



Section Mathématiques

SEMINAIRE D'ANALYSE

➤ **VENDREDI 3 décembre 2010 à 15h15 à la salle MA A112**

Monsieur **Emanuele PAOLINI** (*Université de Florence, Italie*) donnera une conférence sur le thème:

"Origami and PDEs "

We will consider the problem of finding piecewise smooth maps whose gradient is an orthogonal matrix and which satisfy a Dirichlet boundary condition. We will see that these maps can be determined by their singular set, i.e., by the set of points where they are not differentiable. To satisfy the boundary condition we will need to construct a fractal singular set composed by modules with "self-similar" boundary conditions. We will also point out the relation with paper-folding and we will exploit this relation to build the base modules and hence complete some explicit constructions. The work presented has been done in collaboration with Bernard Dacorogna and Paolo Marcellini.

Lausanne, le 23 novembre 2010
BD/BB/JK/nk

Les séminaires qui ont lieu à la Section de Mathématiques sont annoncés sur Internet (<http://memento.epfl.ch/cgi-bin/memento/select?memento=MATHS>)