

STOCHASTIC MODEL REDUCTION APPLIED TO INVERSE PROBLEMS

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Abstract. This article describes the use of Gaussian Processes in model reduction techniques with application to inverse problems. Mainly, the work is focused on the proper construction of the model approximation, namely on training process based on minimal number of learning samples, by making use of automatic samples selection through computed standard deviation of model prediction. An example of application of stochastic surrogate model for the paperboard characterization through biaxial tensile test and DIC measurements is also presented.