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*An Application of Sequential Design for Multi-fidelity Computer Models*

The design and analysis of experiments on simulators of physical systems have become common practice in many physics-based applications. For many of these applications, the computer model can be run in different levels of fidelity. The question of how one should allocate the experimental resources is one of primary importance. It turns out that sequentially allocating the trials can improve the predictive ability of the final model. In this work, we consider an application where experimenters have a multi-fidelity simulator of radiative shocks and also real-world experimenters to consider. Allocating the simulator and experimental trials are the main issues.