Prof. Fabio NOBILE
Mathematics Institute of Computational Science and Engineering - MATHICSE

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SEMINAR OF NUMERICAL ANALYSIS

➢ **WEDNESDAY 13 JULY 2016 - ROOM MA A1 10 - 16h15**

Dr. Joakim BECK (King Abdulla University of Sience and Technology, Saudi Arabia) will present a seminar entitled:

"Sequential Design with Mutual Information for Computer Experiments using Gaussian Process Models"

Abstract:

Computer simulators can be computationally expensive to run over a large number of input values, as required for optimization and various uncertainty quantification tasks. A common approach for the design and analysis of computer experiments is to employ Gaussian process models that provide an efficient way to perform regression from a limited set of simulation runs. Following this approach, we propose a sequential design algorithm MICE (mutual information for computer experiments) that adaptively selects the input values at which to run the computer simulator in order to maximize the expected information gain (mutual information) over the input space. The computational efficiency of the MICE algorithm compared to other algorithms is demonstrated by test functions and by a tsunami model.

Lausanne, 6 July 2016/FN/cr

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The MATHICSE seminars are announced at http://mathicse.epfl.ch/seminars