ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

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SEMINAR OF NUMERICAL ANALYSIS

- **WEDNESDAY 13 JANUARY 2016 - ROOM MA A3 31 - 16h15**

Prof. Kathrin GLAU (TU, Munich, Germany) will present a seminar entitled:

« Magic Point Empirical Interpolation: Parametric Integration and Applications"

Abstract:

We derive analyticity criteria for explicit error bounds and an exponential rate of convergence of the magic point empirical interpolation method introduced by Barrault et al. (2004). Furthermore, we investigate its application to parametric integration. We find that the method is well-suited to Fourier transforms and has a wide range of applications in such diverse fields as probability and statistics, signal and image processing, physics, chemistry and mathematical finance. To illustrate the method, we apply it to the evaluation to recurrent option pricing problems in finance. Our numerical experiments display convergence of exponential order, even in cases where the theoretical results do not apply.

Lausanne, 16 December 2015/DK/cr
