

Contents

IPNet Digest	Volume 23, Number 01	January 2, 2016	2
IPNet Digest	Volume 23, Number 02	February 1, 2016	8
IPNet Digest	Volume 23, Number 03	February 28, 2016	17
IPNet Digest	Volume 23, Number 04	March 31, 2016	22
IPNet Digest	Volume 23, Number 05	May 1, 2016	29
IPNet Digest	Volume 23, Number 06	May 30, 2016	33
IPNet Digest	Volume 23, Number 07	July 1, 2016	37
IPNet Digest	Volume 23, Number 08	July 30, 2016	41
IPNet Digest	Volume 23, Number 09	August 30, 2016	46
IPNet Digest	Volume 23, Number 10	October 04, 2016	50
IPNet Digest	Volume 23, Number 11	October 31, 2016	55
IPNet Digest	Volume 23, Number 12	November 29, 2016.....	59

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topics:

Symposium: Abstract Submissions for Inverse Problems Symposium 2016

PhD Position: Large Scale Hydrodynamic Imaging in the Ocean

University Lectureship: Mathematics of Information

Table of Contents: Journal of Inverse and Ill-posed Problems

Table of Contents: Nonlinear Analysis: Modelling and Control

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: "McMasters, Robert L" <mcmastersrl@vmi.edu>

Subject: Inverse Problems Symposium Announcement

Date: December 21, 2015

Abstract submissions will accepted for the Inverse Problems Symposium for 2016

<http://inverseproblems2016.org>
starting on 15 January 2016.

The conference will be held in Lexington Virginia at the Virginia Military Institute 5-7 June 2016.

Topics included in the conference are listed below:

A. Mathematical and Statistical Aspects of Inverse Problems

1. Theory and Methods of Inverse Problems
2. Stability and Error Analysis

B. Design of Experiments

1. Optimal Design of Experiments
2. Analysis of Actual Experimental Data

C. Applications

1. Heat Transfer, Applied Mechanics, Controls, Other
Engineering Disciplines

2. Biology, Biochemistry, Genetics, and Medicine
3. Nondestructive Evaluation
4. Nanoengineering
5. Tomography and Inverse Scattering
6. Geology and Environmental Phenomena
7. Economics
8. Food and Bioprocessing
9. Bioengineering
10. Packaging

Submitted by: Bob McMasters

From: "Smith, Lynn" <L.Smith@hw.ac.uk>

Subject: 3 Yr PhD: LAKHsMI - Large Scale Hydrodynamic Imaging in the Ocean

Date: December 4, 2015

Immediately Available: 3 Yr PhD: LAKHsMI - Large Scale Hydrodynamic Imaging in the Ocean

3 year PhD Position: Ocean Systems Laboratory, Edinburgh Centre for Robotics, Heriot-Watt University

Immediate Start

LAKHsMI: Large Scale Hydrodynamic Imaging in the Ocean From An Artificial Lateral Line

A three-year PhD by research position is available based in the Ocean Systems Laboratory at Heriot-Watt University and affiliated to the Edinburgh Centre for Robotics, starting as soon as possible as part of the LAKSHMI EU H2020 Blue Growth 09 programme 2015-2019.

PROJECT:

LAKHsMI will develop a new bio-inspired technology to make continuous and cost-effective measurements of the near-field, large-scale hydrodynamic situation for environmental monitoring in cabled ocean observatories, performance and damage detection in marine renewable energy and unwanted ingress in port/harbor security. The project will design, manufacture, and field test prototype smart sensor cables that measure differential pressure and temperature on the ocean floor, enabling high resolution imaging of the surrounding volume in space and time through simple, inexpensive, very low power transduction. The cables can be connecting with existing cabled ocean observatories. The technology is inspired by the biophysics of fish hydrodynamic sensing and is scalable from meters to possibly hundreds of kilometers with a high sampling frequency. Software interfaces developed in the course of the project will be integrated with existing observatory systems (such as EUROGOOS). Tests will be conducted in a tank, a pool, and in an ocean observatory. The project involves a consortium of engineers, computer scientists, oceanographers, environmentalists and companies, from Tallinn, Groningen, Aberdeen, Orkney and Edinburgh.

The PhD:

The PhD will research novel signal processing techniques for imaging hydrodynamic activities in the water column at a variety of resolutions and ranges. It will also research suitable embedded detection and classification approaches for significant or relevant hydrodynamic events using the array data. These are intended to produce useful information products for interdisciplinary oceanography and seismic geophysics, tracking fish and fish schools, (sub)surface traffic in harbours and marine renewable turbine performance.

Applications are sought from interested EU CITIZENS ONLY with MSc (Distinction) or 1st class honours degree (or equivalent) in electrical and electronic engineering, signal processing, applied mathematics or robotics, and with practical aptitudes/interests in field trials with sensors. Interests and skills in probabilistic methods, beamforming approaches and fluid dynamics would be an advantage. Some practical electrical engineering skills for data acquisition from the sensor array are also expected.

The position is of three years duration, starting as soon as possible, with all fees covered and an annual stipend of up to £15k.

Further reading:

Yingchen Yang et al, Distant touch hydrodynamic imaging with an artificial lateral line. Proc Natl Acad Sci U S A. 2006 Dec 12; 103(50): 18891- <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1748147/>

Curcic-Blake B and Netten S M v 2006 Source localization encoding in the fish lateral line J. Exp. Biol. 209 1548-59

Institution:

The Edinburgh Centre for Robotics (ECR) is a £35M joint venture between Heriot-Watt University and the University of Edinburgh, supported by EPSRC, Industry and the Universities. It captures the expertise of over 30 principle investigators of international standing from 12 cross-disciplinary research groups and institutes across the Schools of Engineering and Physical Sciences, Informatics and the Department of Computer Science The Centre includes an EPSRC Centre for Doctoral Training in Robotics and Autonomous Systems which trains innovation-ready postgraduates, and ROBOTARIUM, a £7.2M national capital equipment facility. This studentship will be affiliated with the Centre.

Annual Report:

<https://www.dropbox.com/s/7k1ro8y7xkue8oq/2015.10.12%20ECR%20Annual%20Review14-15%20%28final%29.pdf?dl=0>

The Ocean Systems Laboratory at Heriot-Watt University, Edinburgh is a multidisciplinary science and engineering research centre that innovates, applies and teaches world class advances in autonomous systems, sensor modelling/processing, and underwater acoustic system theory/design for offshore, marine science, renewable energy and security applications. It has a world class reputation, spinning out companies of the calibre of <http://www.seebyte.com> <http://www.codaoctopus.com> and <http://www.hydrason.com>

Further information:

Contact: Professor David Lane FREng FRSE david.lane@edinburgh-robotics.org Edinburgh Centre for Robotics: www.edinburgh-robotics.org
Ocean Systems Laboratory: <http://www.oceansystemslab-heriotwatt.com>
<https://www.youtube.com/user/oceanslabheriotwatt>

From: Mathematics HR Office <HR-Office@maths.cam.ac.uk>
Subject: Vacancy: University Lectureship in the Mathematics of Information, University of Cambridge
Date: December 22, 2015

Applications are invited for a University Lectureship in the Mathematics of Information at the University of Cambridge in the Department of Applied Mathematics and Theoretical Physics (DAMTP) to commence on 1 September 2016 or by agreement. Appointment will be made at an appropriate point on the University scale (£38,896-£49,230) and will be for a probationary period of five years with appointment to the retiring age thereafter, subject to satisfactory performance.

Candidates should hold a PhD or equivalent in mathematics or a closely related subject, and have an outstanding record of research in the mathematics of data science. Preference will be given to experts in

applied and computational analysis. Willingness to engage in an interdisciplinary and cross-cutting research is very desirable.

This Lectureship is affiliated with the new Cantab Capital Institute for Mathematics of Information which is hosted within the Faculty of Mathematics. It accommodates research activity on fundamental mathematical problems and methodology for understanding, analysing, processing and simulating data. Data science research performed in the Institute is at the highest international level, aiming to extract the relevant information from large- and high-dimensional data with a predictable certainty.

For further information on the position as well as instructions on how to apply please go to the Cambridge University Job Opportunities page at <http://www.jobs.cam.ac.uk/job/8736/>

Submitted by: Tracey Flack, HR Office Administrator (Mornings Only)
Department of Applied Mathematics & Theoretical Physics and
Department of Pure Mathematics & Mathematical Statistics
University of Cambridge, Centre for Mathematical Sciences
Wilberforce Road, Cambridge CB3 0WA
Tel: +44 (0)1223 760533

From: <noreply@degruyter.com>
Subject: Contents, 'Journal of Inverse and Ill-posed Problems'
Date: December 1, 2015

Journal of Inverse and Ill-posed Problems December 2015 Volume 23,
Issue 6

Table of Contents

On a mixed problem for the parabolic Lamé type operator
Puzyrev, Roman / Shlapunov, Alexander

Mixed spatially varying L2-BV regularization of inverse ill-posed
problems
Mazzieri, Gisela L. / Spies, Ruben D. / Temperini, Karina G.

Global uniqueness and stability in determining the electric potential
coefficient of an inverse problem for Schrödinger equations on Riemannian
manifolds
Triggiani, Roberto / Zhang, Zhifei

On fractional Tikhonov regularization
Gerth, Daniel / Klann, Esther / Ramlau, Ronny / Reichel, Lothar

Finding scattering data for a time-harmonic wave equation with first
order perturbation from the Dirichlet-to-Neumann map
Agaltsov, Alexey D.

Inverse problems for variable order differential operators with regular
singularities on graphs
Yurko, Vjacheslav A.

Regularization strategy for determining laser beam quality parameters
Regińska, Teresa / Regiński, Kazimierz

Stochastic algorithms for solving linear and nonlinear inverse ill-posed problems for particle size retrieving and x-ray diffraction analysis of epitaxial films

Sabelfeld, Karl K. / Mozartova, Nadezhda S.

Fast Toeplitz linear system inversion for solving two-dimensional acoustic inverse problem

Kabanikhin, Sergey I. / Novikov, Nikita S. / Oseledets, Ivan V. / Shishlenin, Maxim A.

<http://www.degruyter.com/view/j/jiip.2015.23.issue-6/issue-files/jiip.2015.23.issue-6.xml>

Walter De Gruyter GmbH Genthiner Straße 13 D-10785 Berlin T +49 30 260 05-0 F +49 30 260 05-251 degruyter.com Customer Service service@degruyter.com

From: Romas Baronas <romas.baronas@mif.vu.lt>
Subject: Table of Contents, Nonlinear Analysis: Modelling and Control 21:1
Date: December 1, 2015 at 11:49:41 AM PST
To: <ipnet-digest@math.msu.edu>

Nonlinear Analysis: Modelling and Control 2016 Volume 21, Number 1
Table of Contents

Positive solutions for a class of fractional boundary value problems
Jiafa Xu, Zhongli Wei

Optimal control problem for Lengyel-Epstein model with obstacles and state constraints
Jiashan Zheng

On fixed point results for α -implicit contractions in quasi-metric spaces and consequences
Hassen Aydi, Manel Jellali, Erdal Karapinar

New synchronization criteria for an array of neural networks with hybrid coupling and time-varying delays
Yanke Du, Rui Xu

Spatiotemporal superposed rogue-wave-like breathers in a (3+1)-dimensional variable-coefficient nonlinear Schrödinger equation
Hai-Ping Zhu, Ya-Jiang Chen

Projection error evaluation for large multidimensional data sets
Kotryna Paulauskiene, Olga Kurasova

Fixed points for Kannan type contractions in uniform spaces endowed with a graph
Aris Aghanians, Kourosh Nourouzi

Boundary value problem with integral condition for a Blasius type equation
Sergey Smirnov

On the optimality of some multi-point methods for finding multiple roots of nonlinear equation
Nebojsa M. Ralevic, Dejan Cebic

Modelling of water droplets heat and mass transfer in the course of phase transitions: I. Phase transitions cycle peculiarities and iterative scheme of numerical research control and optimization
Gintautas Miliauskas, Arvydas Adomavicius, Monika Maziukiene

A free on-line edition is available at: <http://www.mii.lt/NA/>

----- end -----

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topics:

Workshop: Mathematical/Computational Aspects of Tomographic Imaging (HD-Tomo Days)

Conference: Inverse Problems in Engineering (ICIPE 2017)

Conference: Discrete Optimization and Operations Research (DOOR2016)

Research Fellow: In Bayesian Inverse problems, Optimization, Imaging

Special Issue: On Image Processing and Analysis, in JSIP

Table of Contents: Inverse Problems

Table of Contents: Inverse Problems in Science and Engineering

Table of Contents: Electronic Transactions on Numerical Analysis

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: " Yiqiu Dong" <yido@dtu.dk>

Subject: Workshop Announcement: HD-Tomo Days, April 2016, Denmark

Date: January 14, 2016

Workshop announcement: HD-Tomo Days

Technical University of Denmark, 6-8 April 2016

This workshop aims at bringing together researchers who are interested in mathematical and computational aspects of modern tomographic imaging methods that build on advanced PDE analysis, regularization theory, and optimization. The workshop features invited talks, contributed talks, poster presentations, and dedicated discussion sessions.

Prior to this workshop, there will be a Training School on Algebraic Reconstruction Methods in Tomography (4-6 April 2016) at the Technical University of Denmark as part of EXTREMA COST Action MP1207.

See the homepage

<http://hd-tomo-days.compute.dtu.dk/>

for more information. Participation is free but registration is mandatory. The deadline of registration is on February 29, 2016.

On behalf of the organizers:

Martin S. Andersen

Yiqiu Dong

Mirza Karamehmedovi?

Ekaterina Sherina

Kim Knudsen.

