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

Today's Topics:
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   Research Associate: Math/Stat Analysis of Multimodal Clinical Imaging,
U Cambridge
   Ph.D. Student: Multimodal Imaging Combining Diffuse Optics and
Ultrasound, Cancer
   Postdoctoral Fellow: Institute for Mathematics of Information,
Cambridge, UK
   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: Pam Bye <Pam.Bye@ima.org.uk>
Subject: IMA CONFERENCE ON INVERSE PROBLEMS FROM THEORY TO APPLICATION
Date: December 2, 2016

IMA CONFERENCE ON INVERSE PROBLEMS FROM THEORY TO APPLICATION
Tuesday 19 - Thursday 21 September 2017
Isaac Newton Institute, Cambridge, UK
Charity Registration number 1017777

CALL FOR PAPERS
An inverse problem denotes the task of computing an unknown physical
quantity from indirect measurements. The corresponding forward problem
maps the physical quantity to the measurements. In most realistic
situations the solution of the inverse problem is challenging,
complicated by incomplete and noisy measurements, as well as non-
invertible forward operators which render the inverse problem ill-posed
(that is lack of stability and/or uniqueness of solutions). Inverse
problems appear in many practical applications in biology, medicine,
weather forecasting, chemistry, engineering, physics, to name but a few,
and their analysis and solution presents considerable challenges in
mathematics and statistics. This conference will bring together
mathematicians and statisticians, working on theoretical and numerical
aspects of inverse problems, and engineers, physicists and other
scientists, working on challenging inverse problem applications. We
welcome industrial representatives, doctoral students, early career and
established academics working in this field to attend.

Conference topics:
·   Imaging
·   Regularisation theory
·   Statistical inverse problems
·   Sampling
·   Data assimilation
·   Inverse problem applications

Call for Papers:

Papers will be accepted for the conference based on a 300 word abstract for oral or poster presentation. Abstracts should be submitted by 30 April via https://my.ima.org.uk/

Please note that if you are an IMA Member or you have previously registered for an IMA conference, then you are already on our database. Please "request a new password" using the email address previously used to log in and make a submission.

Confirmed Invited Speakers
Dr Marta M. Betcke (University College London)
Professor Dan Crisan (Imperial College London)
Professor Jari Kaipio (University of Auckland, New Zealand)
Professor Dirk Lorenz (TU Braunschweig, Germany)
Professor Bill Symes (Rice University)
Dr Tanja Tarvainen (University of Eastern Finland)

Organising Committee
Carola?Bibiane Schönlieb (University of Cambridge) ? Chair
Cristiana Sebu (University of Malta) – Co-chair
Paul Ledger (Swansea University)
Bill Lionheart (University of Manchester)

Scientific Committee
Simon Arridge (University College London)
Martin Burger (University of Münster)
Daniela Calvetti (Case Western Reserve University)
Paul Childs
Barbara Kaltenbacher (University of Klagenfurt)
Roland Potthast (University of Reading)
Samuli Siltanen (University of Helsinki)

Further information
For further information on this conference, please visit the conference webpage:
http://ima.org.uk/conferences/conferences_calendar/inverse-problems.html

Contact information
For general conference queries please contact Lizzi Lake, Conference Officer
E-mail: conferences@ima.org.uk   Tel: +44 (0) 1702 354 020
Institute of Mathematics and its Applications, Catherine Richards House, 16 Nelson Street, Southend-on-Sea, Essex, SS1 1EF, UK.

Submitted by: Pamela Bye, Conference Support Officer
Institute of Mathematics and its Applications, Tel: 01702 354020

From: Carola-Bibiane Schönlieb <cbs31@cam.ac.uk>
Subject: PostDoc position in Maths & Stats for Medical Imaging, Cambridge UK
Date: December 9, 2016

We invite applications for at least one Post Doctoral Research Associate position to work in the EPSRC Centre for Mathematical and Statistical Analysis of Multimodal Clinical Imaging (CMIH) at the University of Cambridge.

The centre is a collaboration between mathematics, engineering, physics and biomedical scientists and clinicians, and aims to achieve synergies

between applied mathematics and statistics through the focus on the analysis of clinical imaging, particularly that arising in neurological, cardiovascular and oncology imaging.

The research activity of the successful candidate will take place within one or more multidisciplinary projects joint between investigators within the centre. Preference will be given to applicants interested in working on projects involving Electronic Health Records and Imaging, joint reconstruction of multimodal imaging, dynamic image reconstruction and analysis, and/or image distortion correction. For further information concerning the types of project the centre is likely to undertake and a list of investigators, please visit www.cmih.maths.cam.ac.uk. The PDRAs will join a cohort of researchers in the mathematical and statistical analysis of clinical imaging who are already working in the centre.

Requirements: Applicants must have (or be about to receive) a PhD degree in mathematics or statistics (or closely related discipline). The ideal candidate will be experienced in one or more of the following areas: statistical imaging / statistical shape analysis, functional data analysis, spatial statistics, inverse problems, computational analysis, optimisation, variational methods in image processing, data science. Experience in parallel computing and C programming skills are desirable.

Contact: Informal inquiries can be made by contacting LF10840@maths.cam.ac.uk.

Applications: Applications should be made at the following website where a number of postdoctoral positions across the faculty can be applied for – https://postdoc.maths.cam.ac.uk/

Application deadline is the 10th of January 2017.

Limit of tenure: 2 years.

The University values diversity and is committed to equality of opportunity. The University has a responsibility to ensure that all employees are eligible to live and work in the UK.

From: Simon ARRIDGE <sarridge@googlemail.com>
Subject: PhD position available
Date: December 22, 2016

Title : SOLUS (Smart OpticaL and UltraSound diagnostics of breast cancer

Summary :

This project is part of the EC funded SOLUS project to develop a multimodal imaging system combining diffuse optics and ultrasound for improved diagnosis of breast cancer. The PhD student will develop models of time-of-flight light propagation in tissue and inverse solutions for identifying and characterising breast cancer lesions with improved specificity by exploiting simultaneous acquisition of ultrasound images. The position will suit a Physicist, Applied Mathematician or Engineer with experience of computational models and inverse problems

Further Details :

The SOLUS (Smart OpticaL and UltraSound diagnostics of breast cancer) project will develop an innovative multi-modal tomographic system

combining diffuse optical tomography and ultrasound/shear wave
elastography to support the in vivo diagnosis of breast cancer, a major
age and life-style related disease. The multi-modal system aims at the
classification of breast lesions after a positive screening, with special
focus on improving the discrimination of lesions that are borderline
between benign and malignant (BI-RADS 3 vs. 4a) and presently undergo
screening evaluation with high false positive rate.

The project's overall objective will be achieved by building on the
multidisciplinary experience of the consortium and exploiting innovative
photonics concepts and components concerning the time domain small
source-detector distance approach to optical tomography and the high
dynamic range time-gated detection approach. This will allow achieving
unprecedented sensitivity, spatial resolution, and depth penetration,
thus providing effective diagnostic information on tissue composition and
functional blood parameters to complement clinical ultrasounds (USs) and
shear wave elastography (SWE).

The overall project combines academic groups in the UK, Italy and France
with industrial electronics and photonics expertise in France, Italy and
Germany. The PhD student at UCL will develop mathematical and
computational models for light propagation in tissue and methods for
image reconstruction for the multimodality Ultrasound/Optical probe being
developed by partners in the project. The ideal student will have
expertise in Applied Mathematics or Theoretical Physics and strong
programming skills for large scale numerical modelling problems.

- Supervisor : Professor Simon Arridge ?- Deadline for applications : 31-
Jan-2017
- Application link : https://www.prism.ucl.ac.uk/#!/?project=214?- Start
date : (to be decided, ideally as soon as possible).

From: Carola-Bibiane Schönlieb <cbs31@cam.ac.uk>
Subject: Postdoctoral Research Fellowships in the Mathematics of
Information, Cambridge, UK
Date: December 7, 2016

We are pleased to advertise three positions for Postdoctoral Research
Fellows affiliated with the new Cantab Capital Institute for the
Mathematics of Information (CCIMI, http://www.ccimi.maths.cam.ac.uk). The
Fellow will be free to pursue independent research related to fundamental
mathematical problems and methodology for understanding, analysing,
processing and simulating data. The Fellowship is available for three
years. Appointment will be made at an appropriate point on the
University's Postdoctoral Research Associate scale or the Senior Research
Associate scale as appropriate. The Fellow will also receive an annual
allowance for research expenses.

Applicants should have a PhD in Mathematics, Statistics or closely
related discipline before commencing the Fellowship. Senior Research
Associates will have commensurately more experience, including at least
three years postdoctoral experience.

Duties would include developing and conducting individual and
collaborative research objectives, proposals and projects. The role
holder will be expected to plan and manage their own research and
administration, with guidance if required, and to assist in the
preparation of proposals and applications to external bodies. You must be
able to communicate material of a technical nature and be able to build

internal and external contacts. You may be asked to assist in the supervision of student projects, the development of student research skills, provide instruction or plan/deliver seminars relating to the research area of the CCIMI.

To apply online for this vacancy, and to find out further information, please visit http://www.jobs.cam.ac.uk/job/12244/.

The closing date for applications is the 10th of January 2017.

Informal enquiries about the positions may be made to: LE08394@maths.cam.ac.uk

The University of Cambridge values diversity and is committed to equality of opportunity. The Department would particularly welcome applications from women, since women are, and have historically been, underrepresented on our research staff.

The University has a responsibility to ensure that all employees are eligible to live and work in the UK.

From: Romas Baronas <romas.baronas@mif.vu.lt>
Subject: Table of Contents, Nonlinear Analysis: Modelling and Control 22:1
Date: December 6, 2016

Nonlinear Analysis: Modelling and Control   2017   Volume 22, Number 1
                        Table of Contents

Investigation of symmetric non-spherical particle shapes by applying low-resolution spherical harmonics
Urte Radvilaite, Rimantas Kacianauskas, Dainius Rusakevicius

On economic-technological optimization of high-voltage electric cables
Mecislavas Meilunas, Audrius Ilgevicius, Olga Suboc, Gerda Jankeviciut?, Raimondas Ciegis

A free on-line edition is available at: http://www.mii.lt/NA/
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Today's Editor: Patricia (Patti) K. Lamm,   Michigan State University

Today's Topics:
Workshop: Mathematical Imaging with Partially Unknown Models
Call for Abstracts: 12th International EnKF Workshop
Postdoctoral Position: Research in Computational Inverse Problems
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: Carola-Bibiane Schoenlieb <cbs31@cam.ac.uk>
Subject: Workshop: Mathematical imaging with partially unknown models -
Cambridge, 20-21 February 2017
Date: January 10, 2017

Dear All,

It is my pleasure to invite you to the Cambridge - Heriot Watt
interdisciplinary workshop on

Mathematical imaging with partially unknown models
http://www.ccimi.maths.cam.ac.uk/events/cambridge-heriot-watt-
interdisciplinary-data-science-workshop-mathematical-imaging-partially-
unknown-models/.

which will be held on 20 to 21 February 2017 at the University of
Cambridge.

Plenary speakers are:
    •   Gabriel Peyré (Université
    •   Paris-Dauphine)?
    •   Silvia Villa (Istituto Italiano di Tecnologia and
Massachusetts Institute of Technology)?
    •   Yves Wiaux (Heriot-Watt University)?
    •   Juan Carlos de los Reyes (Escuela
    •   Nacional Politécnica de Quito)?
    •   John Aston (University of Cambridge)?
    •   Samuli Siltanen (University of Helsinki)   ?

Jointly organised by Marcelo Pereyra (Heriot-Watt) and Carola-Bibiane
Schönlieb (Cambridge),
alongside local organiser Martin Benning (Cambridge).

For more information and for instructions on how to register, please
visit the workshop website at
http://www.ccimi.maths.cam.ac.uk/events/cambridge-heriot-watt-
interdisciplinary-data-science-workshop-mathematical-imaging-partially-
unknown-models/.

On the first day of the meeting there will be a poster session during lunch time. When registering for the event, please indicate your interest for presenting a poster, including a poster title and short abstract.

All the best,
Carola Schönlieb

From: Xiaodong Luo <xilu@iris.no>
Subject: The 12th International EnKF Workshop: Call for abstracts
Date: January 5, 2017

The 12th International EnKF Workshop
June 12-14, 2017
Solstrand Hotel & Bad, OS
Norway

CALL FOR ABSTRACTS

The ensemble Kalman filter (EnKF) and its many variants have been proven effective for data assimilation in large models, including those in atmospheric, oceanic, hydrologic, and petroleum reservoir systems. By bringing together technical experts, practitioners, researchers and students for presentations and informal interchange of information, we aim to share research results and suggest important challenges that have yet to be addressed. We welcome abstracts on both new developments and applications of data assimilation algorithms, including but not limited to, ensemble-based methods and other Bayesian and/or nonlinear approaches. Abstracts on applications are encouraged to discuss limitations and suggest further developments of the assimilation methods. The accepted abstracts will be scheduled for either oral presentation or poster presentation. This workshop does not publish full papers, so submission of full paper is not required. To facilitate the workshop organization, we encourage our participants to submit abstracts with full information of all authors (e.g., name, affiliation, etc.)

Abstract deadline: March 1st, 2017

Confirmed invited speakers:

   Andreas Størksen Stordal, IRIS
   Dan Crisan, Imperial College London
   John Harlim, The Pennsylvania State University
   Peter Jan van Leeuwen, University of Reading
   Chris Snyder, University Corporation for Atmospheric Research (UCAR)

Scientific committee:

   Geir Evensen (geve@iris.no), IRIS
   Xiaodong Luo (xilu@iris.no), IRIS
   Alberto Carrassi (alberto.carrassi@nersc.no), NERSC
   Dean Oliver (dean.oliver@uni.no), Uni Research CIPR
   Remus Hanea (rhane@statoil.com), Statoil and University of Stavanger (UiS)

Organizing Committee

    Xiaodong Luo (xilu@iris.no), IRIS
    Randi Valestrand (rv@iris.no), IRIS
    Mette S.Myhre (mes@iris.no), IRIS

Further information
For further information about the workshop, please visit the webpage:
http://www.iris.no/enkf/enkf-homepage

Contact information
For general queries please contact Xiaodong Luo
E-mail: xilu@iris.no   Tel: (+47) 482 22 859
IRIS, Thormøhlensgate 55, 5008 Bergen, Norway

From: Ville Kolehmainen <ville.kolehmainen@uef.fi>
Subject: post doc position
Date: January 23, 2017

Postdoctoral Researcher/Project Researcher on Computational Inverse
Problems, Department of Applied Physics, University of Eastern Finland,
Kuopio, Finland

We are seeking for a highly motivated researcher to work on development
of computational methods for the inverse problem of electrical impedance
tomography. The researcher will work in a consortium initiative between
three Finnish universities for the development of electrical imaging and
classification of stroke. The position will be located at the
Computational Physics and Inverse Problems research group, which is
affiliated with the Centre of Excellence in Inverse Problems Research of
the Academy of Finland. For further information of the research group,
see
http://venda.uef.fi/inverse/FrontPage

A person to be appointed as a postdoctoral researcher/project researcher
shall hold a suitable doctoral degree (e.g. applied mathematics,
scientific computing, applied/computational physics). If the employee has
been awarded his or her doctoral degree less than five years ago, the
post will be one of a Postdoctoral Researcher. If the doctoral degree has
been awarded more than five years ago, the post will be one of a Project
Researcher.

A successful candidate is expected to have background on computational
inverse problems and/or scientific computing, strong programming skills
in some commonly used programming languages (e.g. Matlab, Python, C/C++),
fluent written and spoken English, ability to work both independently and
as part of a consortium, and strong interest in research. Experience in
uncertainty quantification, finite element methods and/or numerical
optimization are beneficial for the position. Persons graduating with a
Ph.D. in the near future are also encouraged to apply. However, they are
expected to hold a PhD degree by the starting date of the position.

The position will be filled for a one year term from April 1, 2017 (or as
agreed). Continuation for two more years is possible. The continuation of
the position will be agreed separately. For further administrational
information and application process, see
http://www.uef.fi/en/uef/en-open-positions

The electronic application should contain the following appendices:
1.   a motivation letter including names and contact information of two referees
2.   a résumé or CV
3.   a list of publications
4.   copies of the applicant's academic degree certificates/ diplomas, and copies of certificates / diplomas relating to the applicant's language proficiency, if not indicated in the academic degree certificates/diplomas

The application needs to be submitted no later than February 19, 2017 (by 24:00 EET) by using the electronic application form at http://www.uef.fi/en/uef/en-open-positions

For further information on the position, please contact: Professor Ville Kolehmainen, tel. +358 40 355 2054, email: ville.kolehmainen@uef.fi.

