



**International Council on Systems Engineering
Delaware Valley Chapter Meeting (Non-members welcome to attend)**

“Systems Engineering: Peacebuilding and Vision”

Speakers: Dr. Julie Drzymalski, Director of the Drexel Systems Engineering at Drexel University.

Bob McMahon, Senior Systems Engineer with L-3 Communications in Camden, NJ

Date: Tuesday evening, January 24th, 2017

Agenda: 6:00-6:30: Arrival and check in
6:30-6:45: Welcome to Drexel & Introductions
6:45-7:15: Dr. Julie Drzymalski presentation and discussion
7:15-7:45: Bob McMahon presentation and discussion
7:45-8:15: Networking with the students
8:15-8:30: Chapter business

Location:

3250 Chestnut Street, Philadelphia, PA
McAlister Building, 6th Floor, “City View Room, (see the map on last page for details of location)

RESERVATIONS

INCOSE Members and Nonmembers: James Finney jameswfinney@yahoo.com

Drexel & Other Students Contact: Chris Morse cmorse@coe.drexel.edu

University of Penn Students Contact: Dr Pete Scott peter.crosby.scott@comcast.net

Meal Choices: Boxed sandwiches available to INCOSE Members and non-members for \$10, and free to students with ID, who reserve by the reservation deadline. Served with Potato Chips, Whole Fruit and a Cookie. Indicate your selection when making reservation:

- 1) Smoked Turkey and Swiss Cheese
- 2) Ham and Swiss Cheese
- 3) Roasted Vegetables and Cheese

Cost: Free to attend lectures; food prices as above, paid at the event.

Deadline for Reservations is Friday, January 20th



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Abstracts and Bios

Maestros and Martians: Using Systems Engineering Tools for Peacebuilding **by Dr. Julie Drzymalski**

Why do so many peacebuilding efforts fail? Why do others produce long lasting results? Peacebuilding is not a simple task; it needs to consider the actions and consequences of all parties involved and the environment in which they reside.

Governments, both domestic and international, as well as NGOs are complex systems which operate in complex and adaptive environments. Agencies need to understand the conditions which exist in these environments and the relationship between them in order to make appropriate decisions for peace building efforts. Systems engineering methodologies are used to determine relationships between key components of a complex system and create dynamic, complex systems models which can be used to understand system behavior. Taking a formal systems approach to modeling the agencies and entities will provide the capability to understand the structure and interactions and can then be used to test various theories of change, offer insight into effects of policies and quantify the peacebuilding outcomes.

As part of a new program in Peace Engineering at Drexel University, Systems Engineering for Peacebuilding is a core course in the curriculum. This is a newer application of systems engineering, thus course material will draw on traditional systems engineering techniques, historical events as well as current literature on the application of systems thinking to peacebuilding.

Julie Drzymalski, Ph.D.

Julie currently serves as Clinical Professor and Program Director for the Vidas Systems Engineering Program in the Engineering Management Department at Drexel University. Previously she served as Associate Professor and Chair of the Industrial Engineering and Engineering Management Department at Western New England University in Springfield MA.

Prior to her academic experience, Julie spent approximately 12 years working as a Quality Engineer, Project and Program Manager for various engineering firms in the greater Philadelphia and New York City areas specializing in precast and pre-stressed concrete structures. She received her B.S. in Mechanical Engineering from Polytechnic University, M.S. in Engineering Management from Widener University and M.S. in Management Science and Ph.D. in Industrial Engineering from Lehigh University.

Julie's primary areas of research lie at the crossroads of supply chain management, complex systems, operations research and network science. She is developing models in the areas of supply chain financing and also focusing on improving supply chain robustness through the use of network science and complex system techniques. She is well published and active in



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the Institute of Industrial and Systems Engineers, Institute for Operations Research and Management Science (INFORMS) and American Society of Engineering Management (ASEM).

Overview of Systems Engineering Vision 2025 by Bob McMahon

In 2014, INCOSE published "Systems Engineering Vision 2025" to inspire and guide the direction of systems engineering and envision its future state as this century continues to unfold. This vision statement was produced by a team of leaders from industry, academia, and government with the intent that it will be used by people working in many domains – healthcare, utilities, transportation, defense, finance – who will add their unique perspectives to the role systems engineering plays in serving our world’s many complicated demands. In this presentation, I will provide an overview of Vision 2025, along with examples from existing and future systems highlighting the best practices that can guide systems engineering over the next ten years.

Bob McMahon is a senior systems engineer with L-3 Communications in Camden, NJ. He has over 30 years of experience working in software and systems engineering. He holds a BS degree in Computer Engineering from Lehigh University and an MS degree in Electrical Engineering, with a concentration in Systems, from Drexel University. Bob is an INCOSE member and has a current CSEP certification.

For further information about the International Council on Systems Engineering please visit the INCOSE website at <http://www.incose.org/> and the Delaware Valley Chapter website at <http://www.incose.org/ChaptersGroups/Chapters/ChapterSites/delaware-valley/chapter-home>

Location Directions and Parking:

There is a train station at 30th and Market Streets, a subway station at 34th and Market, and a trolley station at 33rd and Market. The building is at the corner of 33rd and Chestnut Streets. For those driving, you can park at the Drexel Parking Garage, located on Ludlow Street between 33rd and 34th Street – Cost \$8