Submitted by: Dr. Yiqiu Dong, Department of Applied Mathematics and Computer Science,

Technical University of Denmark, 2800 Kgs. Lyngby Denmark

Tel: +45 4525 3108 Homepage: <http://www2.compute.dtu.dk/~yido/>

From: Kyle Daun <kjdaun@uwaterloo.ca>

Subject: International Conference on Inverse Problems in Engineering
(ICIPE 2017) Announcement
Date: January 27, 2016

The 9th International Conference on Inverse Problems in Engineering

The conference will be held May 24-27, 2017 at the University of Waterloo. Waterloo is an interesting study of contrast: it is the centre of Canada's high tech industry, while the surrounding countryside is pastoral, and features beautiful farms, rolling hills, and communities of old-order Mennonites. Further afield, Toronto, Canada's largest city, Niagara Falls and the Niagara Peninsula, famous for its vineyards, and Stratford Ontario, famous for its theatre festival, are all within a 90 minute drive. 2017 also marks the 150th anniversary of Canada, so there will be many special festivities highlighting the history and culture of our country.

Traveling to Waterloo is quite straightforward: international visitors can arrive at Pearson International Airport (west of Toronto) and Waterloo is approximately one additional hour by ground transportation. Visitors from the United States may also wish to drive (~2 hrs from Buffalo NY, ~3 hrs from Detroit MI) or fly into Buffalo airport and take ground transportation to Waterloo.

We have put together a website (under development) at icipe17.uwaterloo.ca, and I have attached a conference flier. The preliminary publication timeline is:

- Abstract submission: October 15th, 2016
- Abstract acceptance notification: November 1st, 2016
- Paper submission deadline: January 1st, 2017
- Paper acceptance notification: February 15th, 2017
- Final paper submission deadline: March 1st, 2017

We would be grateful if you could disseminate the call-for-papers to your colleagues in inverse analysis. We hope to have good attendance from around the world.

We are very excited about hosting you in Waterloo!

Best regards,

Kyle and Sriram

Kyle J. Daun, PhD, P. Eng.
Conference Chair
Associate Professor
Department of Mechanical and Mechatronics Engineering
University of Waterloo

Sriram Narasimhan, PhD, Peng
Conference Co-chair
Canada Research Chair in Smart Infrastructure and Associate Professor,
Civil & Environmental Engineering
University of Waterloo

From: Nurminski E.A. <nurmi@dvo.ru>

Subject: International Conference on Discrete Optimization and Operations Research

September 19-23, 2016 Vladivostok, Russky Island, Russia.

Date: January 21, 2016

Call for submissions.

International Conference on Discrete Optimization and Operations
Research, DOOR2016,
Sept. 19-23, 2016 Vladivostok, Russky Island, Russia.

See details on the conference website and visit it again as it is
continuously updated with more information:
<http://www.math.nsc.ru/conference/door/2016/>.

The conference is organized by Far Eastern Federal University, Sobolev
Institute of Mathematics Siberian Branch of RAS, Novosibirsk State
University, Higher School of Economics, Nizhny Novgorod.

Main Topics:

Mathematical programming
Mathematical models and methods for decision making
Integer programming and polyhedral combinatorics
Bilevel programming and multicriteria optimization
Computational complexity and polynomial time approximation
Optimization problems in machine learning and data mining
Discrete optimization in scheduling, routing, bin packing, locations,
and optimization problems on graphs
Applications of operations research

Important Dates

Paper submission - April, 15, 2016
Notification of acceptance - June, 1, 2016
Payment of the registration fee - July, 1, 2016
Preliminary program - September, 1, 2016
Conference days - September, 19-23, 2016

Co-Chairs of Program Committee:

Professor Evgeny Nurminski (FEFU, Vladivostok, Russia)
Professor Vladimir Beresnev (SIM, Novosibirsk, Russia)
Professor Panos Pardalos (HSE, Nizhny Novgorod, Russia, University of
Florida, USA)

English and Russian are the working languages of the Conference.
Proceedings will be prepared as a volume of Lecture Notes in Computer
Science, by Springer.

For the complete First Call click on "The First Call for papers" on the
above website.

From: Alexandre THIERY <a.h.thiery@nus.edu.sg>
Subject: Immediately Available: Research Fellowship in Bayesian Inverse
Problems /
Optimization at the National University of Singapore
Date: February 1, 2016

A research fellow position in
Bayesian Inverse problems / Optimization / Imaging
at the National University of Singapore, under the supervision
of Dr Alex Thiery (NUS) and Dr Cuong Dang (NTU) is available.

PhD in statistics, optimization, computer science, applied
mathematics, engineering, machine learning or a related discipline is

required. Strong research track record is essential.

Duration: 1 years, renewable up to two years

Starting date: As soon as possible

Salary Range: 60k to 75k SGD

Research travel budget available.

Application closing date: March, 2016

More information:

http://www.normalesup.org/~athierry/imaging_fellowship.pdf

For informal inquiries, contact Alex Thiery

(a.h.thiery at nus.edu.sg<mailto:a.h.thiery at nus.edu.sg>).

From: Journal of Signal and Information Processing
<jsip@scholarsletter.com>
Subject: Special Issue on "Image Processing and Analysis"
Date: January 25, 2016

Special Issue on
"Image Processing and Analysis"
Submission Deadline: April 12th, 2016

The Journal of Signal and Information Processing (JSIP), a peer-reviewed open-access journal, is seeking papers for the upcoming special issue on "Image Processing and Analysis". We would like to invite you to submit papers to this issue through our Paper Submission System.

Aims & Scope (not limited to the following fields)

Analog image processing
Computer graphics
Digital image processing
Electronic imaging
Feature extraction
Graphics processing units
Image enhancement
Image mining
Image registration
Image sharpening and restoration
Magnetic resonance imaging
Medical imaging
Pattern recognition

Best regards,
Prof. Baozong Yuan (Beijing Jiaotong University, China)
Editor-in-Chief
JSIP Editorial Office E-mail: jsip@scirp.org
Principal Place of Business: Building 5, Headquarters Space of Optical Valley, Tangxun Lake North Road #38, East Lake High-Tech Development Zone, Wuhan 430223, Hubei Province, China.
For ease of communication: Scientific Research Publishing Inc., P. O. BOX 54821, Irvine CA 92619-4821, USA.

From: <noreply@iopscience.org>
Subject: Inverse Problems, Volume 32, Number 1, January 2016
Date: January 3, 2016

The generalized Legendre transform and its applications to inverse spectral problems

Victor Guillemin and Zuoqin Wang

On the unique reconstruction of induced spherical magnetizations

Christian Gerhards

Near-field imaging of obstacles with the factorization method: fluid-solid interaction

Tao Yin, Guanghui Hu, Liwei Xu, and Bo Zhang

Uniqueness in inverse boundary value problems for fractional diffusion equations

Zhiyuan Li, Oleg Yu Imanuvilov, and Masahiro Yamamoto

Two reconstruction procedures for a 3D phaseless inverse scattering problem for the generalized Helmholtz equation

Michael V Klibanov and Vladimir G Romanov

Numerical approximation of the potential in the two-dimensional inverse scattering problem

Juan A Barceló, Carlos Castro, and Juan M Reyes

A penalty method for PDE-constrained optimization in inverse problems

T van Leeuwen and F J Herrmann

Edge-promoting reconstruction of absorption and diffusivity in optical tomography

A Hannukainen, L Harhanen, N Hyvönen, and H Majander

On the reconstruction of unknown time-dependent boundary sources for time fractional diffusion process by distributed measurement

J J Liu, M Yamamoto, and L L Yan

An ill-posed problem for the Black-Scholes equation for a profitable forecast of prices of stock options on real market data

Michael V Klibanov, Andrey V Kuzhuget, and Kirill V Golubnichiy

An undetermined coefficient problem for a fractional diffusion equation

Zhidong Zhang

On artifacts in limited data spherical Radon transform: curved observation surface

Lyudmyla L Barannyk, Jürgen Frikel, and Linh V Nguyen

<http://iopscience.iop.org/0266-5611/32/1/email-alert/1146947108>

From: "McAtee, Harriet" <Harriet.McAtee@tandf.co.uk>

Subject: Contents, Inverse Problems in Science and Engineering

Date: January 11, 2016

Inverse Problems in Science and Engineering March 2016 Vol. 24,
Issue 2

Table of Contents

Robust inversion for material parameters identification from correlated outlying observations
N. Benaraba, D. Yebdri & F. Touati

Regularization of the inverse heat conduction problem by the discrete Fourier transform
Agnieszka Wróblewska, Andrzej Fr?ckowiak & Micha? Cia?kowski

Identification of materials in a hyperbolic annular fin for a given temperature requirement
Ranjan Das

Inverse spectral problem for Dirac operator with discontinuous coefficient and polynomials in boundary condition
Aynur Çöl

A fast Bayesian approach using adaptive densifying approximation technique accelerated MCMC
W. Zhang, J. Liu, C. Cho & X. Han

Damage identification in plates based on the ratio of modal strain energy change and sensitivity analysis
Z.T. Wei, J.K. Liu & Z.R. Lu

Recovery of parameters of cancellous bone by acoustic interrogation
Robert P. Gilbert, Philippe Guyenne & Michael Shoushani

Inversion of the seismic parabolic Radon transform and the seismic hyperbolic Radon transform
Sunghwan Moon

Back-projection inversion of a conical Radon transform
J. Cebeiro, M. Morvidone & M.K. Nguyen

Inverse Problems in Science and Engineering April 2016 Vol. 24,
Issue 3

Table of Contents

A stochastic approach to quantifying the blur with uncertainty estimation for high-energy X-ray imaging systems
Michael J. Fowler, Marylesa Howard, Aaron Luttmann, Stephen E. Mitchell & Timothy J. Webb

Bearing dynamic parameters identification of a flexible rotor-bearing system based on transfer matrix method
Wengui Mao, Xu Han, Guiping Liu & Jie Liu

A Gauss-Newton full-waveform inversion for material profile reconstruction in viscoelastic semi-infinite solid media
A. Pakravan, J.W. Kang & C.M. Newton

Structural damage identification using transfer matrix with lumped crack properties
P. Nandakumar & K. Shankar

Logical inference for inverse problems
G. Rus, J. Chiachìo & M. Chiachìo

Quasi-optimal Tikhonov penalization and parameterization coarseness in space-dependent function estimation

F. Dubot, Y. Favennec, B. Rousseau, Y. Jarny & D.R. Rousse

A methodology for identification of damage in beams

Nilson Barbieri, Renato Barbieri & Hugo Augusto Tupan Silva

Model updating of a rotating machine using the self-adaptive differential evolution algorithm

Aldemir Ap Cavalini Jr., Fran SÈrgio Lobato, Edson Hideki Koroishi & Valder Steffen Jr.

Sparsity prior for electrical impedance tomography with partial data

Henrik Garde & Kim Knudsen

www.tandfonline.co.uk/gipe

Submitted by: Harriet McAtee

Editorial Assistant: Mathematics | Statistics | History of Science | Science, Technology & Society

Taylor & Francis / Routledge Journals

4 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN, UK.

e-mail: harriet.mcatee@tandf.co.uk Direct Line: +44 (20) 701 76022

From: Lothar Reichel <reichel@math.kent.edu>

Subject: ToC, ETNA, vol. 44, 2015

Date: January 3, 2016

Electronic Transactions on Numerical Analysis (ETNA) 2015 Volume 44
Table of Contents

Structure preserving deflation of infinite eigenvalues in structured pencils

V. Mehrmann and H. Xu

Analysis of smoothed aggregation multigrid methods based on Toeplitz matrices

M. Bolten, M. Donatelli, and T. Huckle

On the development of parameter-robust preconditioners and commutator arguments for solving Stokes control problems

J. W. Pearson

Revisiting the stability of computing the roots of a quadratic polynomial

N. Mastronardi and P. Van Dooren

S. Gazzola, P. Novati, and M. R. Russo

On Krylov projection methods and Tikhonov regularization

Iterative methods for symmetric outer product tensor decomposition

N. Li, C. Navasca, and C. Glenn

Explicit formulas for Hermite-type interpolation on the circle and applications

E. Berriochoa, A. Cachafeiro, J. Diaz, and J. Illan

Quasi-optimal convergence rates for adaptive boundary element methods with data approximation. Part II: hyper-singular integral equation

M. Feischl, T. Fuhrer, M. Karkulik, J. M. Melenk, and D. Praetorius

Randomized methods for rank-deficient linear systems
J. Sifuentes, Z. Gimbutas, and L. Greengard

Fast solution of boundary integral equations with the generalized Neumann kernel
M. M. S. Nasser

BEM-based finite element tearing and interconnecting methods
C. Hofreither, U. Langer, and C. Pechstein

A convergent linear finite element scheme for the Maxwell-Landau-Lifshitz-Gilbert equations
L. Banas, M. Page, and D. Praetorius

On the discrete extension of Markov's theorem on monotonicity of zeros
K. Castillo and F. R. Rafeali

Fast algorithms for spectral differentiation matrices
J. L. Aurentz

An implicit finite difference approximation for the solution of the diffusion equation with distributed order in time
N. J. Ford, M. L. Morgado, and M. Rebelo

Roundoff error analysis of the CholeskyQR2 algorithm
Y. Yamamoto, Y. Nakatsukasa, Y. Yanagisawa, and T. Fukaya

Fast and stable unitary QR algorithm
J. L. Aurentz, T. Mach, R. Vandebril, and D. S. Watkins

The fast bisection eigenvalue method for Hermitian order one quasiseparable matrices and computations of norms
Y. Eidelman and I. Haimovici

Efficient preconditioners for PDE-constrained optimization problem with a multilevel sequentially semiseparable matrix structure
Y. Qiu, M. B. van Gijzen, J.-W. van Wingerden, M. Verhaegen, and C. Vuik

