be applied to address human decision making and the associated complexities of its emergent behavior.

### **Bio**

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 41 patents (granted) and 75 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.

## Attendees

Paul Hershey, William Miller, D. Mpoeleng, W Deining, Farhad Ilahi Bakhsh, Bill Scheible, Engr. Oto-obong John Effiong, Vitalii Stoliarchuk, Zafar Taqvi, LaMont McAliley, Madison Musselman.

## Action Items

- Paul Hershey to send Stephanie White and Amanda Osborne his presentation slides.