



Melvin Leok

Professor of Mathematics

Research Areas Numerical Analysis
 Computational Geometric Mechanics
 Computational Geometric Control Theory
 Numerical Analysis

Office Location AP&M 5763
Direct Phone (858) 534-2126
Direct Fax (858) 534-5273
Email mleok@ucsd.edu
Website <http://www.math.ucsd.edu/~mleok/>

Professional Biography

Dr. Leok received his Ph.D. in Control and Dynamical Systems from Caltech in 2004. Prior to joining UCSD in 2009, he was an assistant professor of mathematics at Purdue University, a visiting assistant professor of control and dynamical systems at the California Institute of Technology, and a T.H. Hildebrandt research assistant professor of mathematics at the University of Michigan, Ann Arbor. Dr. Leok's research is on computational geometric mechanics, which is an area of computational and applied mathematics with increasingly important applications to modern science and engineering. Dr. Leok's work uses a synthesis of differential geometric and numerical analysis techniques to provide long-time solutions to differential equations that are stable and robust, and thus provide methods for modeling and controlling modern engineering systems.

Dr. Leok is the author of over 60 research articles. He has been awarded six individual investigator grants from the National Science Foundation, including the prestigious CAREER award. In addition, he was part of a group of UCSD faculty who received a Focused Research Grant and a Research Training Grant. He is a three-time National Academy of Sciences Kavli Frontiers of Science Fellow, and received the SciCADE New Talent Prize, the SIAM Student Paper Prize, and the Leslie Fox Prize (second prize) in Numerical Analysis. He serves on the editorial boards of the Journal of Nonlinear Science, the SIAM Journal on Control and Optimization, the LMS Journal of Computation and Mathematics, the Journal of Geometric Mechanics, and the Journal of Computational Dynamics.

Education

- Ph.D. Control and Dynamical Systems, California Institute of Technology, 2004
- M.S. Mathematics, California Institute of Technology, 2000
- B.S. Mathematics, California Institute of Technology, 2000

Awards and Distinctions

- National Academy of Sciences Kavli Frontiers of Science Fellow
- Leslie Fox Prize in Numerical Analysis
- NSF CAREER Award
- SciCADE New Talent Award
- SIAM Student Paper Prize