An overview of multilevel methods with aggressive coarsening and massive polynomial smoothing
J. Brousek, P. Frankova, M. Hanus, H. Kopincova, R. Kuzel, R. Tezaur, P. Vanek, and Z. Vastl

Edge-based Schwarz methods for the Crouzeix-Raviart finite volume element discretization of elliptic problems
A. Loneland, L. Marcinkowski, and T. Rahman

High-order modified Tau method for non-smooth solutions of Abel integral equations
P. Mokhtary

Algebraic distance for anisotropic diffusion problems: multilevel results
A. Brandt, J. Brannick, K. Kahl, and I. Livshits

A two-level overlapping Schwarz method for $H(\text{curl})$ in two dimensions with irregular subdomains
J. G. Calvo

Preconditioned Recycling Krylov subspace methods for self-adjoint problems

A. Gaul and N. Schlomer

Laminar-turbulent transition in pipe flow: wall effects and critical Reynolds number

H. Kanda

Discontinuous Galerkin discretizations of optimized Schwarz methods for solving the time-harmonic Maxwell's equations

M. El Bouajaji, V. Dolean, M. J. Gander, S. Lanteri, and R. Perrussel

SVD of Hankel matrices in Vandermonde-Cauchy product form

Z. Drmac

Perturbation of partitioned linear response eigenvalue problems

Z. Teng, L. Lu, and R.-C. Li

Monotone-comonotone approximation by fractal cubic splines and polynomials

P. Veedu Viswanathan and A. Kumar Bedabrata Chand

Polynomial interpolation in nondivision algebras

G. Opfer

ETNA is available at <http://etna.math.kent.edu> and at several mirror sites. ETNA is in the extended Science Citation Index and the CompuMath Citation Index

----- end -----

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topics:

Conference: Mathematical Modelling and Analysis, with Inverse & Ill-Posed Problems

Meeting: LMS Inverse Day on BIG Inverse Problems

Symposium: Chemnitz Symposium on Inverse Problems 2016

Symposium Update: Inverse Problems Symposium 2016

Postdoctoral Position: Project on Sparsity-inspired Signal and Image Modeling

Postdoctoral Positions: Mathematical and Statistical Analysis of Multimodal Clinical Imaging

Table of Contents: Journal of Inverse and Ill-posed Problems

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: Uno Hämarik <Uno.Hamarik@ut.ee>

Subject: Conference: Mathematical Modelling and Analysis, Estonia, June 2016

Date: February 6, 2016

The 21th International Conference "Mathematical Modelling and Analysis" (MMA2016) 2016, June 1-4, Tartu, Estonia

<http://www.ut.ee/mma2016/>

Conference topics:

Modelling and Analysis of Problems of Mathematical Physics and Engineering

Approximation Methods for Differential, Integral and Operator Equations
Inverse and Ill-Posed Problems

Optimization and Splines

Confirmed plenary speakers:

Raimondas Ciegis (Vilnius Gediminas Technical Univ, Lithuania)

Teresa Diogo (University of Lisbon, Portugal)

Martin Hanke-Bourgeois (University of Mainz, Germany)

Helmut Neunzert (Fraunhofer Institute, Kaiserslautern, Germany)

Igor Podlubny (Technical University of Kosice, Slovak Republic)

Andrejs Reinfelds (University of Latvia, Latvia)

Ian H. Sloan (University of New South Wales, Sydney, Australia)

Tarmo Soomere (Estonian Academy of Sciences, Estonia) ?Gennadi Vainikko (University of Tartu, Estonia)

Anatoly Yagola (Lomonosov Moscow State University, Russia)

Deadlines:

Registration and abstract submission: March 15, 2016

Notification of acceptance: March 31, 2016

From: Carola-Bibiane Schönlieb <cbs31@cam.ac.uk>

Subject: Inverse day on BIG inverse problems

Date: February 6, 2016

LMS inverse day on BIG inverse problems

This inverse day will focus on the topic of inverse problems for large- and high- dimensional data, and will take place on the 29th February 2016, in Nottingham, UK.

Speakers include:

- . - Simon Arridge (UCL)
- . ?
- . -Natalia Bochkina (University of Edinburgh)
- . ?
- . -Matt Dunlop (University of Warwick)
- . ?
- . -Felix Hermann (UBC & Imperial)
- . ?
- . -Jared Tanner (University of Oxford)?

For more information please see

http://www.damtp.cam.ac.uk/user/cbs31/LMS_Inverse_Day_Nottingham/Home.html

1

From: Chemnitz Symposium on Inverse Problems 2016 <ip2016@tu-chemnitz.de>
Subject: Chemnitz Symposium on Inverse Problems 2016: registration open
Date: February 9, 2016

Dear Colleagues,

we would like to announce that registration for

Chemnitz Symposium on Inverse Problems, September 22 and 23, 2016

is now open and online. Please see for details:

<http://www.tu-chemnitz.de/mathematik/ip-symposium>

You are cordially invited to participate at the symposium.

If there are questions, please do not hesitate to contact us. It would be fine if you could give this information to your collaborators and coauthors.

Welcome to Chemnitz!

Yours sincerely

Bernd Hofmann

Faculty of Mathematics

TU Chemnitz

09107 Chemnitz, GERMANY

Phone +49 371 531 34125

Fax +49 371 531 22009

Email addresses: ip2016@tu-chemnitz.de or hofmannb@mathematik.tu-chemnitz.de

From: "McMasters, Robert L" <mcmastersrl@vmi.edu>

Subject: Inverse Problems Symposium 2016

Date: February 15, 2016

The abstract submission window has been open since 15 January for the Inverse Problems Symposium for 2016

<http://inverseproblems2016.org>

and the window will close 30 March 2016. The conference will be held in Lexington Virginia at the Virginia Military Institute 5-7 June 2016. Decisions on abstracts will be made by 15 April 2016. Topics include a full range of inverse-problem applications and theory. All symposium attendees will receive a free electronic copy of the textbook Parameter Estimation in Engineering and Science by James V. Beck and Kenneth J. Arnold, 1977, Wiley. A set of analytical solutions to diffusion problems, including MATLAB code, will also be provided.

From: Michael Elad <elad@cs.technion.ac.il>
Subject: Post-Doc Position
Date: February 6, 2016

Research-Associate / Post-Doc Opening

This opening position corresponds to a long-term ERC (European Research Council) project on sparsity-inspired signal and image modeling, led by Prof. Michael Elad in the Technion - Israel Institute of Technology. We are seeking to hire talented and highly motivated post-doctoral fellows to join our group. The research will involve the exploration of both theoretical and application-oriented topics.

Job requirements:

- An established research record with solid publications in leading venues,
- The ability to work fairly independently,
- A strong background in engineering or applied mathematics,
- A desire to collaborate or help in supervising Ph.D. students, and
- A genuine interest in sparsity-based modeling, with proven experience and work on related topics.

Please contact us (at elad@cs.technion.ac.il). The working conditions and atmosphere at the Technion CS department are excellent. More details will be given upon request.

Submitted by:

Michael Elad - Professor, Computer Science Department, The Technion - Israel Institute of Technology, Head of the Technion Excellence Program
Contact information:
The Computer Science Department, 712 Taub building, The Technion - Israel Institute of Technology, Haifa 32000, Israel?
Phone: +972-4-829-4169 (office)? +972-4-829-4898 (admin.)?
Fax: +972-4-829-4353 or +972-4-829-3900?
Email: elad@cs.technion.ac.il? Web: <http://www.cs.technion.ac.il/~elad>
?

From: Carola-Bibiane Schönlieb <cbs31@cam.ac.uk>
Subject: Maths in Healthcare Postdocs in Cambridge
Date: February 6, 2016

5 PostDoc positions in new Maths in Healthcare Centre in Cambridge

We are currently advertising 5 PostDoc positions for our new EPSRC Centre for Mathematical and Statistical Analysis of Multimodal Clinical Imaging, see

<http://www.jobs.cam.ac.uk/job/9299/>

Deadline for applications is the 3rd of March 2016.

More information on the Centre can be found here <http://tinyurl.com/Cam-CMiH>

From: <noreply@degruyter.com>
Subject: TOC 'Journal of Inverse and Ill-posed Problems'
Date: February 4, 2016

Journal of Inverse and Ill-posed Problems February 2016 Volume 24,
Issue 1

Table of Contents

Preface

Wang, Yanfei / Yagola, Anatoly G.

Lq-regularization for the inverse Robin problem

Fan, Qibin / Jiao, Yuling / Lu, Xiliang / Sun, Zhiyuan

Hybrid Newton-type methods for reconstructing sound-soft obstacles from a single far field

Wang, Zewen / Li, Xiaoxia / Xia, Yun

Numerical simulation and parameters inversion for non-symmetric two-sided fractional advection-dispersion equations

Jia, Xianzheng / Li, Gongsheng

A coupled model of partial differential equations for uranium ores heap leaching and its parameters identification

Zhang, Wen / Sun, Zhanxue / Wang, Zewen / Hu, Kangxiu

An optimal filtering method for a time-fractional inverse advection-dispersion problem

Zhao, Jingjun / Liu, Songshu

Simultaneous determination of thickness, thermal conductivity and porosity in textile material design

Xu, Dinghua / Cui, Peng

Nuclear norm and indicator function model for matrix completion

Geng, Juan / Wang, Laisheng / Wang, Xiuyu

Calibrating the model parameters in pricing using the trust region method

Xu, Zuo-liang / Ma, Qing-hua / Wang, Li-ping

An adaptive multigrid conjugate gradient method for permeability identification of nonlinear diffusion equation

Zhao, Jingjun / Liu, Tao

Reconstruction of prograde and retrograde Chandler excitation

Zotov, Leonid V. / Bizouard, Christian

<http://www.degruyter.com/view/j/jiip.2016.24.issue-1/issue-files/jiip.2016.24.issue-1.xml>

Walter De Gruyter GmbH?Genthiner Straße 13?D-10785 Berlin?T +49 30 260
05-0?F +49 30 260 05-251?degruyter.com?Customer Service
service@degruyter.com?
----- end -----

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topic:

Abstract Deadline Extended: Inverse Problems Symposium 2016

Update: The 11th AIMS Conference on Dynamical Systems, Differential Equations & Applications

Position: Research Associate in Cerenkov Luminescence Imaging for Robotic Assisted Surgery

Position: PostDoc, Inverse Problems and Mathematical Imaging, University of Graz

New Deadline for Inverse Problems Special Issue: Superiorization: Theory and Applications

Table of Contents: Inverse Problems

Table of Contents: Inverse Problems and Imaging

Table of Contents: Inverse Problems in Science and Engineering

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: Inverse Problems <info@inverseproblems.org>
Subject: Deadline Extended for Abstract Submission, Inverse Problems Symposium 2016
Date: March 31, 2016

Several abstract submission accounts have been established on the Inverse Problems Symposium web site without the corresponding abstract submission. Also, there has been a concern on the part of some participants regarding email confirmation for submissions. Because of this, we are extending the abstract submission deadline one week. The new deadline is Wednesday 6 April 2016. Please submit your abstracts via the Symposium web site <http://inverseproblems2016.org/>. When abstracts are uploaded, the user is logged out of the account, so do not allow this to be a cause for concern.

If confirmation of a submission is desired, please contact the conference chairman, Robert McMasters, at mcmastersrl@vmi.edu. We look forward to receiving your submission.

From: Susan Cummins <newsletter@aimsciences.org>
Subject: 11th AIMS Conference Update
Date: March 15, 2016

The 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications

July 1 - July 5, 2016, Orlando, FL, USA

Hyatt Regency Hotel

Plenary Speakers

Suncica Canic (USA)?Alessio Figalli (USA)?Irene Fonseca (USA)?Michael Ghil (USA)?Martin Hairer (UK)?Anatole Katok (USA)?Wei-Ming Ni (USA)?Stan Osher (USA)?Hal Smith (USA)?Gang Tian (China)

Follow AIMS On Twitter

March 13, 2016

This is to update you on the preparation of the AIMS Conference at Orlando: more than 100 special sessions have been organized and about 1,500 participants are expected to come. The program committee will start scheduling all the talks immediately after March 15, 2016, which is the deadline for registrations and abstract submissions. As the conference takes place in a resort and Orlando is known for having the best tourist attractions, bring your family to join us!

To show our gratitude for your professional support and involvement, we are offering you the latest issues of all AIMS journals, see <http://aimsciences.org/>

See <http://aimsciences.org/conferences/2016/index.html> for more information on the conference.

We hope to see you there!

Best regards,??

Susan Cummins

Publication Editor?American Institute of Mathematical Sciences?Tel: 417-351-3204?

Email: journal@aimsciences.org

From: Simon ARRIDGE <S.Arridge@cs.ucl.ac.uk>
Subject: Post doc position in Peri-Operative Imaging with Cerenkov Illumination
Date: March 2, 2016

Research Associate in Cerenkov Luminescence Imaging for Robotic Assisted Surgery

Centre for Medical Image Computing and Department of Computer Science, UCL in close collaboration with Lightpoint Medical?

?

This post is funded for 24 months in the first instance.

Candidates should hold a PhD or equivalent experience in medical image computing, computer-aided interventions, skill analysis or closely related field. ?

We are looking for candidates with a proven record in a combination of the following: inverse problems, Monte Carlo simulation, computer vision, medical/surgical robotics, medical image computing and image guided interventions. You are expected to have a record of achievement relevant to your experience and be highly self-motivated and able to work within a large team plus have excellent communication skills?

?Please see the following link for details?

