



ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

Prof. Assyr Abdulle

Mathematics Institute of Computational Science and Engineering - MATHICSE

MATHICSE COLLOQUIUM

➤ **THURSDAY 11 JULY 2013 - ROOM MA A3 30 - 15h15**

Prof. Claude LE BRIS, (*CERMICS – ENPC, Marne-la-Vallée, France*) will present a colloquium entitled:

"Two examples of multiscale numerical problems"

Abstract:

We will present some recent mathematical and numerical contributions related to two multiscale problems. The first problem stems from our wish to model a periodic microstructure with embedded defects: our goal is then to construct a numerical approximation of the solution that is accurate at the vicinity of the defects. The second problem is a problem set on a perforated domains, with perforations possibly heterogeneously located throughout the domain. We introduce a MsFEM type approach well suited for the situation under consideration.

The works are joint works with Xavier Blanc (Paris 7) and Pierre Louis Lions (College de France) for the former problem, and Frederic Legoll (Ecole des Ponts) and Alexei Lozinski (Universite de Besancon) for the latter problem.

Lausanne, 8 may 2013/AA/cr

The seminars taking place at the Section of Mathematics are announced on internet address : [www
http://mathicse.epfl.ch/colloquium](http://mathicse.epfl.ch/colloquium)