International Workshop on Nonlocal Models, PDEs and Applications

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Keynote n°1 : **Nikos KATZOURAKIS**
University of Reading, United Kingdom

Title : **Inverse optical tomography through PDE constrained optimisation in L^∞**

Fluorescent Optical Tomography (FOT) is a new bio-medical imaging method with wider industrial applications. It is currently intensely researched since it is very precise and with no side effects for humans, as it uses non-ionising red and infrared light. Mathematically, FOT can be modelled as an inverse parameter identification problem, associated with a coupled elliptic system with Robin boundary conditions. In this talk I will explain how one case utilise novel methods of Calculus of Variations in L^∞ to lay the mathematical foundations of FOT which is posed as a PDE-constrained minimisation problem in L^p and L^∞.

N. Katzourakis, Department of Mathematics and Statistics, University of Reading, Whiteknights, PO Box 220, Reading RG6 6AX, United Kingdom

E-mail address: n.katzourakis@reading.ac.uk