<http://bit.ly/1XY2nQC>

[Note: The IPNet has been told that the deadline on the above website is likely to be extended. -Ed]

From: "Moser, Melanie (melanie.moser@uni-graz.at)" <melanie.moser@uni-graz.at>

Subject: PostDoc position, Inverse Problems and Mathematical Imaging, University of Graz

Date: March 8, 2016

Mårten Gulliksson, Anders Holmbom, Jens Persson, and Ye Zhang

Null space and resolution in dynamic computerized tomography
Bernadette N Hahn

Inversion of the x-ray transform for complexes of lines in \mathbb{R}^n
Aleksander Denisiuk

Iterative reconstruction of the wave speed for the wave equation with
bounded frequency boundary data
Kiril Datchev, and Maarten V de Hoop

Optimal mirror deformation for multi conjugate adaptive optics systems
S Raffetseder, R Ramlau, and M Yudytskiy

Interior transmission eigenvalues of a rectangle
B D Sleeman, and D C Stocks

Erratum: Solution of nonlinear Cauchy problem for hyperelastic solids
(2015 Inverse Problems
31 115003)
S Andrieux, and T N Baranger

<http://iopscience.iop.org/issue/0266-5611/32/2>

Inverse Problems
Number 3

March 2016

Volume 32,

Table of Contents

A reduced basis Landweber method for nonlinear inverse problems
Dominik Garmatter, Bernard Haasdonk, and Bastian Harrach

Variational regularization of complex deautoconvolution and phase
retrieval in ultrashort laser pulse characterization
Stephan W Anzengruber, Steven Bürger, Bernd Hofmann, and Günter
Steinmeyer

An analytic method for the inverse problem of MREPT
V Palamodov

Regularization by discretization in Banach spaces
Uno Hämarik, Barbara Kaltenbacher, Urve Kangro, and Elena Resmerita

Directional decomposition of the acoustic wave equation for fluids and
metafluids in spherical geometries, with application to transformational
acoustics
Peter Olsson

Nonexistence results for relaxation spectra with compact support
R J Douglas, and H R Whittle Gruffudd

Extremal norms of the potentials recovered from inverse Dirichlet
problems
Jiangang Qi, and Shaozhu Chen

Determining the twist in an optical fiber
Rakesh , Jiahua Tang, and Andrew A Lacey

Elastic frequency-domain finite-difference contrast source inversion method

Qinglong He, Yong Chen, Bo Han, and Yang Li

Near-field imaging of periodic interfaces in multilayered media

Jiaqing Yang, Bo Zhang, and Ruming Zhang

Erratum: Polarization tomography for residual stress measurements in a hexagonal single crystal (2014 Inverse Problems 30 125002)

A Puro, and D Karov

<http://iopscience.iop.org/issue/0266-5611/32/3>

Inverse Problems
Number 4

April 2016

Volume 32,

Table of Contents

Numerical computations of interior transmission eigenvalues for scattering objects with cavities

Stefan Peters, and Andreas Kleefeld

Borg-Levinson theorem for perturbations of the bi-harmonic operator

V S Serov

On dimension reduction in Gaussian filters

Antti Solonen, Tiangang Cui, Janne Hakkarainen, and Youssef Marzouk

Extraction of the index of refraction by embedding multiple small inclusions

Ahmed Alsaedi, Faris Alzahrani, Durga Prasad Challa, Mokhtar Kirane, and Mourad Sini

A direct method for photoacoustic tomography with inhomogeneous sound speed

Zakaria Belhachmi, Thomas Glatz, and Otmar Scherzer

An online parameter identification method for time dependent partial differential equations

R Boiger, and B Kaltenbacher

Bayesian smoothing of dipoles in magneto-/electroencephalography

Valentina Vivaldi, and Alberto Sorrentino

Double obstacle phase field approach to an inverse problem for a discontinuous diffusion coefficient

Klaus Deckelnick, Charles M Elliott, and Vanessa Styles

<http://iopscience.iop.org/issue/0266-5611/32/4>

IOP Publishing Limited

Registered in England under Registration No 467514.

Registered Office: Temple Circus Temple Way Bristol BS1 6HG UK

From: Susan Cummins <newsletter@aimsclences.org>

Subject: New IPI vol. 10, no. 1 2016 February issue is now available online

Date: March 11, 2016

On the choice of the Tikhonov regularization parameter and the discretization level: A discrepancy-based strategy
Vinicius Albani, Adriano De Cezaro and Jorge P. Zubelli

A fractional-order derivative based variational framework for image denoising
Fangfang Dong and Yunmei Chen

The topological gradient method for semi-linear problems and application to edge detection and noise removal
Audric Drogoul and Gilles Aubert

Common midpoint versus common offset acquisition geometry in seismic imaging
Raluca Felea, Venkateswaran P. Krishnan, Clifford J. Nolan and Eric Todd Quinto

Factorization method in inverse interaction problems with bi-periodic interfaces between acoustic and elastic waves
Guanghai Hu, Andreas Kirsch and Tao Yin

The enclosure method for inverse obstacle scattering using a single electromagnetic wave in time domain
Masaru Ikehata

A divide-alternate-and-conquer approach for localization and shape identification of multiple scatterers in heterogeneous media using dynamic XFEM
Jaedal Jung and Ertugrul Taciroglu

Preconditioned conjugate gradient method for boundary artifact-free image deblurring
Nam-Yong Lee and Bradley J. Lucier

Approximate marginalization of absorption and scattering in fluorescence diffuse optical tomography
Meghdoot Mozumder, Tanja Tarvainen, Simon Arridge, Jari P. Kaipio, Cosimo D'Andrea and Ville Kolehmainen

A partial data result for less regular conductivities in admissible geometries
Casey Rodriguez

The factorization method for a partially coated cavity in inverse scattering
Qinghua Wu and Guozheng Yan

<http://aimsciences.org/journals/contentsListnew.jsp?pubID=843>

Submitted by: Susan Cummins??Publication Editor?American Institute of Mathematical Sciences?Springfield, MO 65801 USA?Phone: 417-351-3204

From: "Gray, Helen" <Helen.Gray@tandf.co.uk>
Subject: Entry for next IP Digest
Date: March 17, 2016 at 9:48:53 AM EDT

To: "ipnet@math.msu.edu" <ipnet@math.msu.edu>

Inverse Problems in Science and Engineering June 2016 Volume 24,
Issue 4

Table of Contents

Migration NSGA: method to improve a non-elitist searching of Pareto front, with application in magnetics
E. Sieni, P. Di Barba & M. Forzan

Coefficient identification for cubically anisotropic elastic media
Meltem Altunkaynak, Paul Sacks & Valery G. Yakhno

Stability analysis of the Fourier-Bessel method for the Cauchy problem of the Helmholtz equation
Deyue Zhang & Wei Sun

Inversion methods for laser parameter extraction with phenomenological model based on off-axis sensor measurements
V. Kukreja, N.D. Moshman, S.S. Sritharan & J. DeGrassie

Recursive SURE for iterative reweighted least square algorithms
Feng Xue, Anatoly G. Yagola, Jiaqi Liu & Gang Meng

Robin coefficient identification for a time-fractional diffusion equation
T. Wei & Z.Q. Zhang

Improvements in stable inversion of NARX models by using Mann iteration
J.J.A. Eksteen & P.S. Heyns

Inverse fixed energy scattering problem for the two-dimensional nonlinear Schrodinger operator
Georgios Fotopoulos & Valery Serov

Identifiability problem for recovering the mortality rate in an age-structured population dynamics model
A. Perasso & U. Razafison

<http://www.tandfonline.com/gipe>

Submitted by: Helen Gray - Managing Editor
Mathematics | Statistics | History of Science | Science, Technology & Society

Taylor & Francis/Routledge Journals

4 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN, UK.

Direct Line: +44 (20) 755 19435

Web: www.tandfonline.com e-mail: helen.gray@tandf.co.uk

Taylor & Francis is a trading name of Informa UK Limited, registered in England under no. 1072954

----- end -----

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topics:

Workshop: Multiscale Methods and Inverse Problems in Biochemical Networks

Postdoc: Modeling for Complex Systems, Focus on Nanoscale, Biophysical Applications.

Table of Contents: Journal of Inverse and Ill-posed Problems

Table of Contents: Inverse Problems in Science and Engineering

Table of Contents: Inverse Problems

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: Simon Cotter <simon.cotter@manchester.ac.uk>

Subject: Workshop on multiscale methods and inverse problems in biochemical networks

Date: April 28, 2016

Dear colleagues,

I am writing to announce the opening of registration for a workshop entitled "Computational Challenges in Biochemical Networks: Multiscale Methods and Inverse Problems", which will take place in the Alan Turing building, Manchester, UK, on 30-31 August 2016. Registration can be completed via the workshop webpage:

<http://www.maths.manchester.ac.uk/news-and-events/events/computationalchallenges/>

Please feel free to spread the word about this event amongst anybody that you think may be interested. Places are limited and as such people interested in coming should register as soon as they can. Young researchers are encouraged to apply to present a poster during the workshop.

I look forward very much to seeing as many of you as possible in Manchester in August.

Yours sincerely,

Dr Simon Cotter
University of Manchester

From: Roderick Melnik <rmelnik@wlu.ca>

Subject: Postdoc Position, M2NeT Lab, WLU, Waterloo, Canada

Date: April 1, 2016 at 8:07:04 AM PDT

Postdoc Position, M2NeT Lab, WLU, Waterloo, Canada

Applications are invited for a Postdoctoral Position in Modeling for Complex Systems, with focus on nanoscale systems and biophysical applications. The position is based at the M2NeT Lab which is part of the

MS2Discovery Interdisciplinary Research Institute, located at Wilfrid Laurier University, Waterloo, Canada. Further information about the position and how to apply can be found at the following website:
<http://www.m2netlab.wlu.ca/research/2016-17-openings-m2netlab.html>??

It is expected that that full consideration will be given to all applications received by May 30, 2016, but applications will be reviewed as they are received.??

The position is available from the Fall of 2016.

Submitted by:

Prof Dr Roderick Melnik, Tier I Canada Research Chair in Mathematical Modelling,
Director, MS2Discovery Interdisciplinary Research Institute,
WLU, 75 University Avenue West, Waterloo, Ontario, Canada, N2L 3C5
<http://www.ms2discovery.wlu.ca> (Institute)
<http://www.m2netlab.wlu.ca> (Lab)

From: <noreply@degruyter.com>
Subject: Contents, 'Journal of Inverse and Ill-posed Problems'
Date: April 2, 2016

Journal of Inverse and Ill-posed Problems April 2016 Volume
24, Issue 2

Table of Contents

Preface

Kabanikhin, Sergey I.

In celebration of the 60th birthday of Professor Alemdar Hasanov
(Hasanov)

Andreev, Vladimir B. / Banks, H. Thomas / Dulikravich, George S. /
Hofmann, Bernd / Kabanikhin, Sergey I. / Kuchuk, Fikri J. / Lesnic,
Daniel / Nashed, M. Zuhair / Neubauer, Andreas / Romanov, Vladimir G. /
Slodicka, Marian / Vasin, Vladimir V. / Yagola, Anatoly G. / Zirilli,
Francesco

An inverse source problem for a damped wave equation with memory
Šeliga, Lukáš / Slodicka, Marián

On the Cauchy problem for semilinear elliptic equations
Tuan, Nguyen Huy / Binh, Tran Thanh / Viet, Tran Quoc / Lesnic, Daniel

A unified approach to convergence rates for ℓ_1 -regularization and lacking
sparsity
Fleming, Jens / Hofmann, Bernd / Veseli?, Ivan

Regularization of ill-posed problems by using stabilizers in the form of
the total variation of a function and its derivatives
Vasin, Vladimir V.

Numerical testing in determination of sound speed from a part of boundary
by the BC-method
Belishev, Mikhail I. / Ivanov, Ivan B. / Kubyshkin, Igor V. / Semenov,
Vladimir S.

Inverse determination of spatially varying material coefficients in solid
objects

Dulikravich, George S. / Reddy, Sohail R. / Pasqualetto, Marcelo A. / Colaço, Marcelo J. / Orlande, Helcio R. B. / Coverston, Joseph

Determination of the initial condition in parabolic equations from boundary observations

Hào, Dinh Nho / Oanh, Nguyen Thi Ngoc

<http://www.degruyter.com/view/j/jiip.2016.24.issue-2/issue-files/jiip.2016.24.issue-2.xml>

From: "McAtee, Harriet" <Harriet.McAtee@tandf.co.uk>

Subject: Contents, Inverse Problems in Science and Engineering

Date: April 8, 2016

Inverse Problems in Science and Engineering July 2016 Volume 24,
Issue 5

Table of Contents

A local meshless method for Cauchy problem of elliptic PDEs in annulus domains

Ahmad Shirzadi & Fariba Takhtabnoos

An inverse approach in obtaining shape functions for a superconvergent thin plate element

S. Faroughi & H. Ahmadian

Synthesis of a non-integer periodic function generator of a four-bar mechanism using a Haar wavelet

Jianwei Sun, Wenrui Liu & Jinkui Chu

Calibration of adhesion models based on Bayesian inference

E. B. Albuquerque, D. A. Castello & L. A. Borges

Using Lagrange principle for solving two-dimensional integral equation with a positive kernel

Y. Zhang, D.V. Lukyanenko & A.G. Yagola

Simultaneous inversion for a diffusion coefficient and a spatially dependent source term in the SFADE

Xianzheng Jia, Gongsheng Li, Chunlong Sun & Dianhu Du

An alternative update formula for non-linear model-based iterative learning control

J. J. A. Eksteen & P. S. Heyns

Solution of the inverse problem in solidification of binary alloy by applying the ACO algorithm

Edyta Hetmaniok

Multi-receivers and sparse-pixel pseudo-thermal light source for compressive ghost imaging against turbulence

Jiying Liu, Erfeng Zhang, Weitao Liu & Jubo Zhu

<http://www.tandfonline.com/gipe>

Submitted by: Harriet McAtee

Editorial Assistant: Mathematics | Statistics | History of Science | Science, Technology & Society

Taylor & Francis / Routledge Journals

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topics:

Graduate Student Workshop: Inverse Problems and Applications, Colorado State University, USA

Call for Minisymposia: 100 Years of the Radon Transform, Linz, Austria

Registration Deadline: Conference on Nanoscience and Mathematics, Toulouse, France

Announcement: Kumamoto Earthquake Donation Books Sale

Table of Contents: Inverse Problems

Table of Contents: Journal of Inverse and Ill-posed Problems

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: Peter Muller <muller@math.colostate.edu>
Subject: Graduate Student Workshop on Inverse Problems at Colorado State University
Date: May 24, 2016

Dear Colleagues,

I would like to announce the upcoming Graduate Workshop in Inverse Problems and Applications. This workshop focuses on both theoretical and computational aspects of inverse problems. The workshop will be held from August 8 - 11, 2016, at Colorado State University in Fort Collins, Colorado, USA. Participants are expected to have a background in PDE's and a strong interest in inverse problems. Women, minorities, and persons with disabilities are strongly encouraged to apply. Please see http://www.math.colostate.edu/~mueller/graduate_workshop/index.html for further information and registration.

