

# Signal Processing Seminar

**#1) Milenkovic's Group Title:** Good-Turing and Small Attenuation Distribution Estimation in the Presence of Repetition Errors

**#2) Singer's Group Title:** Singer Signal Processing (SSP)

**Speakers:** Professor Olgica Milenkovic's Research Group  
Electrical and Computer Engineering – UIUC

Professor Andy Singer's Research Group  
Electrical and Computer Engineering – UIUC

**Date:** Wednesday, March 18, 2009

**Time:** 4:00 - 5:00 pm

**Where:** 4269 Beckman Institute

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**Milenkovic's Group Abstract:** We will review our recent work on generalizing Good-Turing techniques for small sample distribution estimators that operate on erroneously observed sequences. The errors are modeled as insertion and repetition errors, and the proposed algorithm combines expectation-maximization and Good-Turing estimation within an iterative framework.

**Singer's Group Abstract:** Abstract: We will give a brief overview of our on-going research including communication signal processing and stock portfolio prediction. In the communication area, we are working on channel estimation and low complexity receiver design for general wireless communication systems with special emphasis on underwater acoustic communications. Also we are working on turbo equalizer design and sparse OFDM transmission for underwater communication in time-varying environments. In the stock portfolio computation area, computationally efficient, no regret algorithms via factor graph based Bayesian priors will be discussed.