Astronautical Engineering Seminar

Friday, April 24, 2015
9:30 - 10:30 AM
EEB 248

Networked Systems: Influence Geometry, Compositional Algebra, and Distributed Learning with Applications in Autonomous and Distributed Systems

Mehran Mesbahi
Professor, University of Washington

Prof. Mesbahi will explore a class of results at the interaction of systems and control, optimization, and theory of networks that hint at the emergence of an exciting sub-discipline in system theory. In particular, he will discuss a compositional system theory for network-of-networks, controllability properties of diffusively coupled networks in terms of their symmetry and distributed learning and adaptation on dynamic networks. Along the way, examples and motivations for studying such systems in the context of human-swarm interaction as well as distributed autonomous and semi-autonomous networks will be discussed.

Mehran Mesbahi received his Ph.D. in electrical engineering from USC in 1996. He was a member of the Guidance, Navigation, and Analysis group at JPL from 1996-2000 and an Assistant Professor of Aerospace Engineering and Mechanics at the University of Minnesota from 2000-2002. He is currently a Professor of Aeronautics and Astronautics, Adjunct Professor of Mathematics, and Executive Director of Joint Center for Aerospace Technology Innovation at the University of Washington. He was the recipient of the NSF CAREER Award in 2001, NASA Space Act Award in 2004, UW Distinguished Teaching Award in 2005, and UW College of Engineering Innovator Award in 2008. His research interest is autonomous and networked aerospace systems.

Refreshments will be served prior to the seminar