Disciplinary Convergence: Implications for Systems Engineering Research

15th Annual Conference on Systems Engineering Research (CSER)
March 23 - 25, 2017, Crowne Plaza Hotel, Redondo Beach, CA

Technical Program Co-Chairs, USC
Prof. Roger Ghanem
Mechanical Engineering
Prof. Daniel Erwin
Astronautical Engineering

Conference General Co-Chairs, USC
Prof. Azad M. Madni
Systems Architecting and Engineering
Prof. Barry Boehm
Systems and Software Engineering

Research Paper Topics
- Formal Methods in Systems Engineering
- Resilience and Affordability
- Model Based Systems Engineering
- Systems and SoS Integration
- System Architecture and Complexity
- Trade-space Visualization and Analysis
- Cognitive Systems Engineering
- Cyber Secure Resilient Systems
- Lean and Agile Systems Engineering
- Cyber-Physical Systems and Internet of Things
- Systems Thinking and Complexity Management
- Infusion of System Science in SE
- Uncertainty Quantification
- Smart Manufacturing
- Advancing Systems Engineering Education
- Systems Engineering and Decision Science
- Wireless Health

Application Areas
- Autonomous Vehicle Networks
- Defense Systems and System-of-Systems
- Space and Aerospace Systems
- Financial Systems
- Global Supply Chains
- Healthcare Delivery
- Homeland Security
- Smart Manufacturing
- Medical Devices
- Sustainable Energy
- Transportation Systems
- Urban Systems and Infrastructure

Venue
- Crowne Plaza Hotel
300 N Harbor Dr, Redondo Beach, CA 90277

Conference Co-Managers
Mr. Terry Rector
The Aerospace Corp.
Ms. Marilee Wheaton
The Aerospace Corp.

Conference on Systems Engineering Research (CSER) offers researchers in academia, industry, and government a common forum to present, discuss, and influence systems engineering research. It provides access to forward-looking research from across the globe, by renowned academicians as well as perspectives from senior industry and government representatives. Co-founded by University of Southern California and Stevens Institute of Technology in 2003, CSER has become the preeminent event for researchers in systems engineering across the globe.

Important Deadlines
- October 2, 2016: Full papers due
- December 15, 2016: Notification to authors
- February 1, 2017: Final Conference Papers due
- Paper Length: Maximum 10 pages
- To Submit a paper and download the paper template visit: viterbi.usc.edu/sae/cser2017.htm

Conference Website
www.CSER2017.com

For Sponsorship/Exhibitor information contact Richard Emerson, remerson9@gmail.com
Disciplinary Convergence: Implications for Systems Engineering Research

Keynote Speakers

Dr. Yannis Yortsos
Dean, Engineering
University of Southern California

Dr. Paul Nielsen
Director and CEO
Software Engineering Institute

Dr. Greg Hyslop
CTO and SVP, Engineering,
Test and Technology
The Boeing Company

Ms. Kristen Baldwin
Acting DASD,
Systems Engineering, OSD

Dr. John Doyle
Professor
California Institute of Technology

Banquet Speaker

Dr. John Slaughter
Professor
University of Southern California

“Convergence...integrates knowledge, tools and ways of thinking from life and health sciences, physical, mathematical, and computational sciences, engineering disciplines and beyond to form a comprehensive synthetic framework for tackling scientific and societal challenges that exist at the interfaces of multiple fields” - National Research Council Report (2014)

“...The central idea of disciplinary convergence is that of bringing together concepts, thinking, and approaches from diverse disciplines in conjunction with technologies to solve complex problems ... Systems engineering research today is beginning to exploit disciplinary convergence to address problems that appear intractable when viewed through the lens of a single discipline.” -Azad M. Madni “Transdisciplinary Systems Engineering: Exploiting Convergence in a Hyper-Connected World” (Springer, 2017)

Executive Leadership Panel

- Dr. Elliot Axelband (moderator)
  Senior Engineer
  RAND Corporation

- Dr. Allen Adler
  V.P. Enterprise Technology Strategy
  The Boeing Company

- Dr. Wayne Goodman
  Senior V.P. Operations and Support Group
  The Aerospace Corporation

- Lieutenant General (Ret) Larry James
  Deputy Director
  Jet Propulsion Lab, NASA

- Dr. Sandra Magnus
  NASA Astronaut
  Executive Director, AIAA

- Mr. Marcus Nance
  Director, BDS Competitiveness & Integration
  The Boeing Company

Systems Engineering Leadership Panel

- Mr. Scott Lucero (moderator)
  Deputy Director, Strategic Initiatives
  Office of the Secretary of Defense

- Ms. Christi Gau Pagnanelli
  Director, Systems Engineering
  The Boeing Company

- Mr. Paul Gill
  Senior Manager
  Aerojet Rocketdyne

- Dr. Jairus Hihn
  Principal Systems Engineer
  Jet Propulsion Lab

- Ms. Rosalind Lewis
  Principal Director
  The Aerospace Corporation

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