



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

SEMINAIRE D'ANALYSE

➤ ***VENDREDI 20 novembre 2009 à 16h15 à la salle MA A330***

Monsieur Eugen VARVARUCA (Imperial College, Londres) donnera une conférence sur le thème:

"ON THE EXISTENCE OF EXTREME WAVES AND THE STOKES CONJECTURE WITH VORTICITY "

We present some recent results on singular solutions of the problem of travelling gravity water waves on flows with vorticity. We show that, for any nonpositive vorticity distribution, a sequence of large-amplitude regular waves converges to an extreme wave with stagnation points at its crests. This extreme wave is shown to have corners of 120 degrees at its crests, as conjectured by Stokes in 1880. Further extensions of the Stokes conjecture will also be presented. The results were obtained in collaboration with Ovidiu Savin (Columbia University, New York) and Georg Weiss (University of Tokyo).

Lausanne, le 10 novembre 2009
BD/BB/VL

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))