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# A Bayesian Experimental Design Approach to Structural Health Monitoring

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Optimal system design for SHM involves two primary challenges. The first is the derivation of a proper performance function for a given system design. The second is the development of an efficient optimization algorithm for choosing a design that maximizes, or nearly maximizes the performance function. In this paper we will outline how an SHM practitioner can construct the proper performance function by casting the entire design problem into a framework of Bayesian experimental design. The approach demonstrates how the design problem necessarily ties together all steps of the SHM process.

## Ключевые слова:

## Содержание.

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