

Inverse Days

December 12-14, 2017, Oulu, Finland

Tuesday 12th

9:00 *Registration and coffee*

9:45 *Conference opening*

Session 1 (Aurora)

9:50 Yiqiu Dong

Keynote talk: *Directional Regularization for CT Reconstruction*

10:30 Samuli Siltanen

Electrical impedance tomography imaging via the Radon transform

11:00 Joonas Ilmavirta

X-ray tomography in periodic slabs

11:30 Tatiana Bubba

Shearlet-based regularization in sparse dynamic tomography

12:00 *Lunch*

Session 2 (Aurora)

13:00 Matti Lassas

Inverse problems for the Einstein-Maxwell equations

13:30 Jere Lehtonen

Tensor tomography on Cartan-Hadamard manifolds

14:00 Tracey Balehowsky

Recovering a Riemannian metric from least-area data

14:30 *Coffee*

Session 3 (Aurora)

15:00 Tommi Brander

Implementation of enclosure method for p -Laplacian

15:30 Tony Liimatainen

Determining the conformal class of anisotropic conductivity in a conformally invariant version of EIT

16:00 Zenith Purisha

Automated method for choosing regularization parameter: application to X-ray tomography

16:30 *Women in inverse problems*

18:30 *Icebreaker*

Tietomaa

Wednesday 13th

Session 4 (Aurora)

9:00 Nuutti Hyvönen

Generalized linearization techniques and smoothed complete electrode model

9:30 Gwenael Mercier

Convergence of solutions of TV-regularized linear inverse problems

10:00 Pingping Niu

On parameter identification of linear stochastic differential equations by Gaussian statistics

10:30 *Coffee*

Session 5 (Aurora)

11:00 Florian Faucher

Convergence of seismic Full Waveform Inversion and extension to Cauchy data

11:30 Timo Lähivaara

Characterization of porous materials using full-waveform inversion

12:00 *Lunch*

Session 6a (Aurora)

13:00 Petteri Piiroinen

Random walks, statistics and boundary value problems

13:30 Zhidong Zhang

Recovering an unknown source in a fractional diffusion equation

14:00 Antti Solonen

Grey Box Modeling of Marine Vessels via Bayesian Generalized Additive Models and Gaussian Processes

Session 6b (Rossi)

13:00 Otto Lamminpää

Likelihood-Informed Dimension Reduction in Atmospheric Remote Sensing

13:30 Jonatan Lehtonen

Atmospheric turbulence profiling with unknown power spectral density

14:00 Hari Nortunen

Obtaining shape and spin distributions of asteroid populations using scarce data

14:30 *Coffee*

Session 7a (Aurora)

15:00	Mohammad Pour-Ghaz	<i>Taking to the Field: Does the size of sensing skin matter?</i>
15:30	Neil Chada	<i>Hierarchical Ensemble Kalman Inversion</i>
16:00	Anne Wald	<i>Sequential subspace optimization for nonlinear inverse problems with an application in terahertz tomography</i>
16:30	FIPS board meeting (Aurora hall)	
17:00	FIPS meeting (Aurora hall)	

Session 7b (Rossi)

15:00	Aki Pulkkinen	<i>Synthetic schlieren tomography</i>
15:30	Matthew Ozon	<i>The estimation of the time varying parameters of the General Dynamic Equation for aerosols using the Kalman Filter</i>
16:00	Petri Varvia	<i>Gaussian process regression for forest attribute estimation from airborne laser scanning data</i>
19:00	<i>Dinner</i>	Restaurant Rauhala

Thursday 14th**Session 8** (Aurora)

9:00	Simopekka Vänskä	<i>Estimating cervical cancer progression with multiple hpv types from pre-vaccination era screening data</i>
9:30	Matti Hanhela	<i>Huber-penalty as a temporal prior for perfusion MRI</i>
10:00	Andreas Hauptmann	<i>Learning to reconstruct: Deep Learning and image reconstruction</i>
10:30	<i>Coffee</i>	

Session 9 (Aurora)

11:00	Nguyet Minh Mach	<i>Approximating idealised boundary data of Electrical Impedance Tomography by the Shunt Electrode measurements</i>
11:30	Matteo Santacesaria	<i>Reconstruction of a piecewise constant conductivity on a polygonal partition via shape optimization in EIT</i>
12:00	<i>Lunch</i>	

Session 10 (Aurora)

13:00	Tiangang Cui	<i>Subspace Accelerated MCMC on Function Spaces</i>
13:30	Janne Hakkarainen	<i>The aspects of prior-based dimension reduction Kalman filter</i>
14:00	Toni Karvonen	<i>Concentration inequalities for the extended Kalman–Bucy filter</i>
14:30	Sebastian Springer	<i>Correlation integral likelihood: a distance based characterizer and classifier for point clouds</i>
15:00	<i>Coffee</i>	