

Speaker: **Eva Czabarka**
 University of South Carolina

Monday, October 7, 2013
4:00 pm
Room: 258 Hurley Hall

Title: Connecting Sperner problems to mixed orthogonal arrays

Abstract:

Sperner's theorem states that the largest antichain in the subset lattice of a finite set is (one of the) largest levels. Since this theorem a plethora of Sperner-type problems have been proposed. Mixed orthogonal arrays are used in design of experiments, coding theory and many other areas. We found an unexpected connection between Sperner-type problems and mixed orthogonal arrays. We have explored this connection, proved an LYM-type inequality for more-part Sperner systems and multi-systems, and created new mixed orthogonal arrays using only simple rounding. This is joint work in part with H.K. Aydinian, K. Engel, P.L. Erdős and L.A. Székely.