ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

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SEMINAR OF NUMERICAL ANALYSIS

➢ **WEDNESDAY 31 OCTOBER 2012 - ROOM GC A3 30 - 16h15**

Prof. Anthony Nouy, (Ecole Centrale de Nantes, France) will present a seminar entitled:

"Tensor-based numerical methods for the optimal model reduction of high-dimensional problems "

Abstract:

Tensor-based methods are receiving a growing attention for their use in high dimensional applications in scientific computing where functions of multiple parameters have to be approximated. These methods are based on the construction of tensor decompositions that provide approximate representations of functions on adapted low dimensional reduced bases. Here, we present algorithms that are able to directly construct an approximation of optimal tensor decompositions of the solution of equations in tensor format, without a priori information on the solution. Optimality can be achieved with respect to a desired metric. Connections with optimal model reduction will be discussed.

Lausanne, 4 September 2012 / DK/cr