The Center for Control, Dynamical Systems, and Computation
University of California at Santa Barbara
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Presents

Consensus on Manifolds

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Abstract:

Consensus algorithms are distributed computations of means in changing communication environments. They find applications in several engineering problems ranging from coordinated control design to computational algorithms in statistics and machine learning.

In this talk we consider consensus algorithms defined on compact homogeneous manifolds. We motivate the problem with several applications and we propose new convergent algorithms both in continuous-time and discrete-time.

About the Speaker:

Rodolphe Sepulchre is Professor in the Department Electrical Engineering and Computer Science, University of Liège, Belgium.
He received his engineering degree and Ph.D. degree in applied mathematics from the University of Louvain, Belgium, in 1990 and 1994 respectively.
From 1994 to 1996, he held a postdoctoral position at the University of California, Santa Barbara. In 2002-2003, he held a visiting position at Princeton University.
His recent research focuses on coordination control, system theoretic questions pertaining to oscillators, and algorithmic design on manifolds.