

Inverse Problems in Tomography and Related Areas

The minisymposium will cover recent advances in tomographic imaging spanning from theoretical work (e.g. singularities, wave front set techniques), mathematical models for coming imaging modalities (phase contrast tomography, vector field tomography, hybrid imaging technologies such as opto-acoustic tomography, time-dependent tomography) to new instrumental devices (i.e. synchrotron imaging).

The minisymposium aims to bring together experts from different backgrounds who can contribute to general mathematical imaging methodologies, specific tomographic applications or related algorithmic aspects.

Organizers:

P. Maass, University of Bremen, Germany (pmaass@math.uni-bremen.de)

E. T. Quinto, Tufts University, USA (todd.quinto@tufts.edu)

Invited Speakers

J. Boman, J. Andersson, *Estimates with a priori bound for inverse local Radon transforms*
Stockholm University, Sweden, jabo@math.su.se; Royal Institute of Technology (KTH), Sweden

J. A. Burns, *Parameter estimation for delay differential equations with disturbances*, Virginia Polytechnic Institute, USA, jaburns@vt.edu

P. D\"ulk, *Parameter identification in a reaction diffusion equation arising from biochemical evolution of genes in embryogenesis*, University of Bremen, Germany, pduelk@math.uni-bremen.de

J. Frikel, Eric Todd Quinto, *How to characterize and decrease artifacts in photoacoustic tomography*, Tufts University and Helmholtz Center of Munich, Germany, j.frikel@gmx.de

S. Hamilton, A. Hauptmann, J. L. Mueller, S. Siltanen, *A novel data-driven D-bar reconstruction algorithm for experimental 2D electrical impedance tomography data*, University of Helsinki, Finland, sarah.hamilton9@gmail.com

J. Qiu, M. Jiang, Chang Liu, *A novel discretization method with geometric symmetry for image reconstruction*, Beijing Information Science & Technology University, China, qiujun@bistu.edu.cn

H. Kohn, *Lambda tomography as Feature reconstruction*, Universität des Saarlandes, Germany, kohr@num.uni-sb.de

V. Krishnan, *Inversion of a class of circular and elliptical Radon transforms*, Tata Institute of Fundamental Research Centre For Applicable Mathematics, India, vkrishnan@math.tifrbng.res.in

V. Nikitin, F. Andersson, M. Carlsson, *The exponential Radon Transform by using unequally spaced fast Laplace transforms*, Lund University, Sweden, viktor.nikitin@maths.lth.se

G. Rigaud, A. Lakhali, A.K. Louis, *Radon transform over Cormack-Type curves and applications in compton scattering tomography*, Saarland University, Germany, rigaud@num.uni-sb.de

C. Sebu, *3D Image Reconstruction Algorithm for Electrical Impedance Tomography Data Collected on Planar Electrode Arrays*, Oxford Brookes University, UK, csebu@brookes.ac.uk

R. C. Smith, *Bayesian model calibration in the presence of model uncertainty*, NC State University, USA, rsmith@ncsu.edu

T.T. Truong, *On a class of circular arc Radon transforms in the plane: geometric approach and applications to imaging tomography*, University of Cergy-Pontoise, France, truong@u-cergy.fr

K. Prieto-Moreno, O. Dorn, *Sparsity and total variation regularizations in optical tomography*, University of Manchester, UK, kernelenrique.prietomoreno@postgrad.manchester.ac.uk; kernelenrique.prietomoreno@postgrad.manchester.ac.uk

P. Elbau,
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