This conference is supported in part by the Institute for Mathematics and its Applications (IMA) through its Participating Institution (PI) Program. PI members may use IMA/PI funds to support personnel's travel to this conference. The organizers also thank the College of Natural Sciences and the Department of Mathematics at Colorado State University for support.

Thank you on behalf of the workshop organizers,
Peter Muller, Jennifer Mueller, Margaret Cheney
Department of Mathematics
Colorado State University

From: Otmar Scherzer <otmar.scherzer@univie.ac.at>
Subject: Contributed Minisymposia at 100 Years of the Radon Transform
Date: May 30, 2016

Call for minisymposia:

The application for contributed minisymposia at
100 Years of the Radon Transform, Linz, March 27-31, 2017

is open.

We invite organizers to submit proposals for minisymposia related to the Radon transform.

Each minisymposium consists of 6 speakers (30 minutes including discussions).

Please submit a proposal of 1/2 page including a list of potential speakers by August, 31st to Office RICAM <office@ricam.oeaw.ac.at>.

From: Ricardo Celorrio <celorrio@unizar.es>
Subject: NanoMath 2016, Toulouse (France) 27-30 June
Date: May 23, 2016

Third Conference on Nanoscience and Mathematics (NanoMath 2016)
June 26th to 30th, 2016
CEMES-CNRS, Toulouse (France)
<http://nanomath2016.sciencesconf.org/>

Registration deadline 10 June 2016, all participants need to be registered by creating an account and specifying whether they wish to make a contribution poster/oral.

Started in 2012 the purpose of the Nanomath conferences is to bring together mathematicians, chemists, physicists and engineers to explore the potential for mathematicians and experimental scientists to gain a better insight into the workings of the nanoworld.

Organized by
Centre d'Élaboration de Matériaux et d'Études Structurales (CEMES-CNRS), Toulouse.
Nano, EXTreme measurements and Theory (NEXT), Toulouse.
Centre de Recerca Matemàtica (CRM), Barcelona.
Instituto de Matemática Aplicada a la Ciencia y la Ingeniería (IMACI), Univ. Castilla La Mancha.
Instituto de Matemática Interdisciplinar (IMI), Univ. Complutense de Madrid.
Instituto de Investigación en Matemáticas y Aplicaciones (IUMA), Univ. Zaragoza.

Submitted by: Associate Prof. Dr. Ricardo Celorrio
Dept. Applied Mathematics/IUMA Campus Río Ebro
Ed. Torres Quevedo Universidad de Zaragoza
50018 ZARAGOZA (Spain)
e-mail: celorrio@unizar.es Tel: +34 976 762 657

From: Quan-Fang Wang <quanfangwang@outlook.com>
Subject: Kumamoto Earthquake Donation Books Sale
Date: May 5, 2016

It is a pleasure to appeal of my books sale for kumamoto earthquake donation.

Your kind consideration for supporting the kumamoto relief would be greatly appreciated.

Kumamoto Earthquake Donation Sale [Price - 15%]

From: <noreply@degruyter.com>
Subject: Contents: 'Journal of Inverse and Ill-posed Problems'
Date: May 27, 2016

Journal of Inverse and Ill-posed Problems June 2016 Volume 24,
Issue 3

Table of Contents

Inverse scattering problem for the nonstationary Dirac equation on the
half-plane
Ismailov, Mansur I.

A Radon-type transform arising in photoacoustic tomography with circular
detectors
Moon, Sunghwan

Recovery of the matrix quadratic differential pencil from the spectral
data
Bondarenko, Natalia

The effect of resonance on the linear sampling method
Haghparast, Maysam / Mirtaheri, Seyyed A. / Abrishamian, Mohammad S.

Inverse problems for parabolic equations with interior degeneracy and
Neumann boundary conditions
Boutaayamou, Idriss / Fragnelli, Genni / Maniar, Lahcen

Incorporating a posteriori error estimators in an adaptive
parametrization algorithm
Ben Ameer, Hend / Kharrat, Nizar / Mghazli, Zoubida

Generalized sensitivity functions for size-structured population models
Keck, Dustin D. / Bortz, David M.

Stable gradient projection method for nonlinear conditionally well-posed
inverse problems
Kokurin, Mikhail Y.

Uniqueness and non-uniqueness in acoustic tomography of moving fluid
Agaltsov, Alexey D. / Novikov, Roman G.

Convex Tikhonov regularization in Banach spaces: New results on
convergence rates
Kindermann, Stefan

Calderón problem for Maxwell's equations in two dimensions
Imanuvilov, Oleg Y. / Yamamoto, Masahiro

[http://www.degruyter.com/view/j/jiip.2016.24.issue-3/issue-
files/jiip.2016.24.issue-3.xml](http://www.degruyter.com/view/j/jiip.2016.24.issue-3/issue-files/jiip.2016.24.issue-3.xml)

----- end -----

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topics:

Workshop: Optimization Techniques for Inverse Problems, Modena, September 2016

PostDoc Position: Regularization Graphs for Variational Imaging, University of Graz

PhD Positions: Twelve Positions in Inverse Problems, Optimization and Data Analysis, Bremen

Table of Contents: Inverse Problems and Imaging

Table of Contents: Inverse Problems in Science and Engineering

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: Marco Prato <marco.prato@unimore.it>

Subject: Optimization Techniques for Inverse Problems, Modena, September 2016

Date: June 2, 2016

WORKSHOP: OPTIMIZATION TECHNIQUES FOR INVERSE PROBLEMS (OIP2016)
Modena, Italy, September, 19-21, 2016

The format of the third edition of the workshop is made by a limited number of extended talks held by international experts in numerical optimization and inverse problems. The workshop aims at strengthening the interaction between inverse problems and optimization, providing space for exchanges of information and ideas from the two areas. Both theoretical and applied aspects of optimization techniques will be faced, with particular attention to related developments in specific inverse problems as machine learning and signal and image restoration.

Speakers:

Stefania Bellavia, Università di Firenze

Mario Bertero, Università di Genova

Laure Blanc-Féraud, Université Nice Sophia Antipolis

Silvia Bonettini, Università di Ferrara

Alessandro Chiuso, Università di Padova

Christian Clason, Universität Duisburg-Essen

Christine De Mol, Université Libre de Bruxelles

Daniela di Serafino, Seconda Università di Napoli

Marco Donatelli, Università dell'Insubria

Mário Figueiredo, Instituto Superior Técnico, Lisboa

Roger Fletcher, University of Dundee

Dmitri Kvasov, Università della Calabria

Germana Landi, Università di Bologna

Ignace Loris, Université Libre de Bruxelles

Jean-Christophe Pesquet, Université Paris-Est

Michele Piana, Università di Genova

Thomas Pock, Graz University of Technology

Saverio Salzo, Istituto Italiano di Tecnologia

All the information about the workshop can be found at the website
<http://www.oip2016.unimore.it/>

Contacts:

Marco Prato - Luca Zanni
Università di Modena e Reggio Emilia, Italy
Email: marco.prato@unimore.it - luca.zanni@unimore.it

Submitted by: Dott. Marco Prato
Dipartimento di Scienze Fisiche, Informatiche e Matematiche
Università di Modena e Reggio Emilia
Via Campi 213/b 41125 Modena (Italy)
Tel: +39 059 205 5590 Fax: +39 059 2055216
cdm.unimo.it/home/matematica/prato.marco
www.oasis.unimore.it

From: "Moser, Melanie (melanie.moser@uni-graz.at)" <melanie.moser@uni-graz.at>
Subject: PostDoc position, Regularization Graphs for Variational Imaging, University of Graz
Date: June 14, 2016

The Institute of Mathematics and Scientific Computing at the University of Graz offers a postdoc position (FWF-funded project) for 3 years.

The position is available immediately and the Application Deadline is July 31, 2016.

https://static.uni-graz.at/fileadmin/nawi-institute/Mathematik/files/Jobs/Ausschreibungstex_Bredies.pdf

From: Armin Lechleiter <lechleiter@math.uni-bremen.de>
Subject: 12 Open PhD Positions on Inverse Problems, Optimization and Data Analysis
Date: June 17, 2016

Positions: 12 open PhD positions on Parameter Identification

The Department of Mathematics at the University of Bremen invites applications for 12 open PhD positions in the research areas of inverse problems, optimization and data analysis.

All positions are linked to a recently granted research training group on parameter identification by German Science Foundation DFG. The website

<http://www.math.uni-bremen.de/rtg-pi3>

contains detailed information on the proposed PhD projects, the working environment and the application process.

In case of any questions, feel free to email the group's coordinator Dr. Tobias Kluth: tkluth@math.uni-bremen.de

From: Liwei Ning <editorial@aims sciences.org>
Subject: New IPI vol. 10, no. 2 May 2016 issue is now available online
Date: June 17, 2016

Restoration of manifold-valued images by half-quadratic minimization
Ronny Bergmann, Raymond H. Chan, Ralf Hielscher, Johannes Persch and
Gabriele Steidl

Forward and backward filtering based on backward stochastic differential
equations
Dariusz Borkowski

On the detection of several obstacles in 2D Stokes flow: Topological
sensitivity and combination with shape derivatives
Fabien Caubet, Carlos Conca and Matias Godoy

On a transmission eigenvalue problem for a spherically stratified coated
dielectric
David Colton and Yuk-J. Leung

Iterated quasi-reversibility method applied to elliptic and parabolic
data completion problems
Jérémi Dardé

Ghost imaging in the random paraxial regime
Josselin Garnier

Efficient tensor tomography in fan-beam coordinates
François Monard

Color image processing by vectorial total variation with gradient
channels coupling
Juan C. Moreno, V. B. Surya Prasath and João C. Neves

A variational approach to edge detection
Monika Muszkieta

The factorization method for the Drude-Born-Fedorov model for periodic
chiral structures
Dinh-Liem Nguyen

The relationship between backprojection and best linear unbiased
estimation in synthetic-aperture radar imaging
Kaitlyn Muller

A fast patch-dictionary method for whole image recovery
Yangyang Xu and Wotao Yin

<http://aimsciences.org/journals/contentsListnew.jsp?pubID=863>

2016 Conference
The 11th AIMS International Conference on Dynamical Systems and
Differential Equations
July 1-5, 2016 in Orlando, Florida

Submitted by: Liwei Ning, ?Editorial Manager?
American Institute of Mathematical Sciences?
Springfield, MO 65801 USA?Phone: 417-351-3204

From: "McAtee, Harriet" <Harriet.McAtee@tandf.co.uk>

Subject: TOC, Inverse Problems in Science and Engineering
Date: June 22, 2016 at 12:30:13 PM EDT
To: "ipnet@math.msu.edu" <ipnet@math.msu.edu>

Inverse Problems in Science and Engineering September 2016 Volume
24, Issue 7

Table of Contents

Impact force reconstruction using the regularized Wiener filter method
Fergyanto E. Gunawan

Surrogate-assisted Bayesian inference inverse material identification
method and application to advanced high strength steel
Hu Wang, Yang Zeng, Xiancheng Yu, Guangyao Li & Enying Li

An optimization approach for the localization of defects in an
inhomogeneous medium from acoustic far-field measurements at a fixed
frequency
Yann Grisel, Jérémie Fourbil & Vincent Mouysset

Reconstructing gas distribution maps via an adaptive sparse
regularization algorithm
Y. Zhang, M. Gulliksson, V. M. Hernandez Bennetts & E. Schaffernicht

An inverse mode problem for the continuous beam
Xia Tian

Dual regularization in non-linear inverse scattering problems
Konstantin P. Gaikovich, Petr K. Gaikovich, Yelena S. Maksimovitch,
Alexander I. Smirnov & Mikhail I. Sumin

New axisymmetric containers for isochronous sloshing: a tribute to B.
Andreas Troesch
Patrick Weidman

Modified boundary Tikhonov-type regularization method for the Cauchy
problem of a semi-linear elliptic equation
Hongwu Zhang & Renhu Wang

Inverse analysis of geomechanical parameters by the artificial bee colony
algorithm and multi-output support vector machine
Hongbo Zhao & Shunde Yin

Multi-parameter identification and shape reconstruction for unbounded
fractal rough surfaces with tapered wave incidence
Lei Zhang, Jue Wang, Lixin Feng & Yuan Li

Submitted by: Harriet McAtee, Taylor & Francis/Routledge Journals
----- end -----

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topics:

PhD Position: Inverse Problems for Discrete, Continuous, and Stochastic Systems
Postdoctoral and PhD Positions: Quantitative Photoacoustic Imaging
Table of Contents: Inverse Problems
Table of Contents: Inverse Problems in Science and Engineering
Table of Contents: Journal of Inverse and Ill-posed Problems

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: "Kaltenbacher, Barbara" <Barbara.Kaltenbacher@aau.at>

Subject: PhD position in inverse problems

Date: July 8, 2016

?

