

Department of Computer Science  
University of Houston  
Seminar Fall 2010

**WHEN:** THURSDAY, NOVEMBER 11, 2010  
**WHERE:** PGH 563  
**TIME:** 3:00 PM

**Speaker:** Csaba Szepesvári, University of Alberta, Canada

**Host:** Dr. Rong Zheng

**Title:** Toward the Classification of Finite Partial Monitoring Games

**Abstract:**

Consider the problem of dynamic pricing when a seller sets a price for his product every day. Then, a buyer comes and decides a maximum price he is willing to buy for. If the seller's price is higher than that of the buyer's, no transaction happens, the seller suffers some constant loss and receives the feedback "no". Otherwise the loss of the seller is the difference between the two prices and the feedback is "yes". The seller's goal is to maximize its revenue for the worst sequence of buyers. This problem is an instance of adversarial partial monitoring games. We investigate the question of how to play in games like this in an optimal fashion. In particular, we make the first steps toward classifying these games from the point of view of their minimax regret. Some interesting open problems are also outlined.

**Bio:**

Csaba Szepesvári received his PhD in 1999 from "Jozsef Attila" University, Szeged, Hungary. He is currently an Associate Professor at the Department of Computing Science of the University of Alberta and a principal investigator of the Alberta Ingenuity Center for Machine Learning. Previously, he held a senior researcher position at the Computer and Automation Research Institute of the Hungarian Academy of Sciences, where he headed the Machine Learning Group. Before that, he spent 5 years in the software industry. In 1998, he became the Research Director of Mindmaker, Ltd., working on natural language processing and speech products, while from 2000, he became the Vice President of Research at the Silicon Valley company Mindmaker Inc. He is the coauthor of a book on nonlinear approximate adaptive controllers, a recent short book on Reinforcement Learning, published over 100 journal and conference papers. He serves as the Associate Editor of IEEE Transactions on Adaptive Control and AI Communications, is on the board of editors of the Journal of Machine Learning Research and the Machine Learning Journal, and is a regular member of the program committee at various machine learning and AI conferences. His areas of expertise include statistical learning theory, reinforcement learning and nonlinear adaptive control.