

B. Buffoni – B. Dacorogna - H.M Nguyễn - Section Mathématiques

SEMINAIRE D'ANALYSE

➤ **VENDREDI 25 AVRIL 2014 à 15h15 - salle MA A331**

*Professeur **Habib Ammari** (ENS Paris, France) donnera une conférence sur le thème:*

« **Mathematical modeling in hybrid imaging** »

Abstract: Imaging techniques in medicine are for visualizing contrast information on the electrical, acoustic, optical, mechanical properties of tissues. They can be formulated as nonlinear inverse problems. The goal is to achieve good resolution, good stability, and high specificity. A standard approach for solving imaging problems is nonlinear optimization. In this talk, we will discuss emerging alternative approaches which include differential imaging, physics-based classification and identification approaches, and hybrid imaging. We will show resolution, stability, and specificity enhancements for a few modalities. These include spectroscopic admittivity imaging, conductivity imaging by Lorentz force, ultrasound modulated electromagnetic tomography, and optical coherence elastography.

Lausanne, le 17 avril 2014
BD/HMN/MM

Les séminaires qui ont lieu à la Section de Mathématiques sont annoncés sur Internet
<http://memento.epfl.ch/math/>