PhD position in inverse problems

?

at the Karl Popper Kolleg "modeling-simulation-optimization of discrete, continuous and stochastic systems" of the Alpen-Adria-Universitaet Klagenfurt, Austria

<https://www.math.aau.at/mso/>

From: Tanja Tarvainen <tanja.tarvainen@uef.fi>

Subject: Postdoctoral and PhD positions in quantitative photoacoustic imaging

Date: July 10, 2016

The Computational Physics and Inverse Problems Research field at the Department of Applied Physics, University of Eastern Finland (Kuopio campus) has two open positions in a project of Dr Tanja Tarvainen on quantitative photoacoustic imaging funded by Jane and Aatos Erkko Foundation. We are currently seeking for highly motivated researchers with interest in inverse problems and scientific computing. Both PhD students and postdoctoral candidates are considered. If you think you are suitable candidate, we encourage you to apply by September 30th 2016!

For more information:

http://venda.uef.fi/~vilhunen/PostDoc_PhDStudent_Positions.pdf

Link to the electronic application form: <http://www.uef.fi/en/uef/en-open-positions>

(go to: Postdoctoral Researcher/Project Researcher and Early Stage Researcher - Department of Applied Physics).

From: <noreply@iopscience.org>

Subject: Table of Contents, Inverse Problems

Date: July 6, 2016

Table of Contents

Recovery of singularities in a fourth-order operator on the line from limited data

Teemu Tyni, Markus Harju, and Valery Serov

On the reconstruction of boundary impedance of a heat conduction system from nonlocal measurement

Jijun Liu, and Yuchan Wang

A hierarchical Bayesian-MAP approach to inverse problems in imaging

Raghu G Raj

Compressed sensing recovery via nonconvex shrinkage penalties

Joseph Woodworth, and Rick Chartrand

A sampling method for the reconstruction of a periodic interface in a layered medium

Guanying Sun, and Ruming Zhang

A TV-Gaussian prior for infinite-dimensional Bayesian inverse problems and its numerical implementations

Zhewei Yao, Zixi Hu, and Jinglai Li

<http://iopscience.iop.org/issue/0266-5611/32/7>

Inverse Problems

August 2016

Volume 32, Number 8

Table of Contents

Inverse problems for abstract evolution equations with applications in electrodynamics and elasticity

Andreas Kirsch, and Andreas Riederer

Shape reconstruction of the multi-scale rough surface from multi-frequency phaseless data

Gang Bao, and Lei Zhang

An inverse time-dependent source problem for a time-fractional diffusion equation

T Wei, X L Li, and Y S Li

Adaptive correction procedure for TVL1 image deblurring under impulse noise

Minru Bai, Xiongjun Zhang, and Qianqian Shao

Posterior consistency and convergence rates for Bayesian inversion with hypoelliptic operators

Hanne Kekkonen, Matti Lassas, and Samuli Siltanen

Bayesian approach to inverse problems for functions with a variable-index Besov prior

Junxiong Jia, Jigen Peng, and Jinghuai Gao

Matrix coefficient identification in an elliptic equation with the convex energy functional method

Michael Hinze, and Tran Nhan Tam Quyen

<http://iopscience.iop.org/issue/0266-5611/31/12;jsessionid=0C72191D1ACCC3755DC3B77ABE5B994A.c1.iopscience.cld.iop.org>

From: "McAtee, Harriet" <Harriet.McAtee@tandf.co.uk>
Subject: Contents, Inverse Problems in Science and Engineering
Date: July 20, 2016

Inverse Problems in Science and Engineering October 2016 Volume 24,
Issue 8

Table of Contents

?
A damage identification method for truss structures using a flexibility-
based damage probability index and differential evolution algorithm
S. M. Seyedpoor & M. Montazer
?
X-ray Compton scattering tomography
James Webber
?
Comparison of imaging quality between linear sampling method and time
reversal in microwave imaging problems
M. Ghaderi Aram, M. Haghparast, M. S. Abrishamian & A. Mirtaheri
?
Stable explicit time marching in well-posed or ill-posed nonlinear
parabolic equations
Alfred S. Carasso
?
Identification of magnetic deposits in 2-D axisymmetric eddy current
models via shape optimization
Zixian Jiang, Housseem Haddar, Armin Lechleiter & Mabrouka El-Guedri
?
Experimental evaluation of 3D electrical impedance tomography with total
variation prior
G. González, J. M. J. Huttunen, V. Kolehmainen, A. Seppänen & M.
Vauhkonen
?
Simultaneous tomographic reconstruction and segmentation with class
priors
Mikhail Romanov, Anders Bjorholm Dahl, Yiqiu Dong & Per Christian Hansen
?
Stable explicit stepwise marching scheme in ill-posed time-reversed
viscous wave equations
Alfred S. Carasso
?
Inverse identification of time-harmonic loads acting on thin plates using
approximated Green's functions
Bashir Movahedian & Bijan Boroomand

Inverse Problems in Science and Engineering, Volume 24, Issue 8, October
2016 is now available online on Taylor & Francis Online:
<http://www.tandfonline.com/toc/gipe20/current?>

Submitted by: Harriet McAtee, Editorial Assistant, Taylor & Francis
Journals

From: <noreply@degruyter.com>
Subject: Contents, 'Journal of Inverse and Ill-posed Problems'
Date: July 29, 2016

Inversions of the windowed ray transform
Moon, Sunghwan

Inverse problems of demand analysis and their applications to computation
of positively-homogeneous Konüs-Divisia indices and forecasting
Klemashev, Nikolay I. / Shanenin, Alexander A.

Some generalizations for Landweber iteration for nonlinear ill-posed
problems in Hilbert scales
Neubauer, Andreas

An inverse problem for Sturm-Liouville operators with non-separated
boundary conditions containing the spectral parameter
Ibadzadeh, Chinare G. / Nabiev, Ibrahim M.

Use of difference-based methods to explore statistical and mathematical
model discrepancy in inverse problems
Banks, H. Thomas / Catenacci, Jared / Hu, Shuhua

Computing quasisolutions of nonlinear inverse problems via efficient
minimization of trust region problems
Kaltenbacher, Barbara / Rendl, Franz / Resmerita, Elena

Accuracy estimates of Gauss-Newton-type iterative regularization methods
for nonlinear equations with operators having normally solvable
derivative at the solution
Kokurin, Mikhail Y.

On convergence rates for asymptotic discrepancy principle
Bakushinsky, Anatoly / Smirnova, Alexandra

Identification of an unknown coefficient in KdV equation from final time
measurement
Sakthivel, Kumarasamy / Gnanavel, Soundararajan / Hasanov, Alemdar /
George, Raju K.

Improved asymptotic analysis for dynamical probe method
Ji, Yong-Gwan / Kim, Kyoungsun / Nakamura, Gen

[http://www.degruyter.com/view/j/jiip.2016.24.issue-4/issue-
files/jiip.2016.24.issue-4.xml](http://www.degruyter.com/view/j/jiip.2016.24.issue-4/issue-files/jiip.2016.24.issue-4.xml)

----- end -----

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topics:

Postdoctoral Positions: Image Reconstruction at KTH
Postdoctoral Research Associate: Inverse Imaging at University of
Cambridge
Postdoctoral Positions: Hybrid Tomography at TU Denmark
Table of Contents: Inverse Problems
Table of Contents: Inverse Problems in Science and Engineering

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: Ozan Öktem <ozan@kth.se>
Subject: Post-doc announcements for IPnet
Date: July 31, 2016

The Department of Mathematics at the KTH - Royal Institute of Technology in Stockholm, Sweden invites applications for three postdoctoral positions in tomographic reconstruction. One position is on usage of analytic and/or learned dictionaries for sparsity promoting reconstruction, another is on large-scale non-smooth optimization, and the final position is on shape theory (computational anatomy) in reconstruction. Review of applications will begin on October 3, 2016 and starting date is January 1, 2017. There is however some flexibility in the starting date. Further details are given in the links below

Postdoc in Computational Harmonic Analysis in Imaging
<http://www.kth.se/en/om/work-at-kth/lediga-jobb/what:job/jobID:103222/where:4/>

Postdoc in Convex Optimization and Image Processing
<http://www.kth.se/en/om/work-at-kth/lediga-jobb/what:job/jobID:103448/where:4/>

Postdoc in Shape Theory and Image Reconstruction
<http://www.kth.se/en/om/work-at-kth/lediga-jobb/what:job/jobID:103449/where:4/>

From: Carola-Bibiane Schönlieb <cbs31@cam.ac.uk>
Subject: Postdoctoral Research Associate in Inverse Imaging, University of Cambridge
Date: August 14, 2016

Postdoctoral Research Associate in Inverse Imaging, University of Cambridge - Department of Applied Mathematics and Theoretical Physics

We invite applications for the position of a Postdoctoral Research Associate to work in the area of inverse imaging problems within the Cambridge Image Analysis (CIA) group at the Department of Applied Mathematics and Theoretical Physics (DAMTP), University of Cambridge. The research activity of the successful candidate will focus on the

development and analysis of non-smooth and possibly non-convex variation regularisation approaches for inverse imaging problems and their robust optimisation. For more information please refer to <http://www.damtp.cam.ac.uk/research/cia/>.

Applicants must have (or be about to receive) a PhD degree in mathematics. The ideal candidate will be experienced in numerical analysis and optimisation, inverse problems and variational methods in image processing. Experience in parallel computing and C programming skills are desirable.

Fixed-term: The funds for this post are available for 2 years in the first instance and the successful candidate is expected to start no later than 1 January 2017.

Informal inquiries can be made by contacting: Carola-Bibiane Schoenlieb (cbs31@cam.ac.uk), and the Mathematics HR Office (LE09791@maths.cam.ac.uk).

Please quote reference LE09791 on your application and in any correspondence about this vacancy.

Application deadline: 11 September 2016

More information on the position and how to apply:
<http://www.jobs.ac.uk/job/AOJ038/postdoctoral-research-associate-in-inverse-imaging/>

From: Kim Knudsen <kiknu@dtu.dk>
Subject: 2 post doc positions in Hybrid Tomography at the Technical University of Denmark
Date: August 17, 2016

2 post doc positions in Analysis and Computations for Hybrid Tomography

The Department of Applied Mathematics and Computer Science at the Technical University of Denmark (www.compute.dtu.dk/english) invites applications for 2 post doc position starting October 2016 (or shortly thereafter), see <http://www.dtu.dk/english/career/job?id=0e029483-4350-487d-8703-adc065da5a3a>. The positions are affiliated with the project "Improved Impedance Tomography using Hybrid data" (<http://www2.compute.dtu.dk/~kiknu/HybridData/>) funded by the Danish Research Council for Independent Research.

Candidates must have a PhD degree in applied mathematics, or equivalent academic qualifications, and some experience with mathematical analysis or numerical computations for inverse or imaging problems.

Applications must be submitted ONLINE by September 15, 2016.

More information can be obtained from Assoc. Prof. Kim Knudsen (kiknu@dtu.dk).

Submitted by: Kim Knudsen, Associate Professor
Head of the DTU Compute PhD School
DTU Compute
Technical University of Denmark
Department of Applied Mathematics and Computer Science
Matematiktorvet Building 303B, 106 2800 Kgs. Lyngby

Subject: FW: Inverse Problems in Science and Engineering, Volume 24,
Issue 9, December 2016 is now available online on Taylor & Francis Online
Date: August 15, 2016

Inverse Problems in Science and Engineering December 2016 Volume 24,
Issue 9

Table of Contents

Heterogeneous and anisotropic long-term concrete damage of the dez arch
dam using thermal inverse analysis?

M. Labibzadeh & M. Khayat

A coupled complex boundary method for the Cauchy problem?

X. L. Cheng, R. F. Gong & W. Han

Reconstruction of multiplicative space- and time-dependent sources?

A. Hazanee & D. Lesnic?

Numerical solution of a Cauchy problem for Laplace equation in 3-
dimensional domains by integral equations?

Ihor Borachok, Roman Chapko & B. Tomas Johansson

A real-time Lie-group differential algebraic equations method to solve
the inverse nonlinear vibration problems?

Chein-Shan Liu & Chih-Wen Chang

An inverse heat conduction problem of estimating the multiple heat
sources for mould heating system of the injection machine?

Jinguo Li, Ning Jiang, Zengliang Gao, Hong Liu & Gengjie Wang

A Gaussian RBFs method with regularization for the numerical solution of
inverse heat conduction problems?

Yong-Fu Zhang & Chong-Jun Li

Inverse spectral problems for differential pencils on a graph with a
rooted cycle?

Vjacheslav Yurko

Real-time identification of a high-magnitude boundary heat flux on a
plate?

