



SYSTEMS ENGINEERING
Research Center

Welcome to the SERC Doctoral Students Forum (SDSF)

December 2 2015

FHI360 Conference Center
1825 Connecticut Ave NW
Washington, DC 20009

The **Systems Engineering Research Center (SERC)**, a University-Affiliated Research Center of the US Department of Defense, leverages the research and expertise of faculty, staff, and student researchers from more than 20 collaborating universities throughout the United States. SERC is unprecedented in the depth and breadth of its reach, leadership, and citizenship in Systems Engineering. Led by Stevens Institute of Technology and principal collaborator, University of Southern California (USC), the SERC has engaged more than 400 researchers since its founding in 2008 – a community of broad experience, deep knowledge and diverse interests. SERC researchers have worked across many domains and industries, including finance, telecommunications, computing, and transportation, in addition to defense, enabling them to bring broad perspectives to their research.

The Vision

The SERC will become the networked national resource to further systems research and its impact on issues of national and global significance.

The Mission

The SERC will be the primary engine for the US government in SE research. In doing so, the SERC will:

- **Catalyze** community growth among SE researchers and end users by enabling collaboration among many SE research organizations,
- **Accelerate** SE competency development through rapid transfer of its research to educators and practitioners,
- **Transform** SE practice throughout the government by creating innovative methods, processes, and tools that address critical challenges to meet mission outcomes.



Agenda

Started in 2012, the SERC Doctoral Students Forum (previously called the SERC Doctoral Fellows Program Forum) provides a unique venue for doctoral students to present their research in an open assembly of leading systems thinkers from government, industry, and academia. Doctoral students from SERC collaborating universities are invited and encouraged to present their work even if the research was not funded through a SERC research task.

Opening Remarks (Location: Academy Hall)	
12:00p-1:00p	Registration, Check-in, and Networking Time (Location: Academy Hall Foyer)
1:00p-1:20p	Welcome and Opening Remarks from the SERC Executive Director <i>Dr. Dinesh Verma, SERC Executive Director and Dean of the School of Systems and Enterprises, Steven Institute of Technology</i>
1:20p-1:30p	Remarks from the SERC Executive Sponsor <i>Mr. Scott Lucero, SERC Program Manager, Office of the Deputy Assistant Secretary of Defense for Systems Engineering</i>
Presentations by selected Doctoral Students (Location: Academy Hall)	
1:30p-2:15p	A Model-Based Systems Engineering Methodology for Employing Architecture in System Analysis: Developing Simulation Models Using Systems Modeling Language Products to Link Architecture and Analysis <i>Mr. Paul Beery, Naval Postgraduate School</i>
2:15p-3:00p	Detecting and Evaluating Technical Debt of Software Systems and System of Systems <i>Mr. Qiao Zhang, Southern Methodist University</i>
3:00p-3:45p	Demonstration and Analysis Tool for Agile SE Management (DATASEM) – The Simulation Engine <i>Mr. Donghuang Li, Auburn University</i>
3:45p-4:00p	Break
4:00p-4:45p	A Domain-Independent Method to Assess System of System Meta-Architectures Using Domain Specific Fuzzy Information <i>Mr. Louis Pape, Missouri University of Science and Technology</i>
4:45p-5:30p	Determining New System Requirements to Optimize Fleet Level Metrics under Uncertainty <i>Mr. Parithi Govindaraju, Purdue University</i>
5:30p-5:40p	Data Call for Dissertation Research: Request to Observe Upcoming Design Reviews (PDRs, CDRs, or SRRs) on DoD Programs <i>Mr. Robert Braunger, University of Alabama in Huntsville</i>
5:40p-5:50p	Discussion and Wrap-up
Networking Reception and Collaborator Dinner	
5:50p-6:45p	Networking Reception for all attendees (Location: Academy Hall Foyer)
6:45p-8:30p	SERC Collaborator Dinner (by invitation only)