



Designing Experiments to Fit Inverse Metamodels

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Abstract

Many simulation-based design optimization scenarios are driven by an underlying inverse problem. Rather than iteratively exercise the (computationally expensive) simulation to find a suitable design (i.e., match a target performance vector), one might instead iteratively exercise the simulation to fit an inverse approximation, and use the approximation to indicate designs meeting multivariate performance targets. This talk examines issues in defining optimal designs for fitting inverse approximations.

This is joint work with Max Morris, Iowa State.