

B. Buffoni – B. Dacorogna – J. Krieger - H.M Nguyên – Mathematics Section



## > FRIDAY 23 NOVEMBER 2018 AT 14:15 - ROOM MAA331

## Prof. Birgit Schorkhuber

(Karlsruhe Institute of Technology - DE)

Will give a seminar entitled:

## « CO-DIMENSION ONE STABLE BLOWUP FOR THE SUPERCRITICAL CUBIC WAVE EQUATION »

## Abstract:

We consider the focusing cubic NLW on R<sup>d</sup>. This model is energy supercritical in dimensions greater or equal than five and it is well-known that stable blowup behavior is described (at least locally) by a trivial self-similar solution referred to as the ODE blowup solution. In this talk, we address finite-time blowup with a non-trivial limiting profile. In particular, it will be shown that the equation has an explicit non-trivial self-similar solution which is defined on the whole space and exists in all supercritical dimensions. For d = 7, we analyze its stability properties without any symmetry assumptions and show that it is co-dimension one stable (modulo symmetries) in the backward lightcone of the blowup point. This joint work with Irfan Glogic (University of Vienna).

Lausanne, November 7, 2018 KW/rb

The seminars are announced at http://memento.epfl.ch/maths/