Distinguished Lecture Series

Dynamics, Control and Systems Diagnostics Program Overview

The talk will provide a quick overview of the Dynamics, Control and Systems Diagnostics (DCSD) Program, its goals, its funding levels and its priorities. In addition, the presentation will provide the opportunity to provide advice and general suggestions regarding proposal writing and submission, and general interactions between NSF and the scientific community it aims to serve.

The DCSD Program supports fundamental research on the analysis, measurement, monitoring and control of dynamic systems, including development of new analytical, computational and experimental tools, and novel applications to engineered and natural systems. Dynamics is the science of systems that change in time. Control concerns the use of external influences to produce desired dynamic behaviors. Diagnostics concerns the use of observation to infer information about a dynamic system. Objectives of the DCSD Program are the discovery of new phenomena and the investigation of innovative methods and applications in dynamics, control and diagnostics. The intellectual merit of proposals submitted to the DCSD Program are evaluated on the basis of fundamental innovation in foundational areas, on alignment with the core disciplines of the CMMI Division, and on potential for transformative impact within and across disciplinary boundaries.

Professional Profile:

Massimo Ruzzene is a professor of aerospace and mechanical engineering at Georgia Institute of Technology. He is currently the program director for the Dynamics, Control and System Diagnostics Program of CMMI at the National Science Foundation. Ruzzene is the author of two books, 135 journal papers and 180 conference papers. He has participated in projects funded by the AFOSR, ARO, ONR, NASA, U.S. Army, U.S. Navy, DARPA, and NSF, as well as numerous companies. His work focuses on solid mechanics, structural dynamics and wave propagation with application to structural health monitoring, metamaterials, and vibration and noise control. Ruzzene is a Fellow of ASME, an Associate Fellow of AIAA, a member of AHS and ASA.