Optimization and Parsimonious Modeling

Parsimony has been a central concept in statistical modeling and system identification. Model complexity is often captured by rank, sparsity, or other structural indicators. For modest-size problems, it is often possible to obtain globally optimal solutions. In recent years, a rather rich mathematical framework has emerged that allows computationally efficient treatment for a variety of such large-scale problems. Key among those are compressive sensing and techniques based on convex relaxation. The theme of this workshop is to encourage interaction between researchers with statistical modeling and optimization backgrounds. Mathematical subjects that are pertinent include functional analysis, convex optimization, high-dimensional geometry, statistics and probability theory.