Submitted by: Ville Kolehmainen, Ph.D., Professor, Department of Applied Physics
University of Eastern Finland, FI-70211 Kuopio   Finland

From: <noreply@iopscience.org>
Subject: Inverse Problems, Volume 33, Number 2, February 2017
Date: January 16, 2017

Inverse Problems   February 2017   Volume 33, Number 2
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Direct inversion from partial-boundary data in electrical impedance tomography
Andreas Hauptmann, Matteo Santacesaria, and Samuli Siltanen

On optimal solutions of the constrained ? 0 regularization and its penalty problem
Na Zhang, and Qia Li

Looking for central tendencies in the conformational freedom of proteins using NMR measurements
Fabrizio Clarelli, and Luca Sgheri

On relaxed averaged alternating reflections (RAAR) algorithm for phase retrieval with structured illumination
Ji Li, and Tie Zhou

Identifiability of electrical and heat transfer parameters using coupled boundary measurements
Yifan Chang

http://iopscience.iop.org/issue/0266-5611/33/2

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A three-dimensional image reconstruction algorithm for electrical impedance tomography using planar electrode arrays?
Husein Perez, Michael Pidcock & Cristiana Sebu

Dynamic estimation of the modeling error statistics in Diffuse Optical Tomography?
Alireza Zirak, Peyman Beygi & Shahin Mirzakhah

A global domain/boundary integral equation method for the inverse wave source and backward wave problems?
Chein-Shan Liu

Detection and identification of multiple unknown time-dependent point sources occurring in 1D evolution transport equations?
Adel Hamdi

Regularization and the inflection point method for sensor signal in gas concentration measurement?
?ukasz P?ociniczak, Monika Maciejewska & Andrzej Szczurek

Inverse heat transfer analysis of radiator central heating systems inside residential buildings using sensitivity analysis?
Ardeshir Moftakhari, Cyrus Aghanajafi & Ardalan Moftakhari Chaei Ghazvin?

Inverse problem in the hyperthermia therapy of cancer with laser heating and plasmonic nanoparticles?
Bernard Lamien, Helcio Rangel Barreto Orlande & Guillermo Enrique Eliçabe

http://www.tandfonline.com/toc/gipe20/25/4
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Today's Editor: Patricia (Patti) K. Lamm,   Michigan State University

Today's Topics:

Submissions for IPNet Digest:
     Mail to ipnet-digest@math.msu.edu

Information about IPNet:
     http://ipnet.math.msu.edu

From: Candy Smellie <communications@newton.ac.uk>
Subject: Upcoming Workshop - Variational methods, new optimisation
techniques and new fast numerical algorithm 4-8 September 2017
Date: February 24, 2017

Upcoming Workshop
Variational methods, new optimisation techniques and new fast numerical
algorithm
4-8 September 2017

Attend this workshop at the Isaac Newton Institute and interact and
engage while working on the review, exchange and promoting of recent
advances in variational models for imaging and vision, new theories, and
fast algorithms as well as discuss the outstanding challenges in the fast
growing field. Topics such as nonlinear PDEs, nonlinear, nons-mooth, non-
convex or combinatorial optimization problems and their analysis and
algorithms, as well as imaging and vision applications will be covered.

This is the first event and part of the activities for a long term
programme on Variational methods and effective algorithms for imaging and
vision (1 Sept-- 31 Dec 2017) organised by Ke Chen, Andrew Fitzgibbon,
Michael Hintermüller, Carola-Bibiane Schönlieb, and Xue-Cheng Tai.

List of invited and confirmed speakers includes (to expand):   J-F
Aujol; M Berger; A Bruckstein; R H Chan; J Fadili; G Gilboa; T
Goldstein; D Jerome; S H Kang; V Kolmogorov; B Kristian; J Lellmann; M
Ng; A Repetti; S Soatto; M Teboulle; P Weiss; H M Zhou.

This workshop is organised by:
·   Antonin Chambolle (CNRS École Polytechnique),
·   Ke Chen (University of Liverpool)
·   Stan Osher (UCLA)
·   Thomas Pock (Graz University of Technology)

·	Christoph Schnoerr (Universität Heidelberg)
·	Xue-Cheng Tai (Hong Kong Baptist University and University of Bergen)

This workshop is open for registration but closes shortly. Deadline for Oral/Poster presentation: 1 April 2017. Deadline for participation (only): 1 June 2017. Participation remotely is possible.

Apply today - http://www.newton.ac.uk/event/vmvw01

Submitted by: Candy Smellie, Information Coordinator
 Isaac Newton Institute for Mathematical Sciences
20 Clarkson Road?Cambridge CB3 0EH
Tel : 01223 335983

From: Kyle Daun <kjdaun@uwaterloo.ca>
Subject: International Conference on Inverse Problems in Engineering, Poster Abstract Deadline/Early registration March 31st
Date: February 26, 2017

Dear Colleagues,

This is an update for the 9th International Conference on Inverse Problems in Engineering, held at the University of Waterloo, Canada. We are still accepting poster abstracts until March 31st, 2017, which is also the early bird registration deadline. Please visit icipe17.uwaterloo.ca for more information, registration, and abstract submission, and feel free to share this email with your colleagues.

We have an exciting program planned for you:
·	Tuesday, May 23: Workshop on "Inverse Problems in the Bayesian Framework," by Dr. Aku Seppänen, University of Eastern Finland. This is a great opportunity for you and your students to brush up on your Bayes...
·	Wednesday, May 24: Keynote speaker: Prof. Margaret Cheney, Colorado State University, "The Radar Inverse Problem."
·	Wednesday, May 24: Poster session featuring local craft beer and artesian pizza. (Waterloo is the unofficial craft beer capital of Canada.)
·	Thursday May 25: Conference banquet featuring noted author Malcolm Gladwell.
·	Friday, May 26: Lunch banquet and reception in honor of Professor Graham Gladwell, FRSC, in recognition of Graham's pioneering contributions to inverse analysis and his outstanding mentorship and training.

Please contact us if you have any questions. On behalf of the organizing committee, we're looking forward to hosting you in Waterloo!

Sincerely,

Kyle J Daun, PhD, P. Eng.
Chair, 9th International Conference on Inverse Problems in Engineering
Icipe17.uwaterloo.ca

From: Armin Lechleiter <lechleiter@uni-bremen.de>
Subject: Summer school on Inverse Problems and Imaging, September 18-22, 2017 in Bremen, Germany
Date: February 22, 2017

Franco-German Summer School on Inverse Problems and Imaging in Bremen, Germany, September 18-22, 2017

Dear Colleagues,

the Franco-German Summer School on Inverse Problems and Imaging takes place from September 18-22 at the University of Bremen, Germany. This event is generously supported by the Franco-German University, the University of Bremen, the DFG Research Training Center 2224, and INRIA.

This summer school considers the analytical and numerical treatment of inverse problems in the context of multi-modal and hybrid schemes as well as in imaging. A particular focus is set on adapted sparsity regularization and suitable numerical algorithms.

The courses are designed for advanced Master students, PhD students and PostDocs in mathematics. A limited number of participants will also have the opportunity to present their research in dedicated sessions.

More information on the summer school, a detailed program and an online registration for this event can be found at the web site

http://www.math.uni-bremen.de/zetem/ip-school2017

Best wishes,

Houssem Haddar and Armin Lechleiter

From: Denis Sidorov <contact.dns@gmail.com>
Subject: Baikal summer school
Date: February 9, 2017 at 8:08:38 PM EST

I'm happy to inform you that Baikal 17th triannial school-seminar "Methods of Optimization and their Applications" site is already in service:
http://isem.irk.ru/conferences/mopt2017/en/index.html

The school-seminar has a long standing and successful track record since mid
of XX century.

Sections:
Discrete optimization
Continuous optimization
Optimal control
Equilibrium and bilevel programming
Applications of optimization methods in energy problems

Important Dates
15 March 2017 - Abstracts
15 March 2017 - Registration of participants
22 March 2017 - Notification of acceptance
26 March 2017 - Preliminary program
31th of July - 6th of August 2017 - Conference

15 March 2017 - Abstracts
15 March 2017 - Registration of participants
22 March 2017 - Notification of acceptance

26 March 2017 - Preliminary program
31th of July - 6th of August 2017 - Conference

The size of abstract is limited to one page. Text must be prepared by the
Lecture Notes in Computer Science
http://www.springer.com/computer/lncs?SGWID=0-164-6-793341-0
and submitted by EasyChair
https://easychair.org/conferences/?conf=baikal2017.
The submission deadline is March, 15, 2017.

New! Two special Issues will be dedicated to the School-Seminar:
1. Journal of Global Optimization
2. Optimization Methods and Software

Registration Fee: 100 USD (50 USD for PhD Students)

Best Regards,
Denis Sidorov

P.S.
Please kindly forward this information to your colleagues and university
site.

From: "Pereyra, Marcelo" <m.pereyra@hw.ac.uk>
Subject: Fully funded PhD opportunity "Bayesian computation in imaging
inverse problems with partially unknown models", Maxwell Institute for
Mathematical Sciences, Heriot-Watt University, Edinburgh
Date: February 24, 2017

An exciting PhD opportunity is available at the Maxwell Institute for
Mathematical Sciences, School of Mathematics and Computer Sciences,
Heriot-Watt University.

Bayesian computation in imaging inverse problems with partially unknown
models

This project will be fully funded for 3 years including stipend and fees.
The deadline for applications is 19th March 2017. There are no
nationality of citizenship restrictions. All enquires should be directed
to Dr Marcelo
Pereyra http://www.macs.hw.ac.uk/~mp71/phd_opportunity_March2017.html

Mathematical imaging is at the core of modern data science, with
important applications in medicine, biology, defence, agriculture and
environmental sciences. This active research field studies imaging
inverse problems involving the estimation of an unobserved true image
from measurements that are noisy, incomplete and resolution-limited. This
project is related to an increasingly important and particularly
challenging class of imaging inverse problems that, in addition to being
ill-posed and ill-conditioned, are further complicated by inaccurate and
partial knowledge of the observation system and of the properties of the
underlying true image (which are essential to regularise the problem and
deliver meaningful estimates). These so-called "semi-blind" and
"unsupervised" problems are the focus of significant research efforts
across a range of scientific communities, particularly Bayesian
statistics, signal processing, and applied analysis, which have recently
produced important developments in mathematical theory, methods, models
and efficient algorithms. This project will focus on new Bayesian
computation methodology for this challenging class of imaging inverse

problems, with a focus on methods that tightly combine modern high-dimensional stochastic simulation and optimisation, and which support advanced Bayesian analyses.

Application procedure:
To apply please
use   https://www.hw.ac.uk/study/apply/uk/postgraduate.htm
You will need to complete an application form and to submit a CV, cover letter, and the contact information of two references. We will contact you if we need any additional information.

From: BCAM - Basque Center for Applied Mathematics
<recruitment@bcamath.org>
Subject: International Call for postdocs IC2016_WINTER and Ikerbasque Fellows
Date: February 3, 2017

International Call for postdocs IC2016_WINTER and Ikerbasque Fellows

IC2016 _WINTER International Call for postdocs
BCAM, the Basque Center for Applied Mathematics http://www.bcamath.org
whose mission is to develop high quality interdisciplinary research in
the frontiers of Applied Mathematics, has opened the following positions:

BCAM - BCBL Joint PhD Position in Data Analysis for Brain Magnetic
Resonance Imaging

            http://www.bcamath.org/documentos_public/archivos/ofertas/BC
AM17-PhD_Profile_Joint_Position_BCAM_BCBL.pdf
      http://www.bcamath.org/en/research/job/ic2016-winter-joint-phd-
position-in-data-analysis-for-brain-magnetic-resonance-imaging

Deadline: 30/MAY/17

All applications must be submitted on-line at:
http://www.bcamath.org/en/research/job
We kindly ask you to distribute this call among colleagues and potential
candidates. Please, do not hesitate to contact us if you need further
information: recruitment@bcamath.org

Ikerbasque Research Fellows 2017
Ikerbasque, the Basque Foundation for Science http://www.ikerbasque.net
has launched its annual call for attracting researchers to the Research
Institutions in the Basque Country.
This call offers 15 positions for Promising Researchers Ikerbasque
Research Fellows within any of the Basque Research Institutions
(Universities, BERC - Basque Excellence Research Centres, CIC –
Cooperative Research Centres, Biomedical institutions and Technology
Corporations, among others).
        •   5 year contracts
        •   PhD degree between Jan 2006 - Dec 2014
        •   Support letter from the host group is mandatory
BCAM – Basque Center for Applied Mathematics http://www.bcamath.org, is a
BERC Excellence Research Centre and Host Institution in the Ikerbasque
call, whose mission is to develop high quality interdisciplinary research
in the frontiers of Applied Mathematics. Our research agenda is focussed
in.
        •   COMPUTATIONAL MATHEMATICS (CM)

- • MATHEMATICAL MODELLING WITH MULTIDISCIPLINARY APPLICATIONS (M3A)
- • MATHEMATICAL PHYSICS (MP)
- • ANALYSIS PARTIAL DIFFERENTIAL EQUATIONS (APDE)
- • DATA SCIENCE (DS)

All applications must be submitted on line: http://www.ikerbasque.net/
deadline for submissions: March 30th, 2017 at 13:00 CET.

From: "Moser, Melanie (melanie.moser@uni-graz.at)"
Subject: PostDoc position, Inverse Problems and Mathematical Imaging, University of Graz
Date: February 21, 2017

The Institute of Mathematics and Scientific Computing at the University of Graz offers
a two-year post-doctoral research position within the FWF/CDG "Partnership in research" project on
Mathematical methods for motion-aware medical imaging.

The position is available immediately and the Application Deadline is March 31st, 2017.

Further information:
https://static.uni-graz.at/fileadmin/nawi-institute/Mathematik/application_form.pdf

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From: Martin Burger <martin.burger@wwu.de>
Subject: Job vacancy: W1-professorship at Applied Mathematics Münster
Date: February 22, 2017

Job vacancy: W1-professorship at Applied Mathematics Münster?

Applied Mathematics Münster at the Westfälische Wilhelms-Universität Münster invites?applications for a W1-professorship in mathematical optimization starting in winter term 2017. The position is at the level of an assistant professorship?and is appointed for three years plus another three years extension after a positive?evaluation.

The successful candidate will have a strong background and research record in mathematical optimization (or a related field of applied mathematics such as calculus of?variations and inverse problems), and he will have expertise in analysis as well as?numerics.?

The department is looking for a candidate who complements the different applied?mathematics groups in Münster and expects a strong research activity, participation in?the department's research projects, as well as contribution to teaching in applied?mathematics.?

Requirements for an application are a PhD and adequate subsequent further scientific?qualification (for instance as a postdoc) as well as an adequate teaching experience.?The Westfälische Wilhelms-Universität Münster is an equal opportunity employer and is?committed to increasing the proportion of female academics. Consequently, we actively?encourage applications by women. Female candidates with equivalent qualifications and?academic achievements will be preferentially considered within the legal framework.?We also welcome applications from candidates with severe disabilities. Disabled?candidates with equivalent qualifications will be preferentially considered.?To apply for this position, please send a

letter of application (including a Curriculum?Vitae, relevant
certificates, a list of publications, a summary of the research and
teaching?experience) in a single PDF file to:

Dekan des Fachbereichs Mathematik, WWU Münster?
mathdek@uni-muenster.de
The application deadline is April 15th, 2017.??

Submitted by: Prof. Martin Burger
Institut für Numerische und Angewandte Mathematik
WWU Münster
Einsteinstr. 62, 48149 Münster
martin.burger@wwu.de
http://imaging.uni-muenster.de

From: <noreply@degruyter.com>
Subject: eTOC Alert 'Journal of Inverse and Ill-posed Problems'
Date: February 1, 2017

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Error minimizing relaxation strategies in Landweber and Kaczmarz type
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Reciprocity gap method for an interior inverse scattering problem
Zeng, Fang / Liu, Xiaodong / Sun, Jiguang / Xu, Liwei

Feasibility of parameter estimation in hepatitis C viral dynamics models
Arthur, Joseph G. / Tran, Hien T. / Aston, Philip

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https://www.degruyter.com/view/j/jiip.2017.25.issue-1/issue-
files/jiip.2017.25.issue-1.xml

From: <noreply@iopscience.org>
Subject: Inverse Problems, Volume 33, Number 3, March 2017
Date: February 20, 2017

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A multifrequency MUSIC algorithm for locating small inhomogeneities in inverse scattering
Roland Griesmaier, and Christian Schmiedecke

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IPNet Digest   Volume 24, Number 04   April 01, 2017

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

Today's Topics:
    Workshop: New Mathematical Methods in Computational Imaging
(Edinburgh)
    Workshop: Inverse Problems and Data Science (Edinburgh)
    Short Course: Bayesian Inverse Problems (Edinburgh)
    Summer School: Adv. Numerical Techniques for Inverse Problems
(Sardinia)
    University Assistantship: Mathematical Image Processing and Inverse
Problems
    PhD Studentship: Multimodality Image Registration Techniques and
Analysis
    Table of Contents: Inverse Problems
    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: "Pereyra, Marcelo" <m.pereyra@hw.ac.uk>
Subject: Workshop - "New mathematical methods in computational imaging",
June 29, Edinburgh
Date: March 28, 2017

Dear colleagues,

It is my pleasure to invite you to the Heriot-Watt workshop on "New
mathematical methods in computational imaging", which will be held on the
29th of June 2017 in Edinburgh.

