

Canberra Symposium on Regularization and Chemnitz Symposium on Inverse Problems on Tour

Monday, 19th November 2012

8:00 Registration

8:45 Welcome and Opening Remarks

Chair: Bob Anderssen

9:00 Jin Cheng (Fudan University Shanghai, China)
Ill-posedness and Tikhonov regularization in the study of inverse problems

9:45 Mark Lukas (Murdoch University, Australia)
Comparison of parameter choice methods for regularization of linear inverse problems

10:30 Morning Tea

Chair: Jin Cheng

11:00 Ronny Ramlau (Johannes Kepler University Linz, Austria)
Reconstruction methods for Adaptive Optics

11:45 Uno Hämarik (University of Tartu, Estonia)
On parameter choice in regularization methods in case of different information
about the noise level of the data

12:30 Lunch

Chair: Ronny Ramlau

13:30 Shuai Lu (Fudan University Shanghai, China)
Multiscale analysis for ill-posed problems with semi-discrete Tikhonov regularization

14:15 Alexandra Smirnova (Georgia State University, Atlanta, USA)
On further development of generalized Gauss-Newton-type regularization procedures

15:00 Afternoon Tea

Chair: Bernd Hofmann

15:30 Dinh Nho Hao (Vietnam Academy of Science and Technology, Vietnam)
Error estimates of the finite element method for identifying the diffusion coefficient
in an elliptic equation

16:15 Stephan Anzengruber (Chemnitz University of Technology, Germany)
Local regularization through variational filtering

Canberra Symposium on Regularization and Chemnitz Symposium on Inverse Problems on Tour

Tuesday, 20th November 2012

Chair: Bob Anderssen

9:00 Markus Hegland (Australian National University, Australia)
Regularisation theory based on variable Hilbert scales – theory and applications

9:45 Thorsten Hohage (University of Göttingen, Germany)
Newton-type methods for general data misfit terms

10:30 Morning Tea

Chair: Peter Mathé

11:00 Qinian Jin (Australian National University, Australia)
On the iteratively regularized Gauss-Newton method with general convex penalty

11:45 Thomas Schuster (Saarland University Saarbrücken, Germany)
Fast regularization methods in Banach spaces by sequential subspace optimization

12:30 Lunch

Chair: Qinian Jin

13:30 Radu Ioan Boț (Chemnitz University of Technology, Germany)
A Fenchel duality-based double smoothing technique for solving convex optimization problems with applications to image processing

14:15 Wei Wang (Fudan University Shanghai, China)
Minimization of Tikhonov regularization with sparsity constraints

15:00 Afternoon Tea

Chair: Jorge Zubelli

15:30 Thorsten Raasch (Johannes Gutenberg University, Mainz, Germany)
On the L-curve criterion in ℓ_1 regularization of linear discrete ill-posed problems

16:15 Klaus Frick (University of Göttingen, Germany)
Regularization of linear ill-posed problems by the augmented Lagrangian method

Canberra Symposium on Regularization and Chemnitz Symposium on Inverse Problems on Tour

Wednesday, 21st November 2012

Chair: Paul Eggermont

9:00 Lars Elden (Linköping University, Sweden)
Solving Cauchy problems for PDE's in 2D and 3D with variable coefficients using
Krylov methods

9:45 Hans-Jürgen Reinhardt (University of Siegen, Germany)
Regularization of Cauchy problems for elliptic equations in two dimensions

10:30 Morning Tea

Chair: Stephan Anzengruber

11:00 Masaaki Uesaka (University of Tokyo, Japan)
Inverse problems of a structured population model

11:45 Lunch

Excursion

Canberra Symposium on Regularization and Chemnitz Symposium on Inverse Problems on Tour

Thursday, 22nd November 2012

Chair: Mark Lukas

9:00 Sergei Pereverzyev (RICAM Linz, Austria)
Legendre polynomials as a recommended basis for numerical differentiation in the presence of square summable or stochastic white noise

9:45 Peter Mathé (Weierstrass Institute Berlin, Germany)
Using the discrepancy principle in statistical inverse problems

10:30 Morning Tea

Chair: Thomas Schuster

11:00 Anne Vanhems (Toulouse Business School, France)
Nonparametric instrumental regression with non-convex constraints

11:45 Frank Werner (University of Göttingen, Germany)
Convergence rates in expectation for Tikhonov-type regularization of inverse problems with Poisson data

12:30 Lunch

Chair: Sergei Pereverzyev

13:30 Esther Klann (Johannes Kepler University, Linz, Austria)
Regularization properties of Mumford-Shah type functionals with perimeter and norm constraints for linear ill-posed problems

14:15 Paul Eggermont (University of Delaware, USA)
Regularization parameter selection for ill-posed problems with weakly bounded noise

15:00 Afternoon Tea

Chair: Thorsten Hohage

15:30 Irina V. Melnikova (Urals State University, Russia)
Regularization of abstract stochastic problems

16:15 Sergios Agapiou (University of Warwick, UK)
Posterior contraction rates for Bayesian inverse problems

Canberra Symposium on Regularization and Chemnitz Symposium on Inverse Problems on Tour

Friday, 23rd November 2012

Chair: Markus Hegland

9:00 Jorge Zubelli (Institute of Pure and Applied Mathematics, Brazil)
Calibration of stochastic volatility models by convex regularization

9:45 Volker Michel (University of Siegen, Germany)
A greedy algorithm for geophysical tomography

10:30 Morning Tea

Chair: Hans-Jürgen Reinhardt

11:00 Philipp Kügler (RICAM, Vienna, Austria)
Moment fitting for parameter inference in stochastic biological models

11:45 Kamil Kazimierski (University of Bremen, Germany)
Sparse reconstructions in inverse medium scattering

12:30 Lunch

Chair: Dinh Nho Hao

13:30 Pierre Maréchal (Paul Sabatier University, France)
An entropy model for diffusion MRI

14:15 Garry Newsam (Defence Science & Technology Organisation, Australia)
Synthetic aperture imaging and the Radon transform over families of circles and ellipses

15:00 Afternoon Tea