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**Jonathan D Hauenstein\*** (jhauenst@nd.edu). *An Introduction to Multiobjective Optimization And Its Application To Finite Games*. Preliminary report.

Multiobjective Optimization is the optimization of vector-valued functions with respect to a given partial ordering. This introduction will focus on the standard coordinatewise partial ordering on  $R^n$  and its optimal points, called Pareto optimal solutions. As an application of Multiobjective Optimization, we show how to find equilibrium solutions of finite games, and compare Pareto optimal solutions with Nash equilibria. (Received January 18, 2007)