

March 17th at 9:00 AM in Goldwater Center (GWC) Room 487

## abstract

The Systems Science (SYS) and Engineering and Systems Design (ESD) programs support fundamental research that advances knowledge about the design and development of engineered products and systems. The two programs are closely related, but distinct. In broad terms, SYS focuses on advancing theoretical understanding about the design and engineering of large-scale systems—an endeavor commonly referred to as systems engineering—whereas ESD focuses on advancing knowledge about design methods for products and systems. Progress in both areas is important for improving the development of engineered products and systems and can have a major societal impact by leading to better-performing systems that are achieved for less cost and in less time.

This talk will provide background on the motivation for the SYS and ESD programs and explain their respective scopes. Topics will include the difference between theory and methods research as it pertains to these programs and expectations for research validation efforts.

## Richard Malak

Program Director  
National Science Foundation

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Dr. Richard Malak currently serves as Program Director for the ESD, SYS and DEMS programs in the Division of Civil, Mechanical and Manufacturing Innovation (CMMI) of the National Science Foundation. He is on leave from Texas A&M University where he is Associate Professor and Morris E. Foster Faculty Fellow I in the Department of Mechanical Engineering. His personal research interests include decision making in systems design and computational design methods.