

MODEL ORDER REDUCTION METHODS FOR PARAMETERIZED MECHANICAL SYSTEMS

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ABSTRACT

For many-query and real-time applications arising in design, control and optimization, it is crucial to reduce the marginal cost associated with the approximation of the solution to the physical system of interest. Model Order Reduction (MOR) techniques aim at developing efficient and reliable Reduced Order Models of engineering systems, which can be advantageously used in the above-mentioned practices. Examples comprise the Reduced Basis method, the Proper Orthogonal Decomposition and tensor-based/hierarchical approaches. Goal of this Mini-Symposium is to present recent contributions to MOR techniques for computational mechanics, with a special emphasis on (but not limited to) Computational Fluid Dynamics problems.