

Inverse Problems Network Meeting 6

Thursday, 12th December 2019 - Friday, 13th December 2019

University of Manchester

Abstract of Talk

INVERSE PROBLEMS FOR NON-LINEAR PDES

Dr Lauri Oksanen
University College London

One of Slava Kurylev's last contributions to the field of inverse problems was a new approach to solve coefficient determination problems for non-linear partial differential equations. Together with M. Lassas and G. Uhlmann, he showed how to recover the conformal class of a Lorentzian manifold given a local source-to-solution map associated to a wave equation with a quadratic non-linearity on the manifold. Strikingly, their result covers a large class of geometric settings for which the corresponding problem for the linear wave equation is open. I will discuss some recent results inspired by their approach.