

DISTINGUISHED LECTURER SERIES



Jeff Shamma

Julian T. Hightower Chair
of Systems and Controls
Professor of Electrical and
Computer Engineering
Georgia Institute of
Technology

Reception

Thursday, Feb. 26
4:30 pm
1110 Kim Building

Lecture

Thursday, Feb. 26
5:00 pm
1110 Kim Building

Roundtable discussion

Friday, Feb. 27
11:00 am
1146 AV Williams Bldg.

Host

Nuno Martins

Thursday, February 26, 2009 5:00 p.m.

Game Theoretic Learning for Distributed Autonomous Systems

Abstract

Recent years have witnessed renewed and growing interest in the area of distributed autonomous systems. In short, these systems consist of a collection of decision making components with limited processing capabilities, locally sensed information, and limited inter-component communications, all seeking to achieve a collective objective.

The distributed nature of information processing, sensing, and actuation makes these systems a significant departure from traditional centralized decision architectures and more aligned with the framework of game theory, i.e., the study of interactions between decision makers. Of particular relevance is game theoretic learning, in which the focus shifts away from equilibrium solution concepts and towards the dynamics of how decision makers reach equilibrium.

This talk presents an overview of game theoretic learning, from its origins as a “descriptive” tool for social systems to recent work on its “prescriptive” role for engineered systems, i.e., as an approach to design online learning algorithms for distributed autonomous systems.

Biography

Jeff Shamma received a BS from Georgia Tech in 1983 and a PhD from the Massachusetts Institute of Technology in 1988, both in Mechanical Engineering. He has held faculty positions at the University of Minnesota, Minneapolis, the University of Texas at Austin, and University of California, Los Angeles. He also held visiting positions at MIT and Caltech. Jeff returned to Georgia Tech in 2007, where he is a Professor of Electrical and Computer Engineering and Julian T. Hightower Chair of Systems and Controls.

Jeff is an IEEE Fellow (2006) and a recipient of the Donald P. Eckman Award of the American Automatic Control Council (1996).

Questions?

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