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IPNet Digest Volume 19, Number 01 January 31, 2012

Today's Editors:

Patricia K. Lamm, Michigan State University
Stephan Anzengruber, Michigan State University

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Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

http://www.math.msu.edu/ipnet

Subject: Conference "Inverse Problems: Modeling and Simulation"
From: ALEMDAR HASANOG(LU <alemdar.hasanoglu@izmir.edu.tr>
Date: 12/2/2011

THE SIXTH INTERNATIONAL CONFERENCE
INVERSE PROBLEMS: MODELING & SIMULATION
http://www.ipms-conference.org
Lykia World & Links Golf, Antalya -- Turkey
May 21-26, 2012

Dear Colleagues,

The Sixth International Conference "Inverse Problems: Modeling and Simulation" will be held during May 21-26, 2012 in one of the distinguished hotels of the Mediterranean Region, in famous Lykia World & Links Golf Antalya hotel (http://www.lykiaworldantalya.com/), Antalya, Turkey. As with the previous five IPMS conferences, the objective of this conference is to be multidisciplinary and international, bringing together

scientists working on various topics of inverse problems in diverse areas, such as mathematics, engineering, physics, geology, chemistry, biology, medicine, material science, nanotechnology, meteorology, finance, and many areas in the fields of biotechnology, genetics and ecology.

This Conference will also be under the auspices of the leading international journals, "Inverse Problems in Science and Engineering", "Inverse Problems", "Inverse and Ill-Posed Problems", and "Inverse Problems and Imaging". The main aim of the Conference is to bring together all classical and new inverse problems areas from various international scientific schools and to discuss new chalenges of inverse problems in current interdisciplinary sciences. The organizer of the Conference, Izmir University, will work to put together an excellent scientific program and social programs, including boat rides and visits to local archaeological sites.

We welcome you to the Fourth International Conference "Inverse Problems: Modeling and Simulation".

CHAIR:
A. Hasanoglu (Hasanov) , Izmir University, Turkey

CO-CHAIRS:
G.S. Dulikravich, Florida International University, USA
S. Kabanikhin, Sobolev Institute of Mathematics, Russia
A. Neubauer, University of Linz, Austria
D. Lesnic, University of Leeds, UK

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J. Taler, Krakow University of Technology, Poland
V. V. Vasin, Inst. Math. Mechanics, Ekaterinburg, Russia
Y. F. Wang, Chinese Academy of Sciences, China
A. Yagola, Moscow State University, Russia

Contact Address:

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Izmir University
35350 Izmir, Turkiye
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alemdar.hasanoglu@gmail.com,

Web page of the Inverse Problems Conference-2012:
http://www.ipms-conference.org/index.htm

Web page of the conferences "Inverse Problems: Modeling and Simulation":
http://www.ipms-conference.org

Subject: Conference MMA2012
From: Jaan Janno <janno@cs.ioc.ee>
Date: 12/13/2011

17th International Conference on Mathematical Modelling and Analysis
will take place in Tallinn on June 6 - 9, 2012.

Conference topics include

Application of mathematical methods to industrial problems
Engineering optimization and multi-level searching problems
Financial mathematics and mathematics in economics
Mathematical modelling and analysis on the basis of fuzzy sets
Multi-objective optimization and natural resources management
Parallel computing
Inverse and ill-posed problems.

Information concerning the conference is available on the website
http://www.ioc.ee/mma2012

Subject: CISP'12-BMEI'12 Submission Deadline 30 March, Chongqing, China
From: CISP BMEI <cisp-bmei-cfp@cqupt.edu.cn>
Date: 1/6/2012

Dear Colleague,

We cordially invite you to submit a paper to the upcoming 2012 5th
International Congress on Image and Signal Processing (CISP 2012) and
the 2012 5th International Conference on BioMedical Engineering and
Informatics (BMEI 2012), to be jointly held from 16-18 October 2012,
in Chongqing, China.

Renowned as the Mountain City, Chongqing is a magnet for visitors from
home and abroad for its cultural heritage and numerous

attractions. There are many karst caves, hot springs, and gorges in the area. Major tourist spots in and near Chongqing include Dazu Grottoes (rock carvings began in the Tang Dynasty 650 A.D.), Three Gorges, Jinyun Mountain Natural Reserve, Hongya Cave, Shibaozhai, Wulong Karst, etc..

As with past CISP-BMEI conferences, all papers in conference proceedings will be indexed by both EI Compendex and ISTP, as well as included in the IEEE Xplore (IEEE Conference Record Number for CISP'12: 20190; IEEE Conference Record Number for BMEI'12: 20189). Substantially extended versions of best papers will be considered for publication in a CISP'12-BMEI'12 special issues of the Multimedia Tools and Applications journal (SCI-indexed). CISP'12-BMEI'12 is technically co-sponsored by the IEEE Engineering in Medicine and Biology Society.

CISP'12-BMEI'12 is a premier international forum for scientists and researchers to present the state of the art of multimedia, signal processing, biomedical engineering and informatics. The registration fee of US$430 includes proceedings, lunches, dinners, banquet, coffee breaks, and all technical sessions.

To promote international participation of researchers from outside the country/region where the conference is held (i.e., China's mainland), researchers outside of China's mainland are encouraged to propose invited sessions. The first author of each paper in an invited session must not be affiliated with an organization in China's mainland. All papers in the invited sessions can be marked as "Invited Paper". The organizer(s) for each invited session with at least 6 registered papers will (jointly) enjoy an honorarium of US*D 400. Invited session organizers will solicit submissions, conduct reviews and recommend accept/reject decisions on the submitted papers. Invited session organizers will be able to set their own submission and review schedules, as long as a list of recommended papers is determined by 10 August 2012. Each invited session proposal should include: (1) the name, bio, and contact information of each organizer of the invited session; (2) the title and a short synopsis of the invited session. Please send your proposal to cisp-bmei@cqupt.edu.cn

For more information, visit the conference web page:
http://cisp-bmei.cqupt.edu.cn

If you have any questions after visiting the conference web page, please email the secretariat at cisp-bmei@cqupt.edu.cn

Join us at this major event in beautiful Chongqing !!!

Organizing Committee
cisp-bmei@cqupt.edu.cn

P.S.: Kindly forward to your colleagues and students in your school/department.

Subject: first announcement for IPDO 2013
From: Olivier Fudym <fudym@mines-albi.fr>
Date: 1/7/2012

PLEASE MARK YOUR CALENDAR

