Distinguished Lectures
Spring 2017

Colorado State University's Information Science and Technology Center (ISTeC) *presents two lectures by*

Dr. Vikram Krishnamurthy
Professor
Cornell Tech
School of Electrical and Computer Engineering
Cornell University

ISTeC Distinguished Lecture

In conjunction with the Department of Electrical and Computer Engineering, and Department of Computer Science Seminar Series

"Social Learning and Controlled Sensing"

**Monday, Feb. 27, 2017
Reception with refreshments: 10:30 a.m.
Lecture: 11:00 a.m.-12:00 noon
Morgan Library Event Hall**

Department of Electrical and Computer Engineering, and Department of Computer Science Special Seminar *Sponsored by ISTeC*

"Structural Results in Controlled Sensing And Fusion"

**Tuesday, Feb. 28, 2017
Lecture: 2:00-3:00 p.m.
Lory Student Center 386**

Abstracts

Social Learning and Controlled Sensing
This talk deals with the statistical signal processing and controlled sensing of interacting social sensors. Social sensors are agents that provide information about their environment (state of nature) to a social network after interaction with other agents. The talk discusses how sequential detection and fusion can be achieved in multi-agent systems that perform social learning. The talk also discusses mean field dynamics in large scale interacting social sensing.

Structural Results in Controlled Sensing And Fusion
This talk has two parts. The first part is Bayesian and describes structural results for partially observed Markov decision processes in multi-agent systems when individual agents perform social learning. Two specific examples are considered. The first example deals with the so called constrained optimal social learning problem where the onset of herding is delayed by agents sharing full information. The second example deals with change detection when individual agents perform social learning.

The second part of the talk discusses regret based stochastic approximation algorithms for learning correlated equilibria in repeated games with Markov switched parameters. The convergence analysis involves differential inclusions.

Speaker Biography

Dr. Vikram Krishnamurthy is currently a professor at the ECE department at Cornell University and Cornell Tech.

He was also a professor and Canada Research Chair at University of British Columbia since 2002. His research interests are in statistical signal processing and stochastic control.

Dr. Krishnamurthy is a Fellow of IEEE. He has served as distinguished lecturer for the IEEE signal processing society. In 2013 he was awarded an honorary doctorate from KTH (Royal Institute of Technology), Sweden.

To arrange a meeting with the speaker, please contact Prof. Edwin Chong, 970-491-7855, edwin.chong@colostate.edu.

Upcoming Distinguished Lectures

March 31
"An Expanding and Expansive View of Computing"
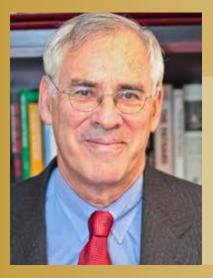**11:00 am-12:00 noon**

Morgan Library Event Hall
Dr. Jim Kurose

April 17
"End-To-End Earthquake Simulation: An Example of Verification, Validation, Data Analysis and Multi Scale Modeling in Computational Science and Engineering"
11:00 am-12:00 noon

Morgan Library Event Hall
Dr. Jacobo Bielak

April 24
"National Security and the Technology Tsunami: What is Swept Away?"
5:00-6:00 p.m.

Lory Student Center Theater
Dr. Richard Danzig

ISTeC (Information Science and Technology Center) is a university-wide organization for promoting, facilitating, and enhancing CSU's research, education, and outreach activities pertaining to the design and innovative application of computer, communication, and information systems. For more information please see ISTeC.ColoState.edu.