The aim of this meeting is to gather imaging experts from the Bayesian
statistics, applied analysis and signal processing communities to discuss
recent breakthroughs in mathematical methodology for inverse problems
related to computational imaging. The goals are to provide an opportunity
to disseminate new results and to promote synergy and cross-fertilisation
between these fields.

Workshop programme
09.50 - 10.00: Welcome
10.00 - 10.45: Mike Davies
Coffee break (30 minutes)
11.15 - 12.00: Marcelo Pereyra
Lunch & Invited Poster Session (Abderrahim Halimi, Audrey Repetti, and
Xiaohao Cai)
13.30 - 14.15: Joao Mota
14.15 - 15.00: Yoann Altmann
Coffee break & Poster session
16.00 - 16.45: TBC

The workshop is organised by Marcelo Pereyra (Heriot-Watt). For more
information, to propose a poster presentation, and to register, please

visit the workshop website at
http://www.macs.hw.ac.uk/~mp71/LMS_workshop_June2017.html

The meeting is supported by the London Mathematical Society and by
Heriot-Watt University.

From: "Betcke, Marta" <m.betcke@ucl.ac.uk>
Subject: Turing/LMS workshop on Inverse Problems and Data Science 8-10
May 2017, Edinburgh, UK
Date: March 23, 2017

Dear All,

we would like to bring to your attention workshop on Inverse Problems and
Data Science, 8-10 May 2017 in Edinburgh, sponsored by the Alan Turing
Institute, London Mathematical Society and Schlumberger, and supported by
the School of Mathematics at the University of Edinburgh.

The aim of the workshop is to bring together researchers on inverse
problems working in different areas of mathematics, statistics and
machine learning as well as from the applied disciplines where inverse
problems arise, such as astronomy, biology, computer vision, geoscience
and medicine. The topics of the workshop include nonlinear inverse
problems, algorithms, inverse problems in machine learning, theoretical
properties of statistical estimators in inverse problems, Bayesian
inverse problems, applications in science and medicine.

Registration and poster submission is open; the deadline for submission
of poster abstracts is 7 April, and the registration deadline is 30
April. There is a registration fee £60 to cover catering. Limited number
of travel bursaries are available for UK-based PhD students presenting a
poster.

For further details please refer to the workshop's website
http://www.maths.ed.ac.uk/~nbochkin/LMSTuring_inverseproblems_workshop.ht
m

The workshop will be followed by one day LMS short course on Bayesian
inverse problems on the 11th of May, see separate advert or the course
website
http://www.maths.manchester.ac.uk/~sholman/LMSworkshops/Bayes_course

Organisers:
Natalia Bochkina (University of Edinburgh)
Marta Betcke (UCL)
Sean Holman (University of Manchester)
Carola Schoenlieb (University of Cambridge)

From: "Betcke, Marta" <m.betcke@ucl.ac.uk>
Subject: LMS short course on Bayesian Inverse Problems, 11th May, 2017,
University of Edinburgh
Date: March 23, 2017

Dear All,

LMS short course "Introduction to the Bayesian approach to inverse
problems" will be held on 11th of May, 2017 at the University of
Edinburgh.

Particular topics include:
- Bayes' theorem in finite and infinite dimensional parameter spaces
- well-posedness
- statistical estimates
- connections to classical regularisation methods
- algorithms for the efficient approximation of the solution of the Bayes inverse problem: Monte Carlo, multilevel Monte Carlo and Markov-chain Monte Carlo.

The course will be given by Dr Aretha Teckentrup (University of Edinburgh and the Alan Turing Institute) and Dr Claudia Schillings (Mannheim, Germany).

Registration is free, registration deadline is 4th of May 2017.

For details please refer to the course website:
http://www.maths.manchester.ac.uk/~sholman/LMSworkshops/Bayes_course

This course directly follows a related ATI/LMS workshop on Inverse Problems and Data Science, 8-10 May, 2017, Edinburgh
http://www.maths.ed.ac.uk/~nbochkin/LMSTuring_inverseproblems_workshop.htm

Organisers:
Natalia Bochkina (University of Edinburgh)
Marta Betcke (UCL)
Sean Holman (University of Manchester)

From: Giuseppe Rodriguez <rodriguez@unica.it>
Subject: Summer School on Inverse Problems in Sardinia, July 2017
Date: March 16, 2017

Summer School "Advanced Numerical Techniques for Inverse Problems, with Applications in Imaging Science and Applied Geophysics"
Cagliari (Sardinia, Italy) July 17-21, 2017.

The last 20 years has seen significant development in methods for analyzing and solving inverse ill-posed problems. Many of these methods can be expressed with the tools of Numerical Linear Algebra. Six courses will provide an overview of many of established and new techniques for the analysis and solution of inverse ill-posed problems. The theory presented is illustrated with computed examples. Participants in the summer school will be assigned homework that expands the theory that is presented in lectures, and programming exercises that will show how the methods discussed perform.

Application:
Participation is open to Ph.D students and young researchers. Prerequisites for participants of the summer school include basic knowledge of Linear Algebra and MATLAB programming. The number of participants in the summer school is limited. Applications can be submitted by e-mail to the address antip17@bugs.unica.it March 15 - April 20, 2017, and should include an application letter by the applicant, a CV of the applicant, and a letter of recommendation describing the background of the applicant. This letter should be sent by the letter writer. Applicants will be notified of acceptance by April 30. Participation in the summer school is free.

Complete information on the summer school is available at the web site
http://bugs.unica.it/cana/antip17/
The event is sponsored by Sardegna Ricerche (www.sardegnaricerche.it)
and the University of Cagliari (www.unica.it).

From: "Moser, Melanie (melanie.moser@uni-graz.at)" <melanie.moser@uni-graz.at>
Subject: University Assistant with doctorate, Graz, Austria
Date: March 15, 2017

The Institute of Mathematics and Scientific Computing at the University
of Graz is looking for an
University Assistant with doctorate

(http://jobs.uni-graz.at/en/MB/69/99/3394)
(40 hours a week; fixed-term employment for the period of 6 years;
position to be filled as of now)

Job specification
    •   Research in the field of applied mathematics with emphasis on
the analysis and the numerics of problems in mathematical image
processing and inverse problems
    •   Collaboration in interdisciplinary cooperation projects and
third-party funded projects
    •   Independent teaching of courses in the field of applied
mathematics, supervision of students and holding of exams
    •   Participation in organizational and administrative matters

Professional qualifications
    •   Doctoral degree in a mathematical branch of study
    •   Solid knowledge of mathematical methods in image processing,
inverse problems and numercial mathematics
    •   Knowledge of functional analysis, geometric measure theory,
continuous mathematical optimization and its efficient algorithmic
realization (desirable)

Personal profile
    •   Ability for integration into the institute's research profile
and in particular into interdisciplinary cooperation projects
    •   Capacity for teamwork, organizational talent and ability to
communicate
    •   Ability to teach in german language

Classification
Salary scheme of the Universitäten-KV (University Collective Agreement):
B1

Minimum salary
The minimum salary as stated in the collective agreement and according to
the classification scheme is EUR 3626.60 gross/month. This minimum salary
may be higher due to previous employment periods eligible for inclusion
and other earnings and remunerations.

We offer you a job with a lot of responsibility and variety. You can
expect an enjoyable work climate, flexible work hours and numerous
possibilities for further education and personal development. Take
advantage of the chance to enter into a challenging work environment full
of team spirit and enthusiasm for your job.

Application Deadline: April 5th 2017?Reference Number: MB/69/99 ex 2016/17

The University of Graz strives to increase the proportion of women in particular in management and faculty positions and therefore encourages qualified women to apply.
Especially with regard to academic staff, we welcome applications from persons with disabilities who meet the requirements of the advertised position.

If you are interested, please submit your application documents within the stated deadline to:
bewerbung@uni-graz.at??Karl-Franzens-Universität Graz?Personalressort?Universitätsplatz 3?8010 Graz

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From: Tuomo Valkonen <tuomov@iki.fi>
Subject: PhD studentship: Multimodality image registration techniques and analysis (University of Liverpool)
Date: March 22, 2017

The Department of Mathematical Sciences and the EPSRC Liverpool Centre of Maths in Healthcare at the University of Liverpool invites applications for this graduate teaching assistant (GTA) studentship leading to a PhD and starting from 1st September 2017.

The project will develop mathematical models for multimodal imaging: the combination of different modalities, such as CT, MRI, photoacoustic, optical, ultrasound, and Tera-Hertz imaging. Our goal is robustness, which will be achieved through rigorous mathematical analysis. The models combined with relevant numerical solution techniques will be applied to various applications, such as oncology and functional brain imaging, relevant to the EPSRC Liverpool Centre of Maths in Healthcare and its clinical and industrial partners. Any single modality of images (e.g. CT) cannot reveal all the features in an object and different modalities may offer advances in practical applications by complementing each other through suitable combination of information.
?
https://www.liverpool.ac.uk/mathematical-sciences/postgraduate/postgraduate-opportunities-in-mathematics/lcmh-phd-studentship-3/
?

From: <noreply@iopscience.org>
Subject: Inverse Problems, Volume 33, Number 4, April 2017
Date: March 1, 2017

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A unified treatment of some perturbed fixed point iterative methods with an infinite pool of operators
Touraj Nikazad, and Mokhtar Abbasi

Nonexpansiveness of a linearized augmented Lagrangian operator for hierarchical convex optimization
Masao Yamagishi, and Isao Yamada

Asymptotic behavior of two algorithms for solving common fixed point problems
Alexander J Zaslavski

Convergence to approximate solutions and perturbation resilience of iterative algorithms
Simeon Reich, and Alexander J Zaslavski

Can linear superiorization be useful for linear optimization problems?
Yair Censor

Perturbation resilience and superiorization methodology of averaged mappings
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Bounded perturbation resilience and superiorization techniques for the projected scaled gradient method
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Superiorization with level control
Andrzej Cegielski, and Fadhel Al-Musallam

Superiorization of incremental optimization algorithms for statistical tomographic image reconstruction
E S Helou, M V W Zibetti, and E X Miqueles

Computerized tomography with total variation and with shearlets
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Speedup of lexicographic optimization by superiorization and its applications to cancer radiotherapy treatment
Esther Bonacker, Aviv Gibali, Karl-Heinz Küfer, and Philipp Süss

Total variation superiorization in dual-energy CT reconstruction for proton therapy treatment planning
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Superiorization-based multi-energy CT image reconstruction
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http://iopscience.iop.org/issue/0266-5611/33/4

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Robust inversion methods for aerosol spectroscopy?
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http://www.tandfonline.com/toc/gipe20/25/6

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An inverse problem for a nonlinear diffusion equation with time-fractional derivative
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A conditional Lipschitz stability for determining a space-dependent source coefficient in the 2D/3D advection-dispersion equation
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Inverse transmission eigenvalue problems with the twin-dense nodal subset
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Today's Editor: Patricia (Patti) K. Lamm,   Michigan State University

Today's Topics:
      Summer School & Workshop: Quantitative Tomographic Imaging
      IMA Conference: Inverse Problems from Theory to Application
      Postdoctoral Position: Inverse Problems and Imaging (Linz, Austria)
      Postdoctoral Positions: Bayesian Inverse Problems, and More
(Singapore)
      Postdoctoral Position: Inverse Problems for Wave Equations

Submissions for IPNet Digest:
      Mail to ipnet-digest@math.msu.edu

Information about IPNet:
      http://ipnet.math.msu.edu

From: Axel Kittenberger <axel.kittenberger@univie.ac.at>
Subject: Workshop: Quantitative Tomographic Imaging – Radon meets Bell
and Maxwell (Linz, Austria)
Date: April 6, 2017

The Radon Institute of Computational and Applied Mathematics (RICAM) at
Linz, Austria, is organizing a Summer School and Workshop entitled

"Quantitative Tomographic Imaging – Radon meets Bell and Maxwell".

The Summer School will take place from July 10 to 12, 2017 and the
Workshop afterwards from July 12 to 14, 2017.

The purpose of the Summer School is to offer educational presentation of
high profiled researchers for students and researchers working
in the area of tomographic and coupled Physics imaging. The workshop
itself covers recent topics on Coupled Physics Imaging, Tomography, and
Inverse Problems.

The workshop is part of a special semester on "100 Years of the Radon
Transform" organized by RICAM. Please visit the website for the list of
speakers
and for further information:
https://www.ricam.oeaw.ac.at/events/workshops/qti2017/

There is space for a limited number of oral and poster presentation. The
conference and workshop are free of charge.

To express the interest in participation in this workshop please contact
office@ricam.oeaw.ac.at
To express the interest in giving a presentation please contact
leonidas.mindrinos@univie.ac.at

From: Pam Bye <Pam.Bye@ima.org.uk>
Subject: IMA Conference on Inverse Problems from Theory to Application
Date: April 28, 2017

IMA CONFERENCE ON
INVERSE PROBLEMS FROM THEORY TO APPLICATION

In collaboration with Turing Gateway to Mathematics
Tuesday 19 - Thursday 21 September 2017
Centre for Mathematical Sciences, University of Cambridge, UK

An inverse problem denotes the task of computing an unknown physical quantity from indirect measurements. The corresponding forward problem maps the physical quantity to the measurements. In most realistic situations the solution of the inverse problem is challenging, complicated by incomplete and noisy measurements, as well as non-invertible forward operators which render the inverse problem ill-posed (that is lack of stability and/or uniqueness of solutions). Inverse problems appear in many practical applications in biology, medicine, weather forecasting, chemistry, engineering, physics, to name but a few, and their analysis and solution presents considerable challenges in mathematics and statistics. This conference will bring together mathematicians and statisticians, working on theoretical and numerical aspects of inverse problems, and engineers, physicists and other scientists, working on challenging inverse problem applications. We welcome industrial representatives, doctoral students, early career and established academics working in this field to attend.

Conference topics:
·   Imaging
·   Regularisation theory
·   Statistical inverse problems
·   Sampling
·   Data assimilation
·   Inverse problem applications

Confirmed Invited Speakers
Dr Marta M. Betcke (University College London)
Professor Dan Crisan (Imperial College London)
Professor Jari Kaipio (University of Auckland, New Zealand)
Professor Dirk Lorenz (TU Braunschweig, Germany)
Professor Bill Symes (Rice University)
Dr Tanja Tarvainen (University of Eastern Finland)

Conference Fees – registration is open via https://my.ima.org.uk/

Early Bird Fees
IMA Member   £265
IMA Student   £170
Non IMA Member   £360
Non IMA Student   £180

Early Bird fees will be available until Monday 21 August 2017, after which the fees will be:

IMA Member   £285
IMA Student   £190
Non IMA Member   £380
Non IMA Student   £200

Early Bird Fees must be paid by Monday 21 August 2017 otherwise the higher price will be implemented.

Residential Fee £200 including single en suite bed and breakfast accommodation for the nights of Tuesday 19 and Wednesday 20 September, at the nearby Murray Edwards College, plus the conference dinner on the evening of Wednesday 20 September

Conference Dinner £45 on Wednesday 20 September for non-residents

*If you are an IMA Member or you have previously registered for an IMA conference, then you are already on our database. Please "request a new password" using the email address previously used, to log in.

Organising Committee
Carola?Bibiane Schönlieb (University of Cambridge) ? Chair
Cristiana Sebu (University of Malta) – Co-chair
Paul Ledger (Swansea University)
Bill Lionheart (University of Manchester)

Scientific Committee
Simon Arridge (University College London)
Martin Burger (University of Münster)
Daniela Calvetti (Case Western Reserve University)
Paul Childs
Barbara Kaltenbacher (University of Klagenfurt)
Roland Potthast (University of Reading)
Samuli Siltanen (University of Helsinki)

Further information
For further information on this conference, please visit the conference webpage:
http://ima.org.uk/conferences/conferences_calendar/inverse-problems.html

Contact information
For general conference queries please contact Lizzi Lake, Conference Officer
E-mail: conferences@ima.org.uk   Tel: +44 (0) 1702 354 020
Institute of Mathematics and its Applications, Catherine Richards House, 16 Nelson Street, Southend-on-Sea, Essex, SS1 1EF, UK.

From: Axel Kittenberger <axel.kittenberger@univie.ac.at>
Subject: PostDoc position, Inverse Problems and Imaging, Linz, Austria
Date: April 6, 2017

At the Johann Radon Institute for Computational and Applied Mathematics (RICAM) of the Austrian Academy of Sciences, Linz, Austria, the "Inverse Problems and Imaging Group" is searching a PostDoc with a strong background in Tomography or Regularization. The research focus will be adjusted according to the interests of the successful candidate, although expert knowledge in either one of the following topics Mathematical Tomography, Integral Geometry, Regularization Theory, Stability Estimates is preferential.

A doctorate in mathematics or a closely related field is required. The working language is English. For more information contact Prof. O. Scherzer at: otmar.scherzer@univie.ac.at

RICAM went into operation on January 1, 2003 and has established research groups in six areas:
* Computational Methods for PDEs
* Geometry in Simulations
* Optimization and Optimal Control
* Inverse Problems and Mathematical
* Symbolic Computation
* Transfer Group

The Institute is located on the campus of the Johannes Kepler University in Linz, a city with approx. 205,000 inhabitants. Linz is located on the Danube, close to the Austrian Alps and half-way between Vienna and Salzburg. Further information is available at: www.ricam.oeaw.ac.at

Applications with personal and scientific data and a compact statement about scientific interests and achievements should be sent by May 31, 2017, by email to the address above.

