



ÉCOLE POLYTECHNIQUE  
FÉDÉRALE DE LAUSANNE

*Institut d'Analyse et Calcul Scientifique (IACS)  
Section Mathématiques*

## **SEMINAIRE D'ANALYSE**

➤ **VENDREDI 7 novembre 2008 à 16h.00 à la salle MA A1 12**

Monsieur **Erik WAHLEN** (*Lund University, Suède*) donnera une conférence sur le thème:

### **"EXISTENCE AND STABILITY OF SOLITARY WATER WAVES WITH VORTICITY"**

*"I will present a new Hamiltonian formulation for water waves with constant vorticity, which is similar to Zakharov's formulation in the irrotational setting. I will then show how this formulation can be used to construct solitary capillary-gravity waves using a variational approach known as the reduced energy-momentum method. The method, which was previously used in the context of irrotational flow, gives a form of stability as a side effect. The presence of vorticity requires some non-trivial extensions. This is joint work with Mark Groves (Loughborough University)."*

Lausanne, septembre 2008  
BB/BD

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Les séminaires qui ont lieu à la Section de Mathématiques sont annoncés sur Internet à l'adresse WWW ([http:// www.epfl.ch/cgi-bin/memento/memento](http://www.epfl.ch/cgi-bin/memento/memento))