C. C. Pacheco, H. R. B. Orlande, M. J. Colaço & G. S. Dulikravich

<http://www.tandfonline.com/toc/gipe20/24/9>

Submitted by: Justin Robinson

Managing Editor | Taylor & Francis | Routledge Journals

Mathematics | Statistics | History of Science | Science, Technology &
Society

4 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN, UK

Tel: +44 (0)20 755 19470

e-mail: justin.robinson@tandf.co.uk

----- end -----

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topics:

Workshop: Computational Inverse Problems - Insight and Algorithms (PCH60)

PhD Position: Inverse Problems, Applied Mathematics at Denmark TU

Postdoctoral Position: Inverse Problems at University Duisburg-Essen

Table of Contents: Inverse Problems and Imaging

Table of Contents: Journal of Inverse and Ill-posed Problems

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: Kim Knudsen <kiknu@dtu.dk>

Subject: Workshop announcemenet

Date: September 30, 2016 at 8:05:25 AM EDT

To: "'ipnet-digest@math.msu.edu'" <ipnet-digest@math.msu.edu>

Computational Inverse Problems, Copenhagen, 2017

We are pleased to announce the following workshop in Copenhagen next summer:

PCH60: Computational Inverse Problems - Insight and Algorithms

A workshop on the occasion of Per Christian Hansen's 60th birthday

Copenhagen, Denmark, August 23-25, 2017

Link: <http://pch60.compute.dtu.dk/>

The workshop aims at bringing together researchers who are interested in computational aspects of inverse problems, including regularization methods, parameter-choice methods, matrix computations, iterative methods, and software.

The invited speakers are:

- Joost Batenburg, Centrum Wiskunde & Informatica
- Martin Hanke, University of Mainz
- Misha E. Kilmer, Tufts University
- Klaus Mosegaard, Copenhagen University
- James G. Nagy, Emory University
- Lothar Reichel, Kent State University

The workshop will take place at IDA Mødecener, beautifully located in the center of Copenhagen at the waterfront.

Martin S. Andersen, Yiqiu Dong and Kim Knudsen, DTU Compute

Submitted by:

Kim Knudsen

Lektor

Leder af DTU Compute ph.d.-skole
DTU Compute

Danmarks Tekniske Universitet

Institut for Matematik og Computer Science
Matematiktorvet
Bygning 303 B, 106
2800 Kgs. Lyngby
Direkte telefon 45253026
kiknu@dtu.dk
www.compute.dtu.dk/

From: Kim Knudsen <kiknu@dtu.dk>
Subject: PhD Position in Inverse Problems
Date: September 30, 2016

PhD position in Applied Mathematics / Inverse Problems

The Norwegian University of Science and Technology (NTNU) and the Technical University of Denmark (DTU) invite applications for a PhD position in Applied Mathematics with emphasis on Inverse Problems. The successful applicant will be enrolled in the PhD programs at both universities and acquire a joint PhD degree. The position is expected to be filled by December 2016.

More information can be found at
<https://www.jobbnorge.no/en/available-jobs/job/129702/phd-position-in-applied-mathematics>

Candidates must have a master degree in applied mathematics, or equivalent academic qualifications, and must have a strong background in applied functional analysis.

Applications must be submitted ONLINE by October 20, 2016.

For further information, please contact Markus Grasmair (markug@math.ntnu.no), or Kim Knudsen (kiknu@dtu.dk).

Submitted by:
Kim Knudsen
Lektor
Leder af DTU Compute ph.d.-skole
DTU Compute

Danmarks Tekniske Universitet

Institut for Matematik og Computer Science
Matematiktorvet
Bygning 303 B, 106
2800 Kgs. Lyngby
Direkte telefon 45253026
kiknu@dtu.dk
www.compute.dtu.dk/

From: Christian Clason <christian.clason@uni-due.de>
Subject: Postdoc position in inverse problems at University Duisburg-Essen

Date: October 4, 2016

The Faculty of Mathematics at the University of Duisburg-Essen is inviting applications for a position (wissenschaftliche(r) Mitarbeiter(in), 100% TV-L 13, three year contract) in the research project "Parameter identification in models with sharp phase transition" within the priority programme SPP 1962 (<https://spp1962.wias-berlin.de/>).

The successful candidate will have a Master's degree in mathematics, solid knowledge of inverse problems, nonsmooth optimization and/or optimization of partial differential equations or variational inequalities as well as experience in the numerical realization of algorithms and their application to concrete problems.

Applications including a CV and copies of relevant certificates should be sent to

Christian Clason
Universität Duisburg-Essen
Fakulty of Mathematics
45117 Essen

or via email to

christian.clason@uni-due.de

The deadline is

October 24, 2016

As an equal opportunity and affirmative action employer, the university explicitly encourages applications from women as well as from all others who would bring additional diversity dimensions to the university's research and teaching strategies. Preference will be given within the framework of legal possibilities to such candidates with essentially the same qualifications.

For more details, please see the official announcement of the university at <https://goo.gl/xxGM6J> (PDF, in German). Information about the research group and the faculty can be found at <https://www.uni-due.de/mathematik/agclason>.

Submitted by:
Prof. Dr. Christian Clason
AG Inverse Probleme, Fakultät für Mathematik
Universität Duisburg-Essen
tel: +49 201 183 6382
www: <http://www.udue.de/clason>

From: Susan Cummins <journal@aims sciences.org>
Subject: New IPI vol. 10, no. 3 2016 August issue is now available online
Date: September 9, 2016

Inverse Problems and Imaging August 2016 Volume 10, Number 03
Table of Contents

On the stability of some imaging functionals
Guillaume Bal, Olivier Pinaud and Lenya Ryzhik

Solving monotone inclusions involving parallel sums of linearly composed
maximally monotone operators
Radu Ioan Boţ and Christopher Hendrich

The inverse problem for electroseismic conversion: Stable recovery of the
conductivity and the electrokinetic mobility parameter
Jie Chen and Maarten de Hoop

Local inverse scattering at fixed energy in spherically symmetric
asymptotically hyperbolic manifolds
Thierry Daudé, Damien Gobin and François Nicoleau

An efficient projection method for nonlinear inverse problems with
sparsity constraints
Deren Han, Zehui Jia, Yongzhong Song and David Z. W. Wang

Reconstructing a function on the sphere from its means along vertical
slices
Ralf Hielscher and Michael Quellmalz

Lavrentiev's regularization method in Hilbert spaces revisited
Bernd Hofmann, Barbara Kaltenbacher and Elena Resmerita

Reconstruction of penetrable obstacles in the anisotropic acoustic
scattering
Yi-Hsuan Lin

A gradient-based method for atmospheric tomography
Daniela Saxenhuber and Ronny Ramlau

Image segmentation based on the hybrid total variation model and the K-
means clustering strategy
Baoli Shi, Zhi-Feng Pang and Jing Xu

Error bounds and stability in the l_0 regularized for CT reconstruction
from small projections
Chengxiang Wang and Li Zeng

The reciprocity gap method for a cavity in an inhomogeneous medium
Fang Zeng, Xiaodong Liu, Jiguang Sun and Liwei Xu

American Institute of Mathematical Sciences

From: <noreply@degruyter.com>
Subject: Contents, 'Journal of Inverse and Ill-posed Problems'
Date: September 30, 2016

Journal of Inverse and Ill-posed Problems October 2016 Volume 24,
Issue 5

Table of Contents

A finite element method for the inverse problem of boundary data recovery
in an oxygen balance model
Ben Belgacem, Faker / Débit, Naïma / El Fekih, Henda / Khiari, Souad

On regularization and error estimates for the Cauchy problem of the modified inhomogeneous Helmholtz equation
Hieu, Phan Trung / Quan, Pham Hoang

Application of the factorization method to retrieve a crack from near field data
Guo, Jun / Hu, Junhao / Yan, Guozheng

Solution to a class of inverse problems for a system of loaded ordinary differential equations with integral conditions
Aida-zade, Kamil R. / Abdullayev, Vagif M.

The variational formulation of an inverse problem for multidimensional nonlinear time-dependent Schrödinger equation
Aksoy, Nigar Y?ld?r?m

Integral identity for a class of ill-posed problems generated by a parabolic equation
Vavilov, Sergey A. / Svetlov, Kirill V.

A meshless method to the solution of an ill-posed problem
Rostamian, Malihe / Shahrezaee, Alimardan

About an inverse problem for a free boundary compressible problem in hydrodynamic lubrication
Ait Hadi, Khalid / Bayada, Guy / El Alaoui Talibi, Mohamed

Error analysis for the operator marching method applied to range dependent waveguides
Li, Peng / Liu, Keying / Zuo, Weibing / Zhong, Weizhou
----- end -----

IPNet Digest Volume 23, Number 11 October 31, 2016

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topics:

Abstract Deadline: 9th International Conference on Inverse Problems in Engineering

Postdoctoral Position: Inverse Problems in Image Reconstruction at UCL

Faculty Position: Inverse Problems and Imaging at MSU

New Inverse Problems Book: The Limits of Resolution

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: Kyle Daun <kjdaun@uwaterloo.ca>
Subject: 9th ICIPE: Upcoming abstract deadline
Date: October 13, 2016

Dear Colleagues,

The 9th International Conference on Inverse Problems in Engineering will be held at the University of Waterloo, Canada, May 23-26 2017. Past conferences have been noteworthy for their balanced focus on theory and applications, as well as an atmosphere that encourages collaboration and interaction between mathematical theorists who develop inverse analysis tools, and engineers who use these tools to solve today's problems.

The 9th ICIPE is in honor of Professor Graham Gladwell, FRSC, in recognition of his seminal contributions to inverse analysis. Keynote speakers include Professor Margaret Cheney, Colorado State University, and Malcolm Gladwell, best-selling author, who will be speaking in honor of his father.

The conference website is icipe17.uwaterloo.ca, and a conference flier is attached to this email. Abstracts are due on November 7th 2016. Please contact kjdaun@uwaterloo.ca if you have any questions, or need help with abstract submissions.

We are looking forward to hosting you in Waterloo!

Sincerely,

Kyle J. Daun, PhD, P. Eng.
Chair, 9th International Conference on Inverse Problems in Engineering
Associate Professor
Department of Mechanical and Mechatronics Engineering
University of Waterloo

From: Simon ARRIDGE <S.Arridge@cs.ucl.ac.uk>
Subject: post doc position at UCL in image reconstruction
Date: October 31, 2016

We have a position available for a postdoc working on inverse problems in image reconstruction.

In particular we are developing compressed-sensing techniques for photoacoustic data acquired from in-vivo probes during fetal surgery. The candidate will develop techniques which advance both theory and practical implementations. Candidates should have a PhD (or will shortly be assessed for a PhD level qualification) in medical image computing, inverse problems, or a comparable subject. ?

Some details are available here
<http://tinyurl.com/j3pxyte>

Or contact Professor Simon Arridge, simon.arridge@ucl.ac.uk for an informal discussion

From: "Inverse Problems Network (IPNet)" <ipnet@math.msu.edu>
Subject: Faculty position in Inverse Problems and Imaging
Date: October 31, 2016

The Department of Computational Mathematics, Science and Engineering (CMSE), a newly created department at Michigan State University, invites applications from outstanding candidates for a tenure-system open-rank faculty position in the broad area of Inverse Problems and Imaging. The anticipated start date is August 16, 2017. In service to the Global Impact Initiative, the Department of CMSE will be hiring eight faculty in computational and data science over the next two years, with the goal of growing the department to roughly 30 faculty.

Exceptional candidates from all areas of inverse problem and imaging will be considered with particular attention to algorithm and theory developments for applications in medical imaging, geoscience, remote sensing, and other related inversion and imaging problems. Research within CMSE will focus on the synergy between algorithms for computational modeling and data science in applications by the creation of joint positions in physical, biological, and engineering departments with tenure home in CMSE.

The department is developing an innovative graduate and undergraduate curriculum in algorithm development, massively parallel and heterogeneous computing, and the use of computational tools in problem solving. Applicants are required to have a Ph.D. in either Mathematics, Geoscience, Biomedical Engineering or other computational related fields. Faculty in CMSE are expected to develop a world-leading research program, mentor graduate students and participate in the development and implementation of the new computational and data science curriculum.

Online application is required via MSU's online job application website: <https://jobs.msu.edu>. Apply to Position #4100. Applications should include a cover letter, CV, statement of research plans, and a one-page teaching statement, all in a single PDF file. In addition, three letters of recommendation should be submitted electronically through this application system. Applications received by November 14, 2016 will receive full consideration, but the search will continue until the positions are filled. Questions regarding the position may be directed to Professor Jianliang Qian (jqian@msu.edu), Chair of the Search Committee.

Michigan State University has been advancing knowledge for more than 160 years. A member of the Association of American Universities, MSU is a

research-intensive institution with 17 degree-granting colleges. MSU is an affirmative action, equal opportunity employer and is committed to achieving excellence through cultural diversity. The University actively encourages applications and/or nominations of women, persons of color, veterans and persons with disabilities. Also, we endeavor to facilitate employment assistance to spouses or partners of candidates for faculty and academic staff positions.

From: "pike, roy" <roy.pike@kcl.ac.uk>
Subject: New inverse problems book
Date: October 6, 2016

New book: The Limits of Resolution
Authors: Geoffrey de Villiers, E. Roy Pike
Website: <https://www.crcpress.com/The-Limits-of-Resolution/de-Villiers-Pike/p/book/9781498758116>

Features:

- Provides a coherent introduction to the topic of resolution in the physical sciences, using many examples and basic ideas to facilitate comprehension.
- Developed from lectures and appropriate for both research and teaching purposes.
- Covers such important and timely topics as super-resolution through sparsity and statistical methods for solving linear inverse problems.
- Emphasizes the parallels between communication theory and optical imaging
- Discusses applications in various areas such as optical microscopy, tomography, diffractive imaging, light scattering, and photon correlation spectroscopy.