The Austrian Academy of Sciences is an equal opportunity employer.

We are approaching interested candidates, prepared to exercise the aforementioned duties for a yearly gross salary of € 50.772,40 EUR. We offer a fixed-term contract for an initial period of one year (with possible extensions up to a maximum of six years). Starting date will be October 1, 2017.

https://www.ricam.oeaw.ac.at/files/jobs/ip_2017_04_04.pdf

From: Alexandre THIERY <a.h.thiery@nus.edu.sg>
Subject: PostDoc Positions at the National University of Singapore (NUS)
Date: April 6, 2017

Research Fellow: Bayesian inverse problems, high-dimensional Monte-Carlo methods and Data Assimilation, Bayesian Deep Learning
(http://www.normalesup.org/~athiery/job_adv/postdoc_MC.pdf)
Salary Range: S$70K -- S$85K
Initially for a period of 2 years
Department of Statistics and Applied Probability, NUS, Singapore

Dear colleagues,

the department of Statistics and Applied Probability of the National University of Singapore has 3 postdoctoral positions are available. Topics of interest include, but are not limited to: PDE-constrained Bayesian inverse problems, high-dimensional Monte-Carlo methods (MCMC, particle methods, optimal transport), high-dimensional Data Assimilation (SMC, EnKF, Variational approaches, Hybrid Methods), Bayesian Deep Learning models for inference in data-scarce settings.

These projects are in collaboration with (i) Abyss Processing, a young and energetic startup specializing in leveraging Deep Learning for medical diagnosis (ii) the Solar Energy Research Institute of Singapore (SERIS). The candidate will work closely with Dr. Alex Thiery and will use this postdoctoral stint to develop a strong research profile that will enable him/her to find a good faculty position.

Applicants should be highly motivated and creative, show an exceptional track record, and hold a Ph.D. degree in Computational Statistics, Computer Science, Signal Processing, Mathematics, or related fields, and be interested in working in an interdisciplinary and multicultural environment. Positions for postdocs who just obtained their Ph.D. degree and for experienced researchers with several years of postdoctoral experience are available. These positions offer the opportunity to gain leadership and supervision experience in joint projects with younger scientists.

Term of Appointment: the appointment can commence immediately and will be initially for a period of two years (renewable for a third year).

Interested candidates are encouraged to directly contact Dr. Alex Thiery
(a.h.thiery@nus.edu.sg) for further details.

From: "Hohage, Thorsten" <hohage@math.uni-goettingen.de>
Subject: Postdoctoral Position in Inverse Problems for Wave Equations
Date: April 25, 2017

The Max Planck Institute for Solar Systems Research (MPS) in Göttingen
(Germany) invites applications for a postdoctoral position within the Max
Planck Fellow Group "Inverse Problems" of Prof. Thorsten Hohage. The
successful candidate will have research experience in either full-
waveform inversions, efficient numerical solution of time-harmonic wave
equations, uniqueness results for inverse elliptic boundary value
problems, wave propagation in random media, or other topics related to
inverse problems for wave equations. She/he is expected to have an
interest, but not necessarily previous experience in helioseismic
inversions and to collaborate with a large and lively group of scientists
working on this topic at MPS. The candidate may also profit from several
other groups working on inverse problems and imaging on the Göttingen
Campus in the applied mathematics, statistics, and physics departments of
the university and at the MPS, providing a vibrant atmosphere for
research on these topics.

Applications including a short CV, a short statement of research
interests, and a preferred start date should be sent as a single PDF file
to hohage@mps.mpg.de with "postdoc on inverse problems" in the subject
line. Review of the applications will begin on 8 May 2017 and continue
until a suitable candidate is found.

The initial contract is for a period of 2 years and may be extended to up
to 4.5 years. Remuneration is according to the German public salary scale
TVöD E13. Benefits include unemployment, healthcare, and retirement
benefits. The MPS is an equal opportunity employer and places particular
emphasis on providing career opportunities for women. Applications from
persons with disabilities are expressly encouraged.
------ end -------

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

Today's Topics:

Submissions for IPNet Digest:
Mail to ipnet-digest@math.msu.edu

Information about IPNet:
http://ipnet.math.msu.edu

From: Eric Miller <elmiller@ece.tufts.edu>
Subject: Imaging Sciences Symposium
Date: May 3, 2017

Houston Imaging Sciences Symposium

This is the first call for abstracts/pre-registration for a two-day Imaging Sciences symposium to be held in Houston, TX on October 2nd-3rd, 2017.

Main focus for symposium:

•   A two-day symposium to bring together experts and practitioners of imaging sciences in various industry, including but not limited to oil and medical industries.
•   Focus on the mathematical and numerical aspects of imaging, bringing in more detail than what we can see at SEG or other industry conferences. At the same time, the focus will also be on how to apply the mathematics to solve industry problems of today.
•   Take a look at what the future holds for imaging, find intersection between imaging and all the fantastic improvements in machine learning, reduced order models, compressive sensing, etc.

There are no tracks at this symposium, the talks will be attended by all participants. We plan to have four sessions, each with one plenary speaker followed by talks. Each talk can be 45 mins long, followed by 10 mins for Q&A.

Please submit a short abstract (1 page or less), including your name, affiliation. Also, please indicate which of the four sessions your talk will best fit into:

1.   Tomographic imaging: Lead by Dr. Eric Miller, Tufts
2.   Reflection imaging: Lead by Dr. Bill Symes, Rice
3.   Image Processing: Lead by Dr. David Fuentes, MD Anderson
4.   Future of Imaging: Lead by Dr. Maarten DeHoop, Rice

Talks that fit well within the focus described above will be more likely to be picked. Please submit abstracts by June 30th, 2017 to houstonimaging2017@gmail.com

At the time, we would also like those who plan to attend to pre-register so that we can get an idea of the number of attendees for planning our logistics. Please respond using the Google form ASAP

https://goo.gl/forms/HddqmsraT9guK7513

Submitted by: Eric L. Miller
Professor and Chair, Electrical and Computer Engineering
Adjunct Professor of Computer Science
Adjunct Professor of Biomedical Engineering
Email: eric.miller@tufts.edu
Web: http://www.ece.tufts.edu/~elmiller/elmhome/
Phone: 617.627.0835   FAX: 617.627.3220
Ground: Halligan Hall Room 101A, 161 College Ave.
        Medford Ma, 02155

From: Candy Smellie <communications@newton.ac.uk>
Subject: Upcoming Workshop - Generative models, parameter learning and sparsity - 30 October - 3 November 2017
Date: May 3, 2017

Upcoming Workshop -
Generative models, parameter learning and sparsity
30 October - 3 November 2017

Attend this workshop at the Isaac Newton Institute and interact and engage while working on the review, exchange and promoting of recent advances in generative models, parameter learning and sparsity.

A key issue in image reconstruction, and in inverse problems as a whole, is the correct choice of image priors (or regularisation functionals) and data models (or fidelity terms) in a variational or Bayesian reconstruction model. Depending on the setup of the model, very different qualitative image reconstruction results are obtained. This workshop will cover many topics around this - Read more here.

This is the second event and part of the activities for a long term programme on Variational methods and effective algorithms for imaging and vision (1 Sept-- 31 Dec 2017) organised by Ke Chen, Andrew Fitzgibbon, Michael Hintermüller, Carola-Bibiane Schönlieb, and Xue-Cheng Tai. List of invited and confirmed speakers includes (to expand): F Bach, R Baraniuk, J Calder, J Chung, J Delon, M Figueiredo, E Haber, A Hansen, L Horesh, P Milanfar, M Peyrera, B Plemmons, L Ruthotto, P Weiss, R Willett.

This workshop is organised by:
·   Simon Arridge (University College London),
·   Martin Burger (Universität Münster),
·   Michael Hintermüller (Humboldt-Universität zu Berlin),
·   Nick Kingsbury (Trinity College, Cambridge),
·   Gabriel Peyre (CNRS - Ecole Normale Superieure Paris),
·   Guillermo Sapiro (Duke University),
·   Carola Schönlieb (University of Cambridge)

This workshop is open for registration but closes shortly. Deadline for Oral/Poster presentation: 30 June 2017. Deadline for participation (only): 31 July 2017. Participation remotely is possible.

Submitted by: Candy Smellie, Information Coordinator
Isaac Newton Institute for Mathematical Sciences
20 Clarkson Road
Cambridge CB3 0EH
Tel : 01223 335983

From: "Pereyra, Marcelo" <m.pereyra@hw.ac.uk>
Subject: Workshop - "New mathematical methods in computational imaging" - Heriot-Watt Edinburgh - 29th June 2017
Date: May 16, 2017

Dear Colleagues,

This is a reminder for the Heriot-Watt workshop on "New mathematical methods in computational imaging", which will be held on the 29th of June 2017 at the School of Mathematical and Computer Sciences.

The aim of this meeting is to gather imaging experts from the Bayesian statistics, applied analysis and signal processing communities to discuss recent breakthroughs in mathematical methodology for inverse problems related to computational imaging. The goals are to provide an opportunity to disseminate new results and to promote synergy and cross-fertilisation between these fields.

Workshop programme
09.50 - 10.00: Welcome
10.00 - 10.45: Mike Davies
Coffee break (30 minutes)
11.15 - 12.00: Marcelo Pereyra
Lunch & Invited Poster Session (Abderrahim Halimi, Audrey Repetti, and Xiaohao Cai)
13.30 - 14.15: Joao Mota
14.15 - 15.00: Yoann Altmann
Coffee break & Poster session
16.00 - 16.45: Jean-François Giovannelli

The workshop is organised by Marcelo Pereyra (Heriot-Watt). For more information, to propose a poster presentation, and to register, please visit the workshop website at
http://www.macs.hw.ac.uk/~mp71/LMS_workshop_June2017.html

The meeting is supported by the London Mathematical Society and by Heriot-Watt University.

Founded in 1821, Heriot-Watt is a leader in ideas and solutions. With campuses and students across the entire globe we span the world, delivering innovation and educational excellence in business, engineering, design and the physical, social and life sciences.

From: Kim Knudsen <kiknu@dtu.dk>
Subject: Postdoc position
Date: May 25, 2017

Postdoc in Mathematical Analysis and Computations for Coupled-Physics
Tomography

The Department of Applied Mathematics and Computer Science at the
Technical University of Denmark (www.compute.dtu.dk/english) invites
applications for a postdoc position starting August 1 2017 (or shortly
thereafter), see http://www.dtu.dk/english/career/job?id=822e52f5-4526-
44dd-9d09-fac235c5db85.

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 June 15, 2017.

More information can be obtained from Assoc. Prof. 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: Mike Christie <Mike.Christie@pet.hw.ac.uk>
Subject: Postdoc position, MCMC methods, Heriot-Watt University,
Edinburgh
Date: May 3, 2017

Heriot-Watt is looking for a postdoc with good knowledge of MCMC [Markov
Chain Monte Carlo] techniques to be part of the EQUIP project between
Heriot-Watt, Warwick University, and Imperial College.

The EQUIP project is funded by the UK's Engineering and Physical Sciences
Research Council, and is aiming to develop uncertainty quantification
techniques that can be applied to real world challenging problems.

The ideal candidate will already have good knowledge of MCMC techniques.

Details of the vacancy and how to apply can be found at
https://www.hw.ac.uk/about/work/jobs/job_SVJDOTgzMA.htm

From: <noreply@iopscience.org>
Subject: Inverse Problems, Volume 33, Numbers 1, 5-6
Date: May 4, 2017

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Special Issue Paper
Sparsity and level set regularization for diffuse optical tomography
using a transport model in 2D

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http://iopscience.iop.org/issue/0266-5611/33/5

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Inverse Problems   June 2017   Volume 33, Number 6
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Special Issue Paper

Sparsity regularization in inverse problems
Bangti Jin, Peter Maaß, and Otmar Scherzer

Special Issue Paper
An improved exact inversion formula for solenoidal fields in cone beam
vector tomography
Alexander Katsevich, Dimitri Rothermel, and Thomas Schuster

Special Issue Paper
All-at-once versus reduced iterative methods for time dependent inverse
problems
B Kaltenbacher

Recovery of an embedded obstacle and its surrounding medium from formally
determined scattering data
Hongyu Liu, and Xiaodong Liu

Inversion of the conical Radon transform with vertices on a surface of
revolution arising in an application of a Compton camera
Sunghwan Moon

A data-scalable randomized misfit approach for solving large-scale PDE-
constrained inverse problems
E B Le, A Myers, T Bui-Thanh, and Q P Nguyen

Second-harmonic imaging in random media
Liliana Borcea, Wei Li, Alexander V Mamonov, and John C Schotland

Alternating minimisation for glottal inverse filtering
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Paavo Alku, and Samuli Siltanen

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Melody Alsaker, Sarah Jane Hamilton and Andreas Hauptmann

Reconstruction in the partial data Calderón problem on admissible
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Yernat M. Assylbekov

Ambient noise correlation-based imaging with moving sensors
Mathias Fink and Josselin Garnier

Time-invariant Radon transform by generalized Fourier slice theorem
Ali Gholami and Mauricio D. Sacchi

Recovering the boundary corrosion from electrical potential distribution
using partial boundary data
Jijun Liu and Gen Nakamura

Subspace clustering by (k,k)-sparse matrix factorization
Haixia Liu, Jian-Feng Cai and Yang Wang

Probabilistic interpretation of the Calderón problem
Petteri Piiroinen and Martin Simon

Image segmentation with dynamic artifacts detection and bias correction
Dominique Zosso, Jing An, James Stevick, Nicholas Takaki, Morgan
Weiss, Liane S. Slaughter, Huan H. Cao, Paul S. Weiss and Andrea L.
Bertozzi

http://aimsciences.org/journals/contentsListnew.jsp?pubID=954

Submitted by: Cuixin Zhou

From: <noreply@degruyter.com>
Subject: Contents, 'Journal of Inverse and Ill-posed Problems'
Date: May 19, 2017

Journal of Inverse and Ill-posed Problems   June 2017   Volume 25,
Issue 3
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On Nesterov acceleration for Landweber iteration of linear ill-posed problems
Neubauer, Andreas

Depth dependent resolution in Electrical Impedance Tomography
Alessandrini, Giovanni / Scapin, Andrea

https://www.degruyter.com/view/j/jiip.2017.25.issue-3/issue-files/jiip.2017.25.issue-3.xml
------ end -------

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

Today's Topics:
    Summer School: Mathematical Aspects of Inverse Problems in 2017
    International Conference: Inverse Problems in Engineering in 2020
    Postdoctoral position: Inverse Problems at Göttingen
    Announcement: Golden Medal given to Mikhail V. Klibanov
    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: Aretha Teckentrup <a.teckentrup@ed.ac.uk>
Subject: Inverse Problems Summer School, London, August 2017
Date: June 22, 2017

We would like to draw your attention to our forthcoming summer school on

  Mathematical Aspects of Inverse Problems

https://www.turing.ac.uk/events/mathematical-aspects-inverse-problems-
summer-school/

The summer school will focus on mathematical foundations of inverse
problems, at the interface of applied mathematics, statistics and data
science. It is suitable for PhD students and early career researchers
with a maths-based degree.

The summer school will be held from the 29 August – 1 September 2017 at
the Alan Turing Institute, London, UK.

Confirmed speakers are: Masoumeh Dashti (Sussex), Alison Fowler
(Reading), Michela Ottobre (Heriot-Watt) and Clarice Poon and Carola-
Bibiane Schoenlieb (Cambridge).

To encourage the participation of female researchers, The Alan Turing
Institute is offering scholarships to cover the travel and accommodation
expenses for four female participants, to the value of £600. Application
deadline is July 7; further details are available from the website.

Submitted by: Aretha Teckentrup
Lecturer in Mathematics of Data Science
School of Mathematics, University of Edinburgh

From: <filippo.demonte@ing.univaq.it>
Subject: 10th ICIPE (International Conference on Inverse Problems in
Engineering)
Date: June 22, 2017

International Conference on Inverse Problems in Engineering

The 10th ICIPE (International Conference on Inverse Problems in
Engineering)
will be held in Italy, Francavilla al Mare (CH), May 18-21, 2020.
A news of it was recently posted on the 9th ICIPE home page that was held
last
May in Waterloo, Canada, https://icipe17.uwaterloo.ca/index.html.

Conference Chair: Filippo de Monte, University of L'Aquila, Italy
Honorary Chair: James V. Beck, Michigan State University, USA
ICIPE Chair: Keith Woodbury, University of Alabama, USA
IPS Chair: Kirk Dolan, Michigan State University, USA

The Conference will be held in Honor of Prof. James V. Beck
for his contribution to Parameter Estimation and Inverse Heat
Conduction Problems.

