Multiobjective Optimization of Simulations with PARMOO

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Multiobjective optimization (MOO) problems are ubiquitous in science and engineering. In MOO, the optimization algorithm must balance the tradeoffs between multiple potentially conflicting objectives. For many of these problems, the underlying cost function is derived from a computationally expensive numerical simulation. In such situations, the computational cost of solving the MOO problem can be prohibitive. In this talk, we will discuss our ongoing work on PARMOO, a MOO framework that is designed to take advantage of parallel resources and exploit properties of the simulation.