

UTC INSTITUTE FOR ADVANCED SYSTEMS ENGINEERING Seminar Series

Monday March 5th, 2018

1:00 – 2:00PM

UConn, Storrs Campus – ITEB 336

[To view live webcast click here](#)

Effective Systems Engineering Implementation

Increasing complexity of systems requires a robust Systems Engineering implementation to facilitate the efficient integration of diverse products, process and people. Although the importance of Systems Engineering is widely recognized, its effectiveness often remains an elusive goal. **Traditional implementation of Systems Engineering is document and process centric**, largely focused on controlling process variability, while assessing process capability levels. Benchmarking surveys seem to indicate a positive correlation between higher SE process capability and project success, thus implying higher effectiveness. However, in practice there are examples of failed projects from executing organizations with highly rated systems engineering process capability, and with high organizational maturity levels. In addressing product complexity, advanced methods including **Model Based Systems Engineering (MBSE), and digital collaboration tools** are being adopted throughout the **Product Life Cycle** with the expectations to optimize product performance cost and schedule. This lecture will provide an overview of the traditional and the advanced Systems Engineering process and implementation. Several other hard-to-quantify factors that are critical for an effective Systems Engineering implementation will be discussed.

Theodora Saunders

Theodora Saunders' career spans over 30 years, starting in the commercial electronics industry prior to moving into the aerospace defense sector, working in fixed wing aircraft projects, and later in the rotorcraft industry. Throughout her engineering assignments she was fortunate to work in projects addressing all aspects of the Product Life Cycle including research, development, system integration, and testing. Assignments in the fixed wing F-16 aircraft included Independent Research and Development (IR&D) Principal Investigator, Navigation and Guidance System Engineer, Software Product Acquisition Manager, Avionics Product Manager, and Avionics Subsystem Integrated Product Team (IPT) Lead. In 2001 she joined the Sikorsky Reconnaissance Attack Helicopter (RAH) Comanche program as the armament system engineer lead. Follow-on Sikorsky assignments included Avionics Systems process development and improvements, managing the System Engineering Process Group (SEPG), and leading system engineering implementation efforts in support of business proposals. In 2014, she was assigned as the Chief System Engineer (CSE) for the USAF Combat Rescue Helicopter (CRH) program. The CRH is a \$1.2 billion Engineering Manufacturing & Development (EMD) contract which includes development and integration of the next generation combat rescue helicopter and mission systems, as well as aircrew and maintenance training systems. As the CSE she provides technical leadership, guidance, mentoring and management of the Systems Engineering Integration Team (SEIT), comprised of over 85 engineering personnel distributed among diverse disciplines and activities. She served as a reviewer for the Systems Engineering Book of Knowledge (SEBoK), ISO/IEC standard 15288, and the draft technical report 24748. Theodora earned her first Master's degree in Electrical Engineering and a second Master's degree in Industrial Engineering, both from New Mexico State University, with specializations in control systems and system reliability.

Upcoming Distinguished Lectures

Magnus Egerstedt,
Long Duration Autonomy
With Applications to
Persistent Environmental
Monitoring,
April 2, 2018

Upcoming Seminars

Anuradha Annaswamy,
Massachusetts Institute of
Technology,
March 26, 2018

Christine Zhang,
United Technologies Research
Center – Software Systems,
April 9, 2018

Jingang Yi,
Rutgers University,
April 16, 2018

Website:

www.utc-iase.uconn.edu

Email:

utc-iase@enr.uconn.edu

Phone:

860.486.3355