Solicited topics include:

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: Filippo de Monte
Professor of Mechanical Engineering

Department of Industrial and Information
Engineering and Economics
University of L'Aquila, L'Aquila, Italy

Email: filippo.demonte@univaq.it
Web: http://www.ing.univaq.it/home/de_monte_filippo

From: "Hohage, Thorsten" <hohage@math.uni-goettingen.de>
Subject: Postdoctoral position: Inverse Problems (Göttingen)
Date: June 23, 2017

The Institute of Numerical and Applied mathematics at the Georg-August
University Göttingen is looking to fill the position of a

   Postdoctoral Researcher in Inverse Problems

within the group of Prof. Thorsten Hohage for a period of 2 years with
the possibility of extension (pay grade 13 TV-L, 39,80 hours/week).

The successful candidate will have a highly qualified PhD in applied mathematics or related fields and research experience in deterministic or statistical regularization theory, inverse problems in partial differential equations, or variational methods in imaging. The candidate may profit from several other groups working on inverse problems and imaging on the Göttingen Campus in the applied mathematics, statistics, and physics departments of the university, and at the Max Planck Institutes for Biophysical Chemistry, Solar Systems Research, and Dynamical Systems, providing a vibrant atmosphere for research on these topics. An interest in extending existing collaborations with one of these groups is very welcome. Under special circumstances, the position is suitable for half-time.

The University of Göttingen is an equal opportunities employer and places particular emphasis on fostering career opportunities for women. Qualified women are therefore strongly encouraged to apply in fields in which they are underrepresented. The university has committed itself to being a family-friendly institution and supports their employees in balancing work and family life. The mission of the University is to employ a greater number of severely disabled persons. Applications from severely disabled persons with equivalent qualifications will be given preference.

Applications including a short CV, a statement of research interests, and a list of publications should be sent as a single PDF file to Antje Scholz, e-mail: a.scholz@math.uni-goettingen.de.

Scientific questions
should be addressed to Thorsten Hohage e- mail: hohage@math.uni-goettingen.de.
Application deadline is July 3, 2017.

From: Loc Nguyen <lnguye50@uncc.edu>
Subject: Announcement of Golden Medal given to Mikhail V. Klibanov
Date: June 15, 2017

Dear Colleagues,

I am glad to inform you that Professor Mikhail V. Klibanov, whom we all know, recently (June 9, 2017) got quite a prestigious award: A Golden Medal from Sobolev Institute of Mathematics. This award is given to him for his "Distinguished Impact in Mathematics" as the official letter states. As you can see from that letter, he is in a great company of very distinguished mathematicians, who are also laureates of this award.

Let us congratulate Professor Klibanov with this valuable achievement!

I copy below the original letter from Sobolev Institute of Mathematics.

Best regards,
Loc H. Nguyen
Assistant Professor
Department of Mathematics and Statistics
University of North Carolina at Charlotte
lnguye50@uncc.edu

Sobolev Institute of Mathematics
Siberian Branch of the Russian Academy of Science (IM SB RAS)

630090, Novosibirsk, Kotyug prospect 4
Phone: +73833332892, Fax: +73833332958
E-mail: im@math.nsc.ru

Professor Mikhail V. Klibanov
Department of Mathematics and Statistics
University of North Carolina at Charlotte, USA

Dear Professor Klibanov,

It is my great pleasure to sincerely congratulate you with a very
honorable event: on June 9, 2017 you were awarded the Golden Medal of
this Institute for your Distinguished Impact in Mathematics!

I am also informing you that since the birth of this Institute sixty
years ago, some other awardees of this medal were such truly
distinguished mathematicians as:
    1.   Ju.S. Osipov, President of Russian Academy of Science.
    2.   I.M. Gelfand, Russia and USA, a Member of Russian Academy of
Science.
    3.   S.M. Nikolskii, a Member of Russian Academy of Science.
    4.   I.R. Shafarevich, a Member of Russian Academy of Science.
    5.   V.V. Kozlov, Interim President of Russian Academy of Science.
    6.   Y.V. Matiyasevich, a Member of Russian Academy of Science.
    7.   E.I. Zelmanov, Fields Laureate, Russia and USA
and a number of other great mathematicians.

Thus, our Institute welcomes you to join this glorious cohort of truly
distinguished mathematicians!
Congratulations once again!

Director
Member of Russian Academy of Science

Sergey S. Goncharov

From: <noreply@iopscience.org>
Subject: Inverse Problems, Volume 33, Number 7, July 2017
Date: June 21, 2017

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Julianne Chung, and Malena I Español

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Cao Van Chung, J C De los Reyes, and C B Schönlieb

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Alexander Cloninger, Wojciech Czaja, and Timothy Doster

FRIST—flipping and rotation invariant sparsifying transform learning and applications
Bihan Wen, Saiprasad Ravishankar, and Yoram Bresler

A-optimal encoding weights for nonlinear inverse problems, with application to the Helmholtz inverse problem
Benjamin Crestel, Alen Alexanderian, Georg Stadler, and Omar Ghattas

Learning theory of distributed spectral algorithms
Zheng-Chu Guo, Shao-Bo Lin, and Ding-Xuan Zhou

http://iopscience.iop.org/issue/0266-5611/33/7
------ end -------

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

Today's Topics:
      Conference: 28th IFIP on System Modeling and Optimization, Inverse
Problems
      Research Associate/Senior Research Associate: Mathematics of
Measurement
      Table of Contents: Journal of Inverse and Ill-posed Problems
      Table of Contents: Inverse Problems
      Table of Contents: Inverse Problems and Imaging

Submissions for IPNet Digest:
      Mail to ipnet-digest@math.msu.edu

Information about IPNet:
      http://ipnet.math.msu.edu

From: Christian Clason <christian.clason@uni-due.de>
Subject: First announcement: IFIP TC 7 Conference 2018 in Essen
Date: July 17, 2017
Dear colleagues,

We would like to draw your attention to the

  28th IFIP TC7 Conference on System Modeling and Optimization,

to be held

  July 23-27, 2018, in Essen, Germany.

You can find a preliminary web page with some important dates at

  https://udue.de/ifip2018

The IFIP TC7 conference series addresses a broad range of topics of
applied optimization such as optimal control of ordinary and partial
differential equations, modeling and simulation, inverse problems,
nonlinear, discrete, and stochastic optimization, and industrial
applications. In particular, submission of minisymposium proposals on one
of these or related topics are welcome (deadline is November 2017).

We hope to see you next year in Essen!

Best wishes,

the organizing committee
(Christian Clason, Christian Meyer, Arnd Rösch, Gerhard Starke, Irwin
Yousept)

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

Research Associate/Senior Research Associate in the Mathematics of
Measurement (Fixed Term)

The Cantab Capital Institute for the Mathematics of Information (CCIMI)
in collaboration with the National Physical Laboratory (NPL) are seeking
strong candidates for a Research Associate / Senior Research Associate
position to work on a collaborative project in the. Mathematics of
Measurement. The postholder will be employed by the University of
Cambridge and affiliated with both CCIMI and NPL, with part of their time
spent in the CCIMI based in the Centre for Mathematical Sciences in
Cambridge and the other part in the NPL offices based in the Maxwell
Centre in Cambridge or at the NPL main site in Teddington, Southwest
London. The exact percentage of time spent at each institution will vary
as appropriate over the course of the project, with the expectation of a
minimum of 20% of time spent at NPL (either at the Maxwell Centre in
Cambridge or the main site in Teddington) and the University of Cambridge
throughout.

Appointment will be made either at Research Associate level (£30,175-
£38,183 per annum) or at Senior Research Associate level (£39,324-£49,772
per annum) for an exceptionally well qualified candidate.

Applicants must have a PhD degree in mathematics or statistics (or
closely related discipline), and have a demonstrably excellent research
record and future research potential.

Duties include developing and conducting individual and collaborative
research objectives, proposals and projects. The role holder will be
expected to plan and manage their own research and administration, with
guidance if required, and to assist in the preparation of proposals and
applications to external bodies. He or she must be able to communicate
material of a technical nature and be able to build internal and external
contacts. He or she may be asked to assist in the supervision of student
projects, the development of student research skills, provide instruction
or plan/deliver seminars relating to the research area. An allowance for
research expenses is included in this position. In the case of an
appointment being made at Senior Research Associate level, additional
duties would include managing research budgets and programmes,
identifying sources of funding, contributing to teaching and
supervising/mentoring research students and colleagues.

Fixed-term: The funds for this post are available for up to 3 years in
the first instance.

To apply online for this vacancy, please click on the 'Apply' button
below. This will route you to the University's Web Recruitment System,
where you will need to register an account (if you have not already) and
log in before completing the online application form.

You will need to upload a full curriculum vitae, research statement, list
of publications and the contact details of two academic referees. Please
ensure that your referees are aware that they will be contacted by the HR
Office Administrator to request that they upload a reference for you to
our Web Recruitment System, and please encourage them to respond
promptly.

Interviews are expected to be held in the week beginning 18 September.

Informal enquiries about the position may be made to the coordinator for this recruitment at: LE12567@maths.cam.ac.uk.

Please quote reference LE12567 on your application and in any correspondence about this vacancy.

The University of Cambridge and NPL value diversity and are committed to equality of opportunity. We particularly welcome applications from women, since women are, and historically have been, under-represented on the University of Cambridge Mathematics Departments' research staff.

The University has a responsibility to ensure that all employees are eligible to live and work in the UK.

Further information can be found here: http://www.jobs.cam.ac.uk/job/14148/

CLOSING DATE: 15 August 2017

From: <noreply@degruyter.com>
Subject: TOC for 'Journal of Inverse and Ill-posed Problems'
Date: July 25, 2017

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Regularization method for an ill-posed Cauchy problem for elliptic equations
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Scattered data fitting by minimal surface
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A proximal iteratively regularized Gauss-Newton method for nonlinear inverse problems
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Compact discrepancy and chi-squared principles for over-determined inverse problems
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Inverse problems on a graph with loops
Yang, Chuan-Fu / Wang, Feng

On Nesterov acceleration for Landweber iteration of linear ill-posed problems
Neubauer, Andreas

Depth dependent resolution in Electrical Impedance Tomography
Alessandrini, Giovanni / Scapin, Andrea

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Criteria for guaranteed breakdown in two-phase inhomogeneous bodies
Patrick Bardsley, Michael S Primrose, Michael Zhao, Jonathan Boyle,
Nathan Briggs, Zoe Koch, and Graeme W Milton

Wideband passive source localization
Margaret Cheney, and James A Given

Convergence rates for regularization functionals with polyconvex
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Clemens Kirisits, and Otmar Scherzer

A comparison of edge-preserving approaches for differential interference
contrast microscopy
S Rebegoldi, L Bautista, L Blanc-Féraud, M Prato, L Zanni, and A Plata

Iterative algorithms for a non-linear inverse problem in atmospheric
lidar
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A novel sampling method for multiple multiscale targets from scattering
amplitudes at a fixed frequency
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http://iopscience.iop.org/issue/0266-5611/33/8

Landmark-guided elastic shape analysis of human character motions
Martin Bauer, Markus Eslitzbichler and Markus Grasmair

A discrete Liouville identity for numerical reconstruction of Schrödinger
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Liliana Borcea, Fernando Guevara Vasquez and Alexander V. Mamonov

Convergence and stability of iteratively reweighted least squares for
low-rank matrix recovery
Yun Cai and Song Li

On the lifting of deterministic convergence rates for inverse problems
with stochastic noise
Daniel Gerth, Andreas Hofinger and Ronny Ramlau

Non-convex TV denoising corrupted by impulse noise
Yoon Mo Jung, Taeuk Jeong and Sangwoon Yun

Convergence of the gradient method for ill-posed problems

Stefan Kindermann

Numerical optimization algorithms for wavefront phase retrieval from multiple measurements
Ji Li and Tie Zhou

Increasing stability for the inverse source scattering problem with multi-frequencies
Peijun Li and Ganghua Yuan

On a spatial-temporal decomposition of optical flow
Aniello Raffaele Patrone and Otmar Scherzer

------ end -------

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

Today's Topics:
     Workshops: Mathematical Imaging Workshops at Isaac Newton Institute
     Postdoctoral Positions: PET/SPECT, Image Reconstruction, Deep
Dictionary Learning
     PhD Studentships: Inverse Problems in Ultrasound Computed
Tomography
     Asst./Assoc. Professorship: Big Data, Computational Inverse Problem
Methods
     Call for Papers: Special issue on Inverse Wave Propagation Problems
(Inverse Problems)
     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: Isaac Newton Institute <communications@newton.ac.uk>
Subject: Mathematical imaging workshops: final call for attendees,
October - December 2017
Date: August 16, 2017

Final call:
"Variational methods and effective algorithms for imaging and vision"
workshops
October - December 2017

Variational methods and effective algorithms for imaging and vision

The Isaac Newton Institute would like to announce a final call for
participants in the three remaining workshops of the "Variational methods
and effective algorithms for imaging and vision" programme, which will
take place in Cambridge and Warwick between October and December 2017.

In recent history, mathematical imaging, image processing and computer
vision have become fundamental for gaining information on various aspects
in medicine, the sciences, and technology, in the public and private
sector equally. The rapid development of new imaging hardware, the
advance in medical imaging, the advent of multi-sensor data fusion and
multimodal imaging, as well as the advances in computer vision have
sparked numerous research endeavours leading to highly sophisticated and
rigorous mathematical models and theories.

These international and inter-disciplinary gatherings will foster
exchange between different groups of researchers and practitioners who
are involved in mathematical imaging science, and stimulate discussions
on new horizons in theory, numerical methods and applications of
mathematical imaging and vision.

The full details of each workshop are as follows:

VMVW02: "Generative models, parameter learning and sparsity" will take
place from 30 October - 3 November 2017 at the Isaac Newton Institute in

Cambridge. This week-long workshop will focus on key issues in image reconstruction, and will discuss image priors, data models and the qualities of a variational imaging approach.

To register by 3 September 2017: http://www.newton.ac.uk/event/vmvw02
http://www.newton.ac.uk/event/vmvw02

VMVW03: "Flows, mappings and shapes" will take place from 11-15 December 2017 at the Isaac Newton Institute in Cambridge. This workshop will bring together the leading experts in image processing, computer vision and shape analysis to discuss the directions that have the potential to lead to the next big breakthroughs and their implications for other allied disciplines.

To register by 30 September 2017: http://www.newton.ac.uk/event/vmvw03

VMVW04: "Image analysis and processing in the life sciences" will take place from 2-3 October 2017 at the University of Warwick. The workshop's objective is to facilitate the interaction and discussion between researchers from the life sciences working with or on imaging technology, and mathematicians developing and   methodology in image analysis and processing.

To register via the University of Warwick's
website: http://www.newton.ac.uk/event/vmvw04

Submitted by:
Isaac Newton Institute for Mathematical Sciences
20 Clarkson Road, Cambridge, CB3 0EH
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From: Ozan Öktem <ozan@kth.se>
Subject: Post-doc announcements
Date: August 9, 2017

Postdoctor in PET/SPECT Image Reconstruction (S-2017-1166)
Deadline: December 1, 2017
Brief description:
The position includes research & development of algorithms for PET and SPECT image reconstruction. Work is closely related to on-going research on (a) multi-channel regularization for PET/CT and SPECT/CT imaging, (b) joint reconstruction and image matching for spatio-temporal pulmonary PET/CT and cardiac SPECT/CT imaging, and (c) task-based reconstruction by iterative deep neural networks. An important part is to integrate routines for forward and backprojection from reconstruction packages like STIR and EMrecon for PET and NiftyRec for SPECT with ODL (http://github.com/odlgroup/odl), our Python based framework for reconstruction. Part of the research may include industrial (Elekta and Philips Healthcare) and clinical (Karolinska University Hospital) collaboration.
Announcement & instructions:
http://www.kth.se/en/om/work-at-kth/lediga-
jobb/what:job/jobID:158920/type:job/where:4/apply:1

Postdoctor in Image Reconstruction/Deep Dictionary Learning (S-2017-1165)
Deadline: December 1, 2017
Brief description:
The position includes research & development of theory and algorithms that combine methods from machine learning with sparse signal processing

for joint dictionary design and image reconstruction in tomography. A key element is to design dictionaries that not only yield sparse representation, but also contain discriminative information. Methods will be implemented in ODL (http://github.com/odlgroup/odl), our Python based framework for reconstruction which enables one to utilize the existing integration between ODL and TensorFlow. The research is part of a larger effort that aims to combine elements of variational regularization with machine learning for solving large scale inverse problems, see the arXiv-reports http://arxiv.org/abs/1707.06474 and http://arxiv.org/abs/1704.040 58 and the blog-post at http://adler-j.github.io/2017/07/21/Learning-to-reconstruct.html for further details. Part of the research may include industrial (Elekta and Philips Healthcare) and clinical (Karolinska University Hospital) collaboration.
Announcement & instructions:
http://www.kth.se/en/om/work-at-kth/lediga-jobb/what:job/jobID:158923/type:job/where:4/apply:1

Submitted by:
Assoc. Prof. Ozan Öktem
Director, KTH Life Science Technology Platform
Web: http://ww.kth.se/lifescience

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E-mail: ozan@kth.se

From: Simon ARRIDGE <S.Arridge@cs.ucl.ac.uk>
Subject: PhD Positions, UCL, Inverse Problems in Ultrasound Computed Tomography
Date: August 26, 2017

Applications are invited from highly motivated candidates for two PhD studentships in the area of "Inverse Problems in Ultrasound Computed Tomography of the Breast"

The studentships will be based in the Department of Computer Science and the Department of Medical Physics & Biomedical Engineering at University College London, and will be undertaken in collaboration with the
National Physical Laboratory.

