

**MEETING ON TOMOGRAPHY AND  
APPLICATIONS  
MATHEMATICS DEPARTMENT, POLITECNICO DI MILANO  
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**Edge detection in Electrical Impedance Tomography**

**ABSTRACT** In this talk we will present a new imaging method able to reconstruct discontinuities (e.g. edges of inclusions) of an electrical conductivity from boundary voltage and current measurements. The method combines the high contrast sensitivity of Electrical Impedance Tomography with improved spatial resolution obtained through introduction of a nonphysical (virtual) variable. This talk presents the theoretical background of the method as well as numerical reconstructions. This is a joint work with A. Greenleaf, M. Lassas, S. Siltanen and G. Uhlmann.

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