Summary:

"This beautiful book can be read as a novel presenting carefully our quest to get more and more information from our observations and measurements. Its authors are particularly good at relating it." --Pierre C. Sabatier

"This is a unique text - a labor of love pulling together for the first time the remarkably large array of mathematical and statistical techniques used for analysis of resolution in many systems of importance today - optical, acoustical, radar, etc... I believe it will find widespread use and value." --Dr. Robert G.W. Brown, Chief Executive Officer, American Institute of Physics

"The mix of physics and mathematics is a unique feature of this book which can be basic not only for PhD students but also for researchers in the area of computational imaging." --Mario Bertero, Professor, University of Geneva

"a tour-de-force covering aspects of history, mathematical theory and practical applications. The authors provide a penetrating insight into the often confused topic of resolution and in doing offer a unifying approach to the subject that is applicable not only to traditional optical systems but also modern day, computer-based systems such as radar and RF communications." --Prof. Ian Proudler, Loughborough University

"a 'must have' for anyone interested in imaging and the spatial resolution of images. This book provides detailed and very readable account of resolution in imaging and organizes the recent history of the subject in excellent fashion.... I strongly recommend it." --Michael A. Fiddy, Professor, University of North Carolina at Charlotte

This book brings together the concept of resolution, which limits what we can determine about our physical world, with the theory of linear inverse problems, emphasizing practical applications. The book focuses on methods for solving illposed problems that do not have unique stable solutions. After introducing basic concepts, the contents address problems with "continuous" data in detail before turning to cases of discrete data sets. As one of the unifying principles of the text, the authors explain how non-uniqueness is a feature of measurement problems in science where precision and resolution is essentially always limited by some kind of noise.

Submitted by: Professor E R Pike FRS
Emeritus Clerk Maxwell Professor of Theoretical Physics
Physics Department
King's College London
K-1.46 Strand
LONDON WC2R 2LS UK
Tel 44 (0) 207 848 2043
Mobile 44 (0) 7818418636
----- end -----

Today's Editor: Patricia (Patti) K. Lamm, Michigan State University

Today's Topics:

Research Fellow: Enabling Quantification of Uncertainty for Inverse Problems

University Lecturer: Statistics and Mathematics of Information, Cambridge, UK

University Lectureship: Climate Modelling, Cambridge UK

Table of Contents: Inverse Problems in Science and Engineering

Table of Contents: Inverse Problems and Imaging

Table of Contents: Journal of Inverse and Ill-posed Problems

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

<http://ipnet.math.msu.edu>

From: Heather Craddock <Heather.Craddock@Penna.com>
Subject: Research Fellow EQUIP (Enabling Quantification of Uncertainty for Inverse Problems)
Date: November 21, 2016

University of Warwick
Department of Mathematics

Research Fellow

£29,301-£38,183 per
annum
Ref: 78765-116

Fixed term contract for 12 months. ??Applications are invited for a number of postdoctoral research fellow positions to work on the £2.6m EPSRC-funded Programme Grant EQUIP (Enabling Quantification of Uncertainty for Inverse Problems). Posts will be based at the University of Warwick, at Heriot-Watt University, or at Imperial College. Each will have a one year duration, and may start at a mutually agreed date in the calendar year 2017. ??EQUIP tackles a number of key methodological and theoretical challenges arising in the solution of statistical inverse problems, primarily driven by applications in subsurface inversion such as groundwater flow, oil and gas reservoirs and carbon sequestration but researchers with interest in the solution of inverse problems arising in other application domains, such as biology, medicine and the social sciences are also encouraged to apply.

??The EQUIP team comprises Mike Christie (Petroleum Engineering, Heriot-Watt), Charlie Elliott (Mathematics, Warwick), Mark Girolami (Statistics, currently Warwick but moving to Imperial College in January 2017), Gareth Roberts (Statistics, Warwick). There is also the possibility of spending part of the postdoctoral appointment at Caltech working with Andrew Stuart who is a co-investigator on the grant. Applicants with expertise in the areas of inverse problems, numerical analysis, computational partial differential equations, computational statistics and theoretical statistics are encouraged to apply. ??You should apply directly to the institution where you wish to be based, although if you are flexible you

are strongly encouraged to apply to all of Imperial College, Heriot-Watt and Warwick. ??Your application should include a CV and list of publications. You should also send a research statement by email to Ann Hume, Departmental Secretary, Mathematics Institute, University of Warwick at MathematicsPA@warwick.ac.uk and ensure that your 3 referees send their references to the same email address by the closing date. ??Interviews for all posts are expected to be conducted at the University of Warwick on, or around, January 11th 2017.

For further details and to apply online please visit our website below.

Minicom users: 024 7615 0554

Closing date: 12 December 2016

https://atsv7.wcn.co.uk/search_engine/jobs.cgi?SID=b3duZXI9NTA2MjQ1MiZvd25lcnR5cGU9ZmFpciZzZWFzb249MCZicmFuZF9pZD0wJiZzdWJtaXRTZWYy2hGb3JtPTEmcVxc2lnPTE0Nzg4NjM5NjItZTY1YzZmMWY4OTJmZjdlY2FjMTRiYjU0MjI5OWE2YjQ1ZTdjYjllMg==

The University Values Diversity

Submitted by : Heather Craddock, ?Account Co-Ordinator- Delivery Team, Recruitment Solutions
02476 214 423

From: Carola-Bibiane Schönlieb <cbs31@cam.ac.uk>
Subject: University Lecturer in the Statistics and Mathematics of Information in Cambridge, UK
Date: November 1, 2016

University Lecturer in the Statistics and Mathematics of Information, University of Cambridge, UK

Applications are invited for a University Lectureship in the Statistics and Mathematics of Information to commence on 1st October 2017 or by agreement. Appointment will be made at an appropriate point on the University scale and will be for a probationary period of five years with appointment to the retiring age thereafter, subject to satisfactory performance.

Candidates should hold a PhD or equivalent in statistics, mathematics or a closely related subject, and have an outstanding record of research in mathematical aspects of data science. Preference will be given to candidates with a research focus in statistics. Willingness to engage in an interdisciplinary and cross-cutting research is very desirable.

This Lectureship is based in the Statistical Laboratory and is affiliated with the new Cantab Capital Institute for Mathematics of Information (CCIMI) which is hosted within the Faculty of Mathematics. It accommodates research activity on fundamental mathematical and statistical problems and methodology for understanding, analysing, processing and simulating data.

Deadline for applications is the 7th of December 2016.

More details on the position can be found here:
<http://www.jobs.cam.ac.uk/job/11847/>

From: Carola-Bibiane Schönlieb <cbs31@cam.ac.uk>
Subject: University Lectureship in Climate Modelling, Cambridge UK
Date: November 28, 2016

University Lectureship in Climate Modelling:

Applications are invited for the post of University Lecturer in Climate Modelling.

This is joint appointment involving the Department of Chemistry, the Department of Geography, and the Department of Applied Mathematics & Theoretical Physics (DAMTP), University of Cambridge, UK.

Deadline: 30 November 2016

More information: <http://www.jobs.cam.ac.uk/job/11775/>

From: "Davies, Rosalind" <Rosalind.Davies@tandf.co.uk>
Subject: Contents, Inverse Problems in Science and Engineering
Date: November 2, 2016

Inverse Problems in Science and Engineering January 2017 Volume 25,
Issue 1

Table of Contents

Foreword?

George S. Dulikravich

Identifying Lamé parameters from time-dependent elastic wave measurements?

Armin Lechleiter & John W. Schlasche

Efficient technique for constitutive analysis of reinforced concrete flexural members?

Viktor Gribniak, Gintaris Kaklauskas, Algirdas Juozapaitis, Romualdas Kliukas & Adas Meskenas

Analytical study for the estimation of thermal properties of processed meat based on hyperbolic heat conduction model?

Han-Taw Chen, Kuo-Chi Liu, Xiao-Jie Xu & Tsu-Hsiang Lin

Application of early arrival waveform inversion with pseudo-deconvolution misfit function by source convolution?

Han Yu, Dongliang Zhang & Yunsong Huang

Inverse estimation of thermal properties using Bayesian inference and three different sampling techniques?

S. Somasundharam & K. S. Reddy

A self-regularized approach for rank-deficient systems in the BEM of 2D Laplace problems?

Jeng-Tzong Chen, Ying-Te Lee, Yu-Lung Chang & Jie Jian

A posteriori error estimates for numerical solutions to inverse problems of elastography?

A. S. Leonov, A. N. Sharov & A. G. Yagola

An inverse solution for reconstruction of the heat transfer coefficient from the knowledge of two temperature values in a solid substrate?
S. Moaveni & J. Kim

Available online: <http://www.tandfonline.com/toc/gipe20/25/1>

Inverse Problems in Science and Engineering February 2017 Volume 25,
Issue 2

Table of Contents

Numerical solution of two backward parabolic problems using method of fundamental solutions?

A. Shidfar & Z. Darooghehgimofrad

Crack identification of beam structures using homotopy continuation algorithm?

L. Hu, L. Huang & Z. R. Lu?

Online dynamic cardiac imaging based on the elastic-net model?

Mingjian Hong, Haibiao Zhang, Mengran Lin, Feng Liu & Yongxin Ge

Regularizing inversion of susceptibility with projection onto convex set using full tensor magnetic gradient data?

Shuangxi Ji, Yanfei Wang & Anqi Zou

Improved artificial bee colony algorithm for crack identification in beam using natural frequencies only?

Zhenghao Ding, Zhongrong Lu, Min Huang & Jike Liu

Model-based identification of damage from sparse sensor measurements using Neumann series expansion?

Ali Zare Hosseinzadeh, Gholamreza Ghodrati Amiri & Seyed Ali Seyed Razzaghi

Proper Generalized Decomposition model reduction in the Bayesian framework for solving inverse heat transfer problems?

Julien Berger, Helcio R. B. Orlande & Nathan Mendes

Identification of separable sources for advection-diffusion equations with variable diffusion coefficient from boundary measured data?

M. Kulbay, B. Mukanova & C. Sebu

Available online: <http://www.tandfonline.com/toc/gipe20/25/2>

Submitted by: Dr. Rosalind Davies

Editorial Assistant: Mathematics | Statistics | History of Science | Science, Technology & Society

Taylor & Francis / Routledge Journals

4 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN, UK.

Tel: 020 755 19484

e-mail: rosalind.davies@tandf.co.uk | Twitter: @RDScience

From: Susan Cummins <journal@aims sciences.org>

Subject: Contents, Inverse Problems and Imaging (IPI)

Date: November 4, 2016

On the optimal control of the free boundary problems for the second order parabolic equations. II. Convergence of the method of finite differences
Ugur G. Abdulla

The localized basis functions for scalar and vector 3D tomography and their ray transforms
Alexander Balandin

Imaging with electromagnetic waves in terminating waveguides
Liliana Borcea and Dinh-Liem Nguyen

FEM-based discretization-invariant MCMC methods for PDE-constrained Bayesian inverse problems
Tan Bui-Thanh and Quoc P. Nguyen

Team organization may help swarms of flies to become invisible in closed waveguides
Lucas Chesnel and Sergei A. Nazarov

The Bayesian formulation of EIT: Analysis and algorithms
Matthew M. Dunlop and Andrew M. Stuart

A coupled total variation model with curvature driven for image colorization
Zhengmeng Jin, Chen Zhou and Michael K. Ng

A globally convergent numerical method for a 1-d inverse medium problem with experimental data
Michael V. Klibanov, Loc H. Nguyen, Anders Sullivan and Lam Nguyen

Model-based reconstruction for magnetic particle imaging in 2D and 3D
Thomas März and Andreas Weinmann

Location of eigenvalues for the wave equation with dissipative boundary conditions
Vesselin Petkov

On the stable recovery of a metric from the hyperbolic DN map with incomplete data
Plamen Stefanov, Gunther Uhlmann and Andras Vasy

A minimal surface criterion for graph partitioning
Dominique Zosso and Braxton Osting

Available online:
<http://aimsciences.org/journals/contentsListnew.jsp?pubID=897>

Submitted by: Susan Cummins??Publication Editor?American Institute of Mathematical Sciences?Springfield, MO 65801
USA?journal@aimsciences.org?Phone: 417-351-3204

From: <noreply@degruyter.com>
Subject: Contents, Journal of Inverse and Ill-posed Problems
Date: November 22, 2016

Inverse problem about two-spectra for finite Jacobi matrices with zero diagonal
Huseynov, Adil

Shape and parameter reconstruction for the Robin transmission inverse problem
Laurain, Antoine / Meftahi, Houcine

Inverse source problem based on two dimensionless dispersion-current functions in 2D evolution transport equations
Hamdi, Adel / Mahfoudhi, Imed

On the null space of a class of Fredholm integral equations of the first kind
Michel, Volker / Orzlowski, Sarah

Numerical solution of an elliptic 3-dimensional Cauchy problem by the alternating method and boundary integral equations
Borachok, Ihor / Chapko, Roman / Johansson, B. Tomas

Reconstruction of local volatility for the binary option model
Ota, Yasushi / Kaji, Shunsuke

Determination of finite difference coefficients for the acoustic wave equation using regularized least-squares inversion
Wang, Yanfei / Liang, Wenquan / Nashed, Zuhair / Yang, Changchun

Numerical solution of an ill-posed Cauchy problem for a quasilinear parabolic equation using a Carleman weight function
Klibanov, Michael V. / Koshev, Nikolaj A. / Li, Jingzhi / Yagola, Anatoly G.

On a criterion for the solvability of one ill-posed problem for the biharmonic equation
Kal'menov, Tynysbek S. / Sadybekov, Makhmud A. / Iskakova, Ulzada A.

Available online: <https://www.degruyter.com/view/j/jiip.2016.24.issue-6/issue-files/jiip.2016.24.issue-6.xml>

Walter De Gruyter GmbH?Genthiner Straße 13?D-10785 Berlin?T +49 30 260 05-0?F +49 30 260 05-251?degruyter.com?Customer Service
service@degruyter.com?
----- end -----