See https://goo.gl/MPr7WJ for further details.

Funding will be for 3 years, with a tax free stipend of £16,553 per year plus
UK/EU-level university fees. Outstanding students from outside the EU may apply if they have funding to support international fees. The closing
date is 15th September 2017 and the anticipated start date is October 2017.

Applicants must be UK students or EU students who will have spent the previous 3 years in the UK.

If you have any scientific queries please contact Professor Simon
Arridge
(Computer Science) s.arridge@ucl.ac.uk or Dr Ben Cox (Medical Physics)
b.cox@ucl.ac.uk.

Assistant or Associate Professor (Tenure Track position) in Big Data and
Modelling of Uncertainties in Environmental Change, University of Eastern
Finland, Department of Applied Physics, Kuopio, Finland

The University of Eastern Finland, UEF, is one of the largest
multidisciplinary universities in Finland. We offer education in nearly
one hundred major subjects, and are home to approximately 15,000 students
and 2,500 members of staff. We operate on three campuses in Joensuu,
Kuopio and Savonlinna. In international rankings, we are ranked among the
leading universities in the world.

The Faculty of Science and Forestry operates on the Kuopio and Joensuu
campuses of the University of Eastern Finland. The mission of the faculty
is to carry out internationally recognised scientific research and to
offer research-education in the fields of natural sciences and forest
sciences. The faculty invests in all of the strategic research areas of
the university. The faculty's environments for research and learning are
international, modern and multidisciplinary. The faculty has
approximately 3,800 Bachelor's and Master's degree students and some 490
postgraduate students. The number of staff amounts to
560. http://www.uef.fi/en/lumet/etusivu

We are now inviting applications for

an Assistant or Associate Professor (Tenure Track position) in Big Data
and Modelling of Uncertainties in Environmental Change, Department of
Applied Physics, Kuopio Campus

The position is research-oriented, and the specific duties associated
with the position are research and teaching addressing advanced data
analysis and computational inverse problems methods in uncertainty
quantification of sustainability of natural resources, in particular,
related to atmospheric and ecosystem processes. A successful candidate
should have a strong background in applying computational methods to
physical phenomena. In addition, knowledge on transport phenomena and/or
atmospheric aerosol processes is an advantage. The research is
implemented in the Computational Physics and Inverse Problems group
(http://venda.uef.fi/inverse/) in close collaboration with the Aerosol
Physics group (https://www.uef.fi/fi/web/aerosol).

The currently open position will strengthen the activities of the
university's strategic research areas. Please
see: http://www.uef.fi/en/tutkimus/strategiset-tutkimusalueet-2015-2020

The person can enter the Tenure Track position from the Assistant or
Associate Professor level, depending on the qualifications of the
appointee. At the end of the term, the merits of the person will be
evaluated to determine whether he or she can proceed to the next level in
the Tenure Track without public notice of vacancy. The criteria,
objectives and results to be achieved during the term in order to proceed

to the next level of the Tenure Track will be agreed with the appointee in detail when signing the contract of employment. An Associate Professor can be invited to a professorship on the basis of expert statements.

A person to be appointed as an associate professor or an assistant professor in the tenure track shall hold a suitable doctoral degree and have good teaching skills. Furthermore, a person to be appointed as an associate professor in the tenure track shall have the prerequisites for fulfilling the qualification requirements of a professor by the end of the tenure track term (UEF University Regulations 31 §).

Scientific achievements in the field of the position (to be demonstrated through publications) and previous experience in university-level teaching, supervision of Bachelor's, Master's and doctoral students, responsible tasks in research projects, acquisition of research funding and engagement in international cooperation will be regarded as merits. A successful applicant will also have good cooperation skills.

English may be used as the language of instruction and supervision in this position.

The position will be filled for a fixed term of 4 years from 1 January 2018 or as agreed. The position is filled for a fixed term due to it being a fixed-term research and teaching position (Tenure Track).

The salary of the position is determined in accordance with the salary system of Finnish universities and is based on level 6-7 of the job requirement level chart for teaching and research staff (€ 3,340.77 – 3,851.33/month). In addition to the job requirement component, the salary includes a personal performance component, which may be a maximum of 46.3% of the job requirement component.

For further information on the position, please contact Head of the Department, Professor Kari Lehtinen, tel.+358 40 867 7844 , email: kari.lehtinen@uef.fi For further information on the application procedure, please contact Executive Head of Administration Arja Hirvonen, tel. +358 44 716 3422, email: arja.hirvonen@uef.fi.

A probationary period is applied to all new members of the staff.

The electronic application is required to contain the following appendices:
- a résumé or CV

- a portfolio of teaching merits

- a list of publications

- a research proposal not exceeding five pages in length

- copies of the applicant's academic degree certificates/ diplomas, and copies of certificates / diplomas relating to the applicant's language proficiency, if not indicated in the academic degree certificates/diplomas

The application needs to be submitted no later than 22 September 2017 (by 24.00 hours Finnish time) by using the electronic application form.

Link for the application: Apply for the job (the electronic application form can be found also

from the description of the open position at http://www.uef.fi/en/uef/en-open-positions)

Submitted by:
Ville Kolehmainen, Ph.D.
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Finland

From: Daniel Jopling <Daniel.Jopling@iop.org>
Subject: Call for papers, Inverse Problems special issue on Inverse wave propagation problems without phase information
Date: August 2, 2017

Call for papers, Inverse Problems special issue on

Inverse wave propagation problems without phase information

http://iopscience.iop.org/journal/0266-5611/page/Special_issue_on_Inverse_wave_propagation_problems_without_phase_information

Guest editors
•
Thorsten Hohage University of Gottingen, Germany
•
Roman Novikov Ecole Polytechnique, Paris-Saclay, France

Aims

This special issue will capture recent developments in the classical phase problem in quantum mechanics, optics, and related areas. By Born's rule, the square of the amplitude of a particle's wave function is proportional to the probability of finding the particle at a given point, whereas the wave function itself has no direct physical interpretation. Similarly, most optical measurement techniques only provide information on the amplitude, but not on the phase of time-harmonic electromagnetic waves. While classical inverse scattering theory has focused mostly on data with phase information, new exciting results on phaseless data have appeared recently on the theoretical, algorithmic, and experimental side. This special issue will present papers on new developments in these different aspects of phaseless inverse problems and will thus provide an overview on the state-of-the-art of this active field of research.
Scope

Relevant topics that would be considered for inclusion in this special issue include:
•
Inverse scattering without phase information
•
Coherent x-ray imaging
•
Phaseless imaging in random media
•
Uniqueness, non-uniqueness, and stability results
•
Explicit (approximate) reconstruction formulas

- Reconstruction algorithms and their convergence analysis
- Novel applications and reconstructions from experimental data

Submission deadline: 31 March 2018.

Note to authors: the guest editors have agreed for individual articles to be published incrementally (i.e. as soon as they are accepted), rather than as a batch. This ensures that authors get published more quickly. All papers will also be collected into a virtual special issue accessible via the journal homepage.

Special Issue Paper

Reconstruction of a time-dependent potential from wave measurements
Thies Gerken, and Armin Lechleiter

Papers

Optimal stability estimates for a magnetic Schrödinger operator with local data
Leyter Potenciano-Machado

Joint denoising and distortion correction of atomic scale scanning transmission electron microscopy images
Benjamin Berkels, and Benedikt Wirth

Stable determination of an inclusion for a class of anisotropic conductivities
Michele Di Cristo, and Yong Ren

Convergence analysis of a two-point gradient method for nonlinear ill-posed problems
Simon Hubmer, and Ronny Ramlau

A limited memory BFGS method for a nonlinear inverse problem in digital breast tomosynthesis
G Landi, E Loli Piccolomini, and J G Nagy

Simultaneous determination of the drift and diffusion coefficients in stochastic differential equations
Michel Cristofol, and Lionel Roques

Uniqueness of a 3-D coefficient inverse scattering problem without the phase information
Michael V Klibanov, and Vladimir G Romanov

Sparse spikes super-resolution on thin grids II: the continuous basis pursuit
Vincent Duval, and Gabriel Peyré

M-matrices with prescribed elementary divisors
Ricardo L Soto, Roberto C Díaz, Mario Salas, and Oscar Rojo

Corrigendum: Inverse problems for the perturbed polyharmonic operator
with coefficients in Sobolev spaces with non-positive order (2016 Inverse
Problems 32 105009)
Yernat M Assylbekov 2017 Inverse Problems 33 099501
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IPNet Digest   Volume 24, Number 10   September 30, 2017

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

Today's Topics:
    Upcoming Deadlines: 2018 SIAM Conference on Imaging Science (IS18)
    PhD Studentship: Improved Detection of Security Threats at Swansea
University (UK)
    Postdoctoral Position: Computer Science Applied to Biomedical
Imaging (Marseille)
    Postdoctoral Position: Machine Learning for Cognitive Sciences
(Tufts)
    Postdoctoral Position: Machine Learning for Predicting Glaucoma
Progression (Singapore)
    PhD Positions: Smart Tomographic Sensors for Advanced Industrial
Process Control (TOMOCON)
    Postdoctoral Positions: Caltech's Computing and Mathematical
Sciences
    New Book: Multi-Wave Medical Imaging
    Table of Contents: Inverse Problems
    Table of Contents: Journal of Inverse and Ill-posed Problems

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Information about IPNet:
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From: Omar Ghattas <omar@ices.utexas.edu>
Subject: Upcoming deadlines: 2018 SIAM Conference on Imaging Science
(IS18), University of Bologna, Italy, June 5-8, 2018
Date: September 6, 2017

The 2018 SIAM Conference on Imaging Science (IS18) will be held at the
University of Bologna in Bologna, Italy, June 5-8, 2018.

Please note the upcoming deadlines for submission of minisymposium
proposals (October 1) and contributed lectures, minisymposium
presentations, and posters (November 5). Further conference
information can be found below and at
https://www.siam-is18.dm.unibo.it.

2018 SIAM Conference on Imaging Science (IS18)
Location: University of Bologna, Bologna, Italy
Dates: June 5-8, 2018
Website: https://www.siam-is18.dm.unibo.it

Sponsors:
The conference is sponsored by SIAM Activity Group on Imaging Science
(SIAG/IS) and the Bologna Committee for IS Conference 2018 (BCIS18).
It is being held in cooperation with the IEEE Signal Processing
Society (IEEE) and Gesellschaft für Angewandte Mathematik und Mechanik
e.V. (GAMM).

Conference Co-Chairs:
Omar Ghattas (The University of Texas at Austin)
Fiorella Sgallari (Dept. Mathematics, University of Bologna)

Scientific Committee:
Marcelo Bertalmío (University Pompeu Fabra)
Julianne Chung (Virginia Tech)
Per Christian Hansen (Technical University of Denmark)
Jari Kaipio (The University of Auckland)
Eric Miller (Tufts University)
Mila Nikolova (CMLA - CNRS ENS Cachan)
Ronny Ramlau (Kepler University Linz and Johann Radon Institute)
Carola-Bibiane Schönlieb (University of Cambridge)
Gabriele Steidl (Technische Universität Kaiserslautern)
Xue-Cheng Tai (Homg Kong Baptist University)
Laura Waller (University of California, Berkeley)
Brendt Wohlberg (Los Alamos National Laboratory)

Organizing Committee:
Carolina Beccari (Dept. Mathematics, University of Bologna)
Giulio Casciola (Dept. Mathematics, University of Bologna)
Salvatore Cuomo (Dept. Mathematics and Applications "Renato Caccioppoli", University of Naples)
Luigi Di Stefano (Dept. Computer Science and Engineering, University of Bologna)
Giovanni Dore (Dept. Mathematics, University of Bologna)
Maurizio Falcone (Dept. Mathematics, University of Rome "La Sapienza")
Luca Formaggia (Dept. Mathematics - Milan Polytechnic)
Patrizio Frosini (Dept. Mathematics, University of Bologna)
Germana Landi (Dept. Mathematics, University of Bologna)
Alessandro Lanza (Dept. Mathematics, University of Bologna)
Damiana Lazzaro (Dept. Mathematics, University of Bologna)
Elena Loli Piccolomini (Dept. Mathematics, University of Bologna)
Roberto Mecca (University of Bologna and University of Cambridge)
Serena Morigi (Dept. Mathematics, University of Bologna)
Michele Piana (Dept. Mathematics, University of Genoa)
Giulia Scalet (Dept. Civil Engineering and Architecture, University of Pavia)
Federica Sciacchitano (Dept. Mathematics, University of Genoa)
Valeria Simoncini (Dept. Mathematics, University of Bologna)
Giulia Spaletta (Dept. Mathematics, University of Bologna)
Fabiana Zama (Dept. Mathematics, University of Bologna)

During the conference the Organizing Committee will give two special awards to promote and rewards new ideas:
• IS18 best poster award: 2000 Euros
• IS18 best challenging application award (among posters and minisymposia): 1000 Euros

Important Dates and Deadlines:
• October 01, 2017 - Minisymposium proposals
• November 05, 2017 - Contributed Lecture and Minisymposium Presentation Abstracts
• November 05, 2017 - Poster Abstracts
• April 04, 2018 - Early registration deadline

Submission information: https://www.siam-is18.dm.unibo.it/submissions
Additional information: email siam-is2018@unibo.it

From: Ledger P.D. <p.d.ledger@swansea.ac.uk>
Subject: PhD Studentship in the Improved Detection of Security Threats at Swansea University (UK)
Date: September 4, 2017

Applications are invited for a UK/EU PhD studentship in the Zienkiewicz Centre for Computational Engineering (ZCCE), College of Engineering, Swansea University. Swansea University is a UK top 30 institution for research excellence (Research Excellence Framework 2014), and has been named as Welsh University of the Year 2017 by The Times and Sunday Times Good University Guide.

A new 3-year project on improving metal detection for the identification of security threats is expected to begin in Autumn 2017 and this PhD studentship will form part of a team that will also include post-doctoral researchers and collaborators in the Department of Mathematics, University College London (UCL) and the Schools of Mathematics and Electrical and Electronic Engineering, the University of Manchester (UoM). The successful candidate's first supervisor will be Dr P.D. Ledger in ZCCE who is also the principal investigator of the project

The aim of the PhD will be to improve the characterisation and location of hidden conducting security threats using scientific computing algorithms. The student will have access to the College of Engineering's new high performance computer cluster which has 73 nodes, each comprising 28 cores. It is expected that the student will work closely with the other team members and attend research meetings as well as presenting at conferences and workshops. The student will also write technical reports describing their research progress in form that can be submitted to peer reviewed academic journals.

Anticipated enrollment: January 2018.

Eligibility: The studentship is restricted to EU/UK applicants.

Qualifications required: A masters degree (MEng, MMath, MPhys, MSc or MSci) in either Engineering, Mathematics or Physics. They should have achieved either 1st class or 2.1 undergraduate degree and a distinction at postgraduate level (if appropriate).

Experience/Skills required: Expertise in numerical algorithms for the solution of partial differential equations (e.g. Finite elements, boundary elements) and be proficient in programming in one or more of the following MATLAB, Python, Fortran, C/C++. Knowledge and experience of (computational) electromagnetics is also desirable. The ideal candidate should also be an effective team worker and enthusiastic about working closely with end users and industry.

The 3-year PhD studentship is expected to provide an annual stipend of £14,553 and cover tuition fees.

For further details and to apply please see

http://www.swansea.ac.uk/postgraduate/scholarships/research/computational-engineering-phd-improving-metal-detection.php

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From: Litman Amelie <amelie.litman@fresnel.fr>
Subject: Post-doc offer in Computer Science applied to biomedical imaging, at Institut Fresnel (Marseille)
Date: September 7, 2017

Post-doc offer in Computer Science applied to biomedical imaging at Institut Fresnel (Marseille)?

Background?
The successful applicant will join the collaborative project L-iOS (ANR PRCE 2016) aiming at developing a portable?and highly accurate (spatially and spectrally) light sensor array for medical applications. He/she will join DiMABio?group at Institut Fresnel and will develop and optimize a Monte Carlo simulator to model light propagation?through biological tissues in the visible to mid-infrared (500-1500 nm). In this wavelength range, tissues are?modeled as highly absorbing and scattering media. The light propagation phenomenon can be described by the?Radiative Transfert Equation. One of the most versatile ways of solving this integro-differential equation is by?Monte Carlo simulations. This forward model will be introduced in an inverse problem resolution loop in order?to reconstruct the 3D maps of the parameters of interest, such as absorption or reduced scattering coefficients,?and, in fine, concentrations of the biomarkers of interest (oxy- and deoxy-hemoglobin, glucose, fat…).?The consortium comprises researchers and physicians from four different institutions in France: Toulouse?Hospital, Laser Physics Laboratory (Paris), CEA-LETI (Grenoble) and Institut Fresnel (Marseille).

