ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

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SEMINAR OF NUMERICAL ANALYSIS

- **WEDNESDAY 8 MAI 2013 - ROOM CH B3 31 - 16h15**

***Prof. Siddhartha Mishra**, (ETH Zürich, Switzerland)* will present a seminar entitled:

"Arbitrarily high order numerical schemes that converge to entropy measure valued solutions of systems of hyperbolic conservation laws"

Abstract:

We start by arguing through numerical examples as to why entropy measure valued solutions are the appropriate solution concept for systems of conservation laws in several space dimensions. Two classes of numerical schemes are presented that can be shown to converge to entropy measure valued solutions. The first class are finite volume schemes based on entropy conservative fluxes and numerical diffusion operators, using a ENO reconstruction. The second class are space-time shock capturing discontinuous Galerkin (STDG) schemes. The schemes are compared on a set of numerical experiments. The lecture concludes with a discussion of efficient ways to compute measure valued solutions.

Lausanne, 20 March 2013/DK/cr
