

# Prof. Assyr Abdulle Mathematics Institute of Computational Science and Engineering - MATHICSE

### SEMINAR OF NUMERICAL ANALYSIS

#### WEDNESDAY 02 MAY 2012 - ROOM MA 12 - 16h15

Prof. J.M Sanz-Serna (University of Valladolid, Spain) will present a seminar intitled:

## "Averaging, old and new"

#### Abstract:

I shall begin by reviewing the main ideas behind the method of averaging to study rapidly oscillatory dynamical systems. Then I shall present a new way of finding explictly high-order averaged systems (joint work with A. Murua and P. Chartier). The new approach originated in the graph-theoretic/combinatorial techniques used nowdays to analyze numerical integrators and is also useful in the derivation of error estimates.

Lausanne, 25 April 2012/AA /vl

The seminars taking place at the Section of Mathematics are announced on internet address: http://mathicse.epfl.ch/seminars