Description of the position?
The applicant can base his/her developments on previous research work conducted at DiMABio group.?A general Monte Carlo simulation code that takes into account polarization has been developed in Fortran [1]. ?Reciprocity relations appearing in the formulation of the inverse problem and strategies to improve the?computation efficiency have been implemented [2].?
In this context, the research program of the applicant could be:?
  - To apply efficient GPU-based, CPU or hybrid CPU-GPU parallelization processes to speed up the forward?model resolution;
 ?- To test different strategies of resolution of the inverse problem at a single wavelength, implement them?in realistic situations and validate them with experimental data;
 ?- To propose a reconstruction scheme for spectrally resolved measurements.
 ?- To propose innovative general solutions within this project that could be used in other diffuse optics?physical problems (Diffuse Optical Tomography, PhotoAcoustic Tomography, Polarization gating?imaging).
 ?- To couple different forward model resolution techniques (mesh-based Monte Carlo), always with the?objective to reduce computation complexity.

[1] https://www.cbica.upenn.edu/vmarkel/CODES/MC.html?
[2] Tricoli et al. "Reciprocity relation for the vector radiative transport equation and its application to diffuse optical?tomography with polarized light", Optics Lett. 42(2), 2017.?
[3] Macdonald, et al., "Numerical investigation of polarization filtering for direct optical imaging within scattering media",?JOSAA, (2017).

Qualifications?
The applicant should have a strong background in Applied Mathematics and Computer Science. Expertise in?physics/optics would be a plus but is not a requirement. He/she will join a group composed of theoretical?and instrumental physicists, and will have to interact with the other researchers and engineers of the consortium.?Hence, he/she should be independent and present a strong motivation in working in a multidisciplinary?environment.

Place : Marseille, Institut Fresnel?
Duration : 12 months?
Starting date : November 1st, 2017

Send CV + lettre of motivation to anabela.dasilva@fresnel.fr?

From: Shuchin Aeron <shuchin@ece.tufts.edu>
Subject: Post Doctoral Position: Machine Learning for Cognitive Sciences
Date: September 7, 2017

Postdoctoral position: Tufts University??

Applications are invited for a postdoctoral position in the Tufts
Information and Networked Systems (TINS) lab in collaboration with the
recently established Center for Applied Brain and Cognitive Sciences
(CABCS) at Tufts University and the U.S. Army Natick Soldier Systems
Center at Natick., MA This appointment would be for 12-18 months with an
estimated start date of October-November 2017.

The primary project is entitled "Real time prediction of individual and
team performance metric from neurophysiological measurements and team
interaction data". Under this project, the fellow will work with Tufts
ECE faculty, Dr. Shuchin Aeron and Dr. Eric Miller, as well as CABCS
scientists to develop supervised and semi-supervised machine learning
algorithms that are capable of predicting cognitive state (e.g., stress
level and alertness) and task performance metrics (e.g., target
identification and marksmanship) from a wide assortment of physiological
sensor data (both labeled and unlabeled) including information collected
continuously as a function of time (EEG, FNIRS, Heart Rate) as well as
data at a relatively few points in time before, during, and after a
specific task (saliva and urine samples). In addition to assessing
individuals, data will be collected to support the characterization of
team and intergroup dynamics. We anticipate the effort will require the
use of several classical as well as recent developments in machine
learning and in particular recursive neural networks, manifold learning,
and social network analysis.

While previous experience in theoretical and applied machine learning
would be ideal, we welcome applicants with significant experience in
related fields including information theory, statistical signal
processing, sparse signal or image processing, compressive sensing,
and distributed convex optimization.

Interested applicants should send a cover letter detailing their research
interests and career goals, CV, and names and contact information of 3
references to Dr. Shuchin Aeron (shuchin@ece.tufts.edu).

From: Alexandre THIERY <a.h.thiery@nus.edu.sg>
Subject: Postdoctoral Fellow – Machine Learning for Predicting Glaucoma
Progression – National University of Singapore
Date: September 10, 2017

Job description: We are looking for a bright, dynamic, and highly
motivated individual to perform research in artificial intelligence with
applications to ophthalmology. This is a project funded by the Biomedical
Institute for Global Health Research and Technology (BIGHEART;
http://bigheart.nus.edu.sg) and in collaborations in the NUS Departments
of Biomedical Engineering and Statistics, and the Singapore Eye Research
Institute (Top 5 worldwide).

The proposed study aims to use optical coherence tomography imaging and artificial intelligence (deep learning) to predict vision loss progression from glaucoma – a blinding ocular disorder for which mechanisms are far from being understood. Predicting glaucoma progression is subjective, heavily dependent on a clinician's experience/expertise, and requires multiple clinical tests. Such tests often need to be repeated at multiple patients' visits to overcome their inherent subjectivity. Recently, the World Glaucoma Association stated: "No specific test can be regarded as the perfect reference standard for detection of glaucomatous […] progression". In other words, clinicians cannot identify which patients are most likely to lose vision, and how quickly. This means that over- and under-treatments are inevitable. Since structural changes of the eye almost always precede vision loss in glaucoma, we aim to exploit the rich information available in 3D images of the eye to predict glaucoma progression. We will achieve this by combining key image enhancement and artificial intelligence technologies. We believe our solution will could to better personalized treatment for the benefit of glaucoma patients.

For this project, the successful candidate will develop 3D deep learning algorithms to predict structural and functional changes of the eye. We will use a longitudinal data set of 3D optical coherence tomography images of the eye for training our algorithms. Due to data scarcity and   heterogeneity of data acquisition modalities, Bayesian regularization techniques, robust uncertainty quantification and representation learning are likely to be crucial components of the methodologies developed in this project.

The candidate will also be expected to manage and lead a team of PhD students and Research Associates.

Qualification: A minimum of 2-years experience with deep learning algorithms, and several deep learning publications are required. Excellent communication and English-writing skills are also required. No background in ophthalmology is required, however, the candidate will be expected to become extremely knowledgeable in the field of clinical glaucoma in order to interact with clinicians. Candidates with PhDs in Computer Science, Electrical Engineering, Biomedical Engineering, Mathematics, Statistics or other related disciplines are encouraged to apply.

Starting Date: Immediately

Duration: An initial contract of 12 month will be provided. Upon performance, we have the funds to extend this contract for a total duration of 2-3 years.

Salary Range: S$70 to S$90K per year (dependent on qualifications)

To apply, please email a detailed CV and the names of two references to:

Dr. Michael JA Girard
Ophthalmic Engineering & Innovation Laboratory
Department of Biomedical Engineering
National University of Singapore
Email: mgirard@nus.edu.sg
Homepage: http://www.bioeng.nus.edu.sg/oeil/

From: Marko Vauhkonen <marko.vauhkonen@uef.fi>

Subject: Doctoral student positions - Smart Tomographic Sensors for
Advanced Industrial Process Control (TOMOCON)
Date: September 11, 2017

Early Stage Researcher / Doctoral Student position at University of
Eastern Finland (UEF), Finland, as part of
          European Innovative Training Network
          Smart Tomographic Sensors for Advanced Industrial Process
Control (TOMOCON)

The European Marie Sk?odowska-Curie Innovative Training Network TOMOCON
joins 12 international academic institutions and 15 industry partners. We
work together in the emerging field of industrial process control using
smart tomographic sensors. The network will lay the scientific and
technological fundamentals of integrating imaging sensors into industrial
processes and will demonstrate its functional feasibility on lab and
pilot-scale applications. Our doctoral researchers will be trained and
work in the fields of process tomography hardware, software and
algorithms, control systems theory and design, industrial process design,
multi-physics modelling and simulation, human-computer interaction, and
massive parallel data processing. More information about the network and
all open positions can be found on our web page www.tomocon.eu.

Within TOMOCON we seek excellent open-minded and team-spirited doctoral
students who will get unique international, interdisciplinary and inter-
sectoral training in scientific and transferable skills by distinguished
leaders from academia and industry. Within the TOMOCON network we offer
the following doctoral student position at UEF:

ECT sensor for moisture distribution measurement in controlled microwave
drying
Reference number: TOMOCON-ESR14

Microwave heating is an attractive technology for drying porous materials
for example in food and pharmaceutical industries. The doctoral student
shall develop electrical capacitance tomography (ECT) towards integration
into control of microwave drying processes. This comprises development of
an ECT sensor for capacitance measurements of porous materials, software
for estimating moisture content based on ECT images and development of
process model and online optimal control for a real microwave drying
process. The work comprises fundamental scientific analyses, software
development and technical demonstration, together with groups at
universities in Lodz (Poland), Chalmers (Sweden), Karlsruhe (Germany) and
different industry partners. The doctoral student will spend secondments
of eight months in total for technical and scientific training at
Chalmers University of Technology (Sweden), Lodz University of Technology
(Poland), Karlsruhe Institute of Technology (Germany), Netrix S.A.
(Poland) and Pinta Elements GmbH (Germany). The PhD degree will be
awarded by University of Eastern Finland, Finland.

Requirements
* Completed suitable higher university degree (in engineering or natural
science, preferably in control or electrical engineering, physics or
mathematics) or an equivalent education abroad which in the country in
question would qualify the person for doctoral studies
* Programming skills with Matlab, C/C++ or Python
* Experience in tomographic imaging, inverse problems or control theory
will be considered as an advantage
* Strong interest in interdisciplinary scientific work (shown by a
motivation letter)

* Good proficiency in English language

- Starting Date: 1st March 2018
- Contract: Full-time contract for 36 months
- Salary: Gross salary per month: 2,986
        EUR Mobility allowance per month: 500
        EUR Family allowance per month (if eligible): 416 EUR
- Information: Prof. Marko Vauhkonen, Email: marko.vauhkonen@uef.fi
- Application: Please submit your application with appendices (CV, a
motivation letter, copies of the degree certificates) using the
electronic application form (http://www.uef.fi/en/uef/en-open-positions)
with the position reference "Early Stage Researcher (PhD student) in
Applied Physics, TOMOCON-ESR14"

DEADLINE 25.10.2017 (by 24.00 hours Finnish time)

Eligibility: The candidate recruited in the TOMOCON project must be
Early-Stage Researcher (ESR) and undertake transnational mobility
(secondments, trainings, conferences). The candidate must be in the first
four years from the date when the researcher obtained the degree
entitling him or her to embark on a doctorate (e.g. master degree). It
will be counted backward from the date of recruitment (in this case
01.03.2018). No doctoral degree has been awarded during these four years.
The candidate can be of any nationality. The candidate must not have
resided or carried out her/his main activity (work, studies, etc.) in
Finland for more than 12 months in the 3 years immediately before the
recruitment date. Compulsory national service, short stays such as
holidays, and time spent as part of a procedure for obtaining refugee
status under the Geneva Convention are not taken into account.
                    ****

Early Stage Researcher / Doctoral Student position at University of
Eastern Finland (UEF), Finland, as part of
        European Innovative Training Network
        Smart Tomographic Sensors for Advanced Industrial Process
Control (TOMOCON)

The European Marie Sk?odowska-Curie Innovative Training Network TOMOCON
joins 12 international academic institutions and 15 industry partners. We
work together in the emerging field of industrial process control using
smart tomographic sensors. The network will lay the scientific and
technological fundamentals of integrating imaging sensors into industrial
processes and will demonstrate its functional feasibility on lab and
pilot-scale applications. Our doctoral researchers will be trained and
work in the fields of process tomography hardware, software and
algorithms, control systems theory and design, industrial process design,
multi-physics modelling and simulation, human-computer interaction, and
massive parallel data processing. More information about the network and
all open positions can be found on our web page www.tomocon.eu.

Within TOMOCON we seek excellent open-minded and team-spirited doctoral
students who will get unique international, interdisciplinary and inter-
sectoral training in scientific and transferable skills by distinguished
leaders from academia and industry. Within the TOMOCON network, we offer
the following doctoral student position at UEF:

Microwave tomography for control of microwave drying processes
Reference number: TOMOCON-ESR15

Microwave heating is an attractive technology for drying porous materials for example in food and pharmaceutical industries. Microwave tomography, on the other hand, provides a potential framework for estimating volumetric moisture content of porous materials during the microwave drying process. The doctoral student shall develop both the forward and inverse problem solvers for microwave tomography. The obtained tomographic image is used to estimate the volumetric moisture content of the target and this information is further applied in online optimal control of the microwave drying process. The work comprises fundamental scientific analyses, software development, and technical demonstration, together with groups at universities in Liberec (Czech Republic) and Karlsruhe (Germany) and an industry partner. The doctoral student will spend secondments of eight months in total for technical and scientific training at Technical University of Liberec (Czech Republic), Karlsruhe Institute of Technology (Germany) and Vötsch Industrietechnik GmbH (Germany). The PhD degree will be awarded by University of Eastern Finland, Finland.

Requirements
 * Completed suitable higher university degree (in engineering or natural science, preferably in physics or mathematics) or an equivalent education abroad which in the country in question would qualify the person for doctoral studies
 * Programming skills with Matlab, C/C++ or Python
 * Experience in inverse problems, mathematical modeling and related numerical methods will be considered as an advantage
 * Strong interest in interdisciplinary scientific work (shown by a motivation letter)
 * Good proficiency in English language

- Starting Date: 1st March 2018
- Contract: Full-time contract for 36 months
- Salary: Gross salary per month: 2,986
         EUR Mobility allowance per month: 500
         EUR Family allowance per month (if eligible): 416 EUR
- Information: Senior researcher, Dr., Timo Lähivaara, Email: timo.lahivaara@uef.fi
- Application: Please submit your application with appendices (CV, a motivation letter, copies of the degree certificates) using the electronic application form (http://www.uef.fi/en/uef/en-open-positions) with the position reference "Early Stage Researcher (PhD student) in Applied Physics, TOMOCON-ESR15"

DEADLINE 25.10.2017 (by 24.00 hours Finnish time)

Eligibility: The candidate recruited in the TOMOCON project must be Early-Stage Researcher (ESR) and undertake transnational mobility (secondments, trainings, conferences). The candidate must be in the first four years from the date when the researcher obtained the degree entitling him or her to embark on a doctorate (e.g. master degree). It will be counted backward from the date of recruitment (in this case 01.03.2018). No doctoral degree has been awarded during these four years. The candidate can be of any nationality. The candidate must not have resided or carried out her/his main activity (work, studies, etc.) in Finland for more than 12 months in the 3 years immediately before the recruitment date. Compulsory national service, short stays such as holidays, and time spent as part of a procedure for obtaining refugee status under the Geneva Convention are not taken into account.

Submitted by:

Marko Vauhkonen, Professor
Department of Applied Physics
University of Eastern Finland
POB 1627   FI-70211 Kuopio   Finland
Tel: +358-40-7713737
email: marko.vauhkonen@uef.fi

From: Sydney G. <sydney@caltech.edu>
Subject: Postdoctoral Fellowships at Caltech
Date: September 29, 2017

Caltech's Computing and Mathematical Sciences (CMS) department announces
openings for postdoctoral fellowships, starting in Fall 2018.

CMS runs an active, interdisciplinary postdoctoral program that typically
has upwards of 20 postdoctoral scholars in any given year. These
postdoctoral scholars are sponsored by individual faculty and research
groups as well as through cross-cutting centers such as the Center for
the Mathematics of Information (CMI, http://www.cmi.caltech.edu/),
the Social and Information Sciences Laboratory
(SISL,https://www.lindeinstitute.caltech.edu/research/SISL),
the Institute for Quantum Information (IQIM,
http://www.iqim.caltech.edu/), the Resnick Institute
(http://www.resnick.caltech.edu/), and the Molecular Programming Project
(http://www.molecular-programming.org/). This year, the following postdoc
programs will be accepting applications through this posting. Many of
these programs will recruit multiple postdoctoral scholars.

        •   The von Karman Postdoctoral Instructorship Program in Applied
and Computational
Mathematics: http://www.cms.caltech.edu/about/vonkarman??
        •   The DOLCIT Postdoctoral Fellowship
Program: http://www.cms.caltech.edu/about/dolcit??
        •   The Center for the Mathematics of Information (CMI)
Postdoctoral Fellowship Program: http://www.cms.caltech.edu/about/cmi??

Please submit applications
at https://www.mathjobs.org/jobs/fellowship/10739.??

We are an equal opportunity employer and all qualified applicants will
receive consideration for employment without regard to race, color,
religion, sex, sexual orientation, gender identity, or national origin,
disability status, protected veteran status, or any other characteristic
protected by law.

Caltech is committed to working with and providing access and reasonable
accommodations to applicants with physical or mental disabilities. To
request disability accommodations for any part of the interview or hiring
process, please contact 626-395-4555 for assistance or contact
sydney@caltech.edu.

Caltech is required by law to record ethnic/racial and gender data on the
Institute's workforce. We therefore are requesting that you please
provide such information as part of the application process. Refusal to
do so will not result in any adverse employment action. This information
is confidential and will be communicated only as permitted by applicable
law.

