## Full discretization and regularization for the Calderón problem

ALESSANDRO FELISI[4]

In this talk, I will introduce the inverse conductivity problem for discontinuous conductivities, also known as the Calderón problem, which is an example of a parameter identification problem for elliptic PDEs. It is possible to recast it as a minimization problem whose solution is a good approximation of a solution to the original inverse problem. The objective functional contains a regularization term which is given by a total variation penalization and is characterized by a regularization parameter. The discretization involves at the same time the boundary measurements, the unknown conductivity and the solution to the direct problem. I will show how to precisely choose the regularization, electrodes size and mesh size parameters with respect to the noise level in such a way that the solution to the discrete regularized problem is meaningful. This is joint work with Luca Rondi (University of Pavia).

---

[4]Dipartimento di Matematica, Università degli Studi di Genova