

Bayesian variable selection for computer experiments

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In computer experiment, it is important to identify active input factors that significantly impact a complex system. Such active factors can be further used to improve model estimation accuracy. In this work, we propose a new and unified Bayesian framework to identify active factors. This framework is based on a widely used Gaussian process model and a novel approximation to simplify the computation. The performance of the proposed method is illustrated via simulations and real examples. This is a joint work with Ying Hung from Department of Statistics, Rutgers University.