Submitted by:

Sydney Garstang, Outreach Manager
Computing and Mathematical Sciences
California Institute of Technology

From: "Ammari Habib" <habib.ammari@sam.math.ethz.ch>
Subject: New book
Date: September 3, 2017

I would like to announce in IPNet Digest the publication of this book
on multi-wave and super-resolution medical imaging. The link is here
http://www.worldscientific.com/worldscibooks/10.1142/q0067
[From the website:
Modeling and Simulation in Medical Imagine: Volume 2
Multi-Wave Medical Imaging
Mathematical Modelling & Imaging Reconstruction
Authors: Habib Ammari, Josselin Garnier, Hyeonbae Kang, Loc Hoang Nguyen,
Laurent Seppecher

Super-Resolution imaging refers to modern techniques of achieving
resolution below conventional limits. This book gives a comprehensive
overview of mathematical and computational techniques used to achieve
this, providing a solid foundation on which to develop the knowledge and
skills needed for practical application of techniques. Split into five
parts, the first looks at the mathematical and probabilistic tools
needed, before moving on to description of different types of imaging;
single-wave, anomaly, multi-wave and spectroscopic and nanoparticle.
As an important contribution to the understanding of super-resolution
techniques in biomedical imaging, this book is a useful resource for
scientists and engineers in the fields of biomedical imaging and super-
resolution, and is self-contained reference for any newcomers to these
fields.
--Ed.]

From: <noreply@iopscience.org>
Subject: Inverse Problems, Volume 33, Number 10, October 2017
Date: September 20, 2017

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Special Issue Paper:
Reconstruction from cone integral transforms
Victor Palamodov

Papers:
On vanishing and localizing of transmission eigenfunctions near singular
points: a numerical study
Eemeli Blåsten, Xiaofei Li, Hongyu Liu, and Yuliang Wang

Inverse backscattering problem for perturbations of biharmonic operator
Teemu Tyni, and Markus Harju

A source reconstruction algorithm for the Stokes system from incomplete
velocity measurements
Galina C García, Cristhian Montoya, and Axel Osses

MRI-based electric properties tomography with a quasi-Newton approach
Anar Rahimov, Amélie Litman, and Guillaume Ferrand

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Improving epidemic size prediction through stable reconstruction of disease parameters by reduced iteratively regularized Gauss-Newton algorithm
Smirnova, Alexandra / Chowell-Puente, Gerardo / deCamp, Linda / Moghadas, Seyed / Sheppard, Michael Jameson

Convexification of restricted Dirichlet-to-Neumann map
Klibanov, Michael V.

https://www.degruyter.com/view/j/jiip.2017.25.issue-5/issue-files/jiip.2017.25.issue-5.xml
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Today's Editor: Patricia (Patti) K. Lamm,   Michigan State University

Today's Topics:
     Symposium: Inverse Problems Symposium 2018
     Workshop: Ensemble Kalman Filter, Data Assimilation, and
Applications
     PhD Positions: Statistical Applied Mathematics, Inverse Problems,
at U. Bath
     PDRA & PhD Positions in Scientific Computing & Inverse Problems at
Swansea U.
     PhD Positions: Mathematics of Information at the University of
Cambridge
     Table of Contents: Inverse Problems and Imaging
     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: "Dolan, Kirk" <dolank@anr.msu.edu>
Subject: Inverse Problems Symposium 2018, Michigan State
University, June 3-5
Date: October 30, 2017

Inverse Problems Symposium 2018, Michigan State University, June 3-5

https://inverseproblems2018.org/

This is the 31st in the series of National and International meetings on
Inverse Problems that were initiated at Michigan State University in
1988. Papers are solicited from all areas involving inverse methods and
their applications. The symposium is organized in a single-session format
to foster cross-disciplinary interaction. Solicited topics include:
     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

Contact Information:

Honorary Chairman: Dr. James V. Beck, Professor Emeritus, Michigan State
University, beck@msu.edu.
Conference Chairman: Kirk Dolan, Professor
Department of Food Science & Human Nutrition
Department of Biosystems & Agricultural Engineering
Michigan State University
East Lansing, MI 48224
Phone: (517) 353-3333
dolank@msu.edu

Important dates:
Abstract submission opens: December 30, 2017
Abstract submission closes: May 1, 2018
Early Registration opens: January 15, 2018
Early Registration ends: May 1, 2018

From: Xiaodong Luo <xilu@iris.no>
Subject: The 13th International EnKF Workshop: Call for abstracts
Date: October 26, 2017

The 13th International EnKF Workshop
MAY 28-30, 2018
SCANDIC BERGEN CITY, BERGEN
NORWAY

CALL FOR ABSTRACTS

The ensemble Kalman filter (EnKF) and its many variants have been proven
effective for data assimilation in large models, including those in
atmospheric, oceanic, hydrologic, and petroleum reservoir systems. By
bringing together technical experts, practitioners, researchers and
students for presentations and informal interchange of information, we
aim to share research results and suggest important challenges that have
yet to be addressed. We welcome abstracts on both new developments and
applications of data assimilation algorithms, including but not limited
to, ensemble-based methods and other Bayesian and/or nonlinear
approaches. Abstracts on applications are encouraged to discuss
limitations and suggest further developments of the assimilation methods.
The accepted abstracts will be scheduled for either oral presentation or
poster presentation. This workshop does not publish full papers, so
submission of full paper is not required. To facilitate the workshop
organization, we encourage our participants to submit abstracts with full
information of all authors (e.g., name, affiliation, etc.)

Abstract deadline: Feb. 15, 2018

Scientific committee:

  Geir Evensen (geve@iris.no), IRIS
  Xiaodong Luo (xilu@iris.no), IRIS
  Laurent Bertino (laurent.bertino@nersc.no), NERSC
  Alberto Carrassi (alberto.carrassi@nersc.no), NERSC
  Dean Oliver (dean.oliver@uni.no), Uni Research CIPR
  Remus Hanea (rhane@statoil.com), Statoil and University of Stavanger

Organizing Committee

  Xiaodong Luo (xilu@iris.no), IRIS
  Randi Valestrand (rv@iris.no), IRIS

Mette S.Myhre (mes@iris.no), IRIS

Further information
For further information about the workshop, please visit the webpage:
http://www.iris.no/enkf/enkf-homepage

Contact information
For general queries please contact Xiaodong Luo
E-mail: xilu@iris.no   Tel: (+47) 482 22 859
IRIS, Thormøhlensgate 55, 5008 Bergen, Norway

From: Melina Freitag <M.A.Freitag@bath.ac.uk>
Subject: PhD Positions in Statistical Applied Mathematics
Date: October 6, 2017

PhD Positions in Statistical Applied Mathematics, University of Bath

We are seeking 10 or more exceptionally qualified students for
fully-funded PhDs working at the interface between applied
mathematics, stochastic modelling, statistics, inverse problems, and
computation in the
Department of Mathematical Sciences at the University of Bath,
starting from September 2018.

Information on how to apply is available here
http://www.bath.ac.uk/math-sci/postgraduate/samba/programme/how-to-apply/

Further information is available on our website
(http://www.bath.ac.uk/samba) and on YouTube
(https://www.youtube.com/watch?v=jwQimRAJx6A&feature=youtu.be).

Submitted by: Dr Melina Freitag
Dept. of Mathematical Sciences
University of Bath
Bath BA2 7AY, UK
Office: 4 West 5.11   Phone: +44 (0) 1225 385635
Email: m.freitag@maths.bath.ac.uk   Web:
http://people.bath.ac.uk/mamamf/

From: Ledger P.D. <p.d.ledger@swansea.ac.uk>
Subject: PDRA & PhD Positions in Scientific Computing & Inverse Problems
Date: October 10, 2017

We currently have openings for a postdoctoral researcher (PDRA) and a
UK/EU PhD studentship in the Zienkiewicz Centre for Computational
Engineering (ZCCE), College of Engineering, Swansea University. Swansea
University is a UK top 30 institution for research excellence (Research
Excellence Framework 2014), and has been named as Welsh University of the
Year 2017 by The Times and Sunday Times Good University Guide.

A new 3-year EPSRC funded project on improving metal detection for the
identification of security threats will begin shortly and these
appointments will form part of a team that will also include other
postdoctoral researchers and collaborators in the Department of
Mathematics, University College London (UCL) and the Schools of
Mathematics and Electrical and Electronic Engineering, the University of
Manchester (UoM). The activities in Swansea University are being led by

Dr Paul D. Ledger in ZCCE who is also the principal investigator of the project.

The project will involve the improved characterisation and location of hidden conducting security threats using scientific computing algorithms. This is a challenging interdisciplinary project and the successful candidates should have an applied mathematics/computational engineering or physics background and bring expertise in numerical algorithms for the solution of partial differential equations (e.g. Finite elements, boundary elements) and be proficient in programming in one or more of the following MATLAB, Python, Fortran, C/C++. Knowledge and experience of (computational) electromagnetics is also desirable. The ideal candidates should also be effective team workers and enthusiastic about working closely with end users and industry.

For further details about the PDRA position please see
http://bit.ly/2yc5sIP

For further details about the PhD studentship please see
http://bit.ly/2tB8GQ3

For informal enquires please contact Dr Paul D. Ledger by email
p.d.ledger@swansea.ac.uk or by telephone on +44 (0) 1792 602554.

From: Rachel Furner <rachel.furner@maths.cam.ac.uk>
Subject: Fully funded PhD studentships at the CCIMI
Date: October 27, 2017

The CCIMI (Cantab Capital Institute for Mathematics of Information), based at the Faculty of Mathematics of the University of Cambridge, invites applications for fully funded PhD studentships studying projects within the broad topic of Mathematics of Information. As well as the information below and in the links, we will be holding an Open Afternoon on November 9th for students to find out more about the CCIMI and its PhD programme. For information on the open afternoon, including a registration link, please visit www.ccimi.maths.cam.ac.uk/events-archive/ccimi-phd-open-afternoon/. Further information on the studentships and training programme can be found below and at www.ccimi.maths.cam.ac.uk/vacancies/ccimi-funded-studentships-maths-information and www.ccimi.maths.cam.ac.uk/training.

The advance of data science and the solution of big data questions heavily relies on fundamental mathematical techniques and in particular, their intra-disciplinary engagement. This is at the heart of the Cantab Capital Mathematics of Information Institute which involves mathematical expertise ranging from statistics, applied & computational analysis, to topology and discrete geometry – all with the common goal of advancing data science questions.

We welcome applications for studentships relating to projects and subject areas covering all aspects of the broad field of mathematics of information. It is expected that students would be supervised (or in some cases co-supervised) by a member of our faculty, who can be found at www.ccimi.maths.cam.ac.uk/people. Prospective students are encouraged to look into the CCIMI faculty members and their work, and discuss areas of interest with potential supervisors to find or propose PhD projects related to the institute's work. Further information on the institute, our activities, events, and some of the projects currently being

investigated by students or faculty can be found on our website
(https://www.ccimi.maths.cam.ac.uk/).

PhD Studentships within the institute are fully funded to include
University Composition Fees and maintenance for the duration of the
course to match the RCUK minimum level, and the scheme is open to
nationals from all countries. Further information on the application
procedure can be found at www.ccimi.maths.cam.ac.uk/vacancies/ccimi-
funded-studentships-maths-information

For further information please contact ccimi@maths.cam.ac.uk

From: Liwei Ning <editorial@aimsciences.org>
Subject: IPI vol. 11, no. 6 December 2017
Date: October 6, 2017

Inverse Problems and Imaging (IPI)   December 2017   Volume 11,
Number 6
                                                        Table of

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http://aimsciences.org/journals/contentsListnew.jsp?pubID=993

From: <noreply@iopscience.org>
Subject: Inverse Problems, Volume 33, Number 11, November 2017
Date: October 30, 2017

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http://iopscience.iop.org/issue/0266-5611/33/11
------ end -------

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

Today's Topics:
  Symposium: 23rd International Symposium on Mathematical Programming, Optimization
  PhD Position: Gamma-ray Tomography, System Modelling, Image Reconstruction in Bergen
  Postdoc Position: Modeling for Complex Systems, Inverse Problem Approaches
  Professorship: Giovanni Prodi Chair Professorship in Mathematics at Würzburg University
  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: <francois.vanderbeck@math.u-bordeaux.fr>
Subject: Call for contributions to ISMP, July 1-6, 2018, in Bordeaux
Date: November 12, 2017

Call for contributions to ISMP 2018 in Bordeaux

The 23rd International Symposium on Mathematical Programming (ISMP 2018) will take place in Bordeaux, France, July 1-6, 2018. The organizers have the great pleasure of inviting you to prepare contributions to this world congress of mathematical optimization gathering scientists as well as industrial researchers and users of mathematical optimization.

Plenary, semi-plenary, and keynote speakers for ISMP2018 have been announced on the conference website along with their provisional talk titles:
https://ismp2018.sciencesconf.org/resource/page/id/4
This very attractive program was kindly setup by the program committee:
https://ismp2018.sciencesconf.org/resource/page/id/5

The richness of the conference scientific program shall be further enhanced by the attendees' contributions that are organized in parallel sessions by the scientific committee. These contributions can take the forms of mini-symposium, invited sessions and contributed presentations. Each attendee can submit at most one talk as a speaker. For further details see
https://ismp2018.sciencesconf.org/resource/page/id/16Interested .
Candidate session organizers are invited to contact the scientific committee for their particular stream of interest. Its composition is given on https://ismp2018.sciencesconf.org/resource/page/id/13 along with contact information.

ISMP is also a great opportunity for deep tech companies, publishers, research institutes and schools in the field to meet the community, to present their work, to communicate on recruitment opportunities, or to illustrate their good-will through sponsorship. These options are presented on https://ismp2018.sciencesconf.org/resource/page/id/17

As the slots are in limited number, bookings are organized on a first come first served basis.

Important Dates

* As early as possible: your registration on the conference website to receive any further communication on ISMP 2018. Simply select create account in the login menu on the upper right corner of the website: https://ismp2018.sciencesconf.org/user/createaccount
* November 15, 2017: Opening of reservations for exhibits and sponsorship opportunities
* January 3, 2018: Opening of abstract submissions
* February 1, 2018: Opening of registrations
* February 28, 2018: Abstract submission deadline
* April 15, 2018: Notification of acceptance
* April 30, 2018: Early bird registration deadline and registration deadline for presenting authors
* July 1-6, 2018: The symposium being held in Bordeaux

The details of the program and practical information on the venue, accommodations and registration are being progressively added on the conference website: https://ismp2018.sciencesconf.org/

Francois Vanderbeck, for the organizing committee
fv@math.u-bordeaux.fr
Institute of Mathematics (IMB), University of Bordeaux
Team ReAlOpt, INRIA-Bordeaux-Sud-Ouest
https://realopt.bordeaux.inria.fr

From: Bill Lionheart <bill.lionheart@manchester.ac.uk>
Subject: Fully funded PhD in Gamma tomography
Date: November 14, 2017

Please tell interested students about this PhD research fellow position in Gamma-ray tomography – system modelling and image reconstruction at the Western Norway University of Applied Sciences in Bergen. I expect to be an external supervisor and it would be an interesting project for a student with a masters in mathematics and an interest in applied inverse problems.

Deadline is Dec 1st
https://www.jobbnorge.no/ledige-stillinger/stilling/144295/phd-research-fellow-position-in-gamma-ray-tomography-system-modelling-and-image-reconstruction

Bill Lionheart
Professor of Applied Mathematics

From: Roderick Melnik <rmelnik@wlu.ca>
Subject: Posdoc Position, M2NeTLab/MS2Discovery, WLU, Waterloo, Canada
Date: November 14, 2017

Postdoc Position, M2NeTLab/MS2Discovery, WLU, Waterloo, Canada

Applications are invited for a Postdoctoral Position in Modeling for Complex Systems, with focus on coupled problems and multiscale modelling. 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/current-openings.html
The position is available from January 1, 2018 and will start at
the mutually agreed date. The review of applications will begin
immediately and continue until the position is filled.

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

From: Alfio Borzi <alfio.borzi@mathematik.uni-wuerzburg.de>
Subject: Announcement PRODI Visiting Professorship
Date: November 22, 2017

The Giovanni Prodi chair professorship in Mathematics at Würzburg
University in Germany
for visiting professorships in the academic year 2018/19.

The application deadline is January 9, 2018. Please see

https://www.mathematik.uni-
wuerzburg.de/lehrstuehle/prodi/bewerbung/index.html?lang=en

In particular applications of leading scientists who may have strong
and/or promising research
connections with members of our institute are very welcome.

Applications from all fields of mathematics are welcome with the
applicant at the level of an associate or full professor. Only persons
coming from outside Germany are eligible. Female applicants are
especially encouraged to apply. The professorship carries a teaching load
of 4 hours per week plus the obligation to run a seminar or exercise
group for 2 hours per week.

For additional details, please see the link.

With my best regards and many thanks

Alfio Borzi

Addition links:
https://www.mathematik.uni-wuerzburg.de/~borzi/
https://www.mathematik.uni-wuerzburg.de/index.html?lang=en
https://www.uni-wuerzburg.de/en/home/
http://www.wuerzburg.de/en/index.html

From: <noreply@degruyter.com>
Subject: eTOC Alert 'Journal of Inverse and Ill-posed Problems'
Date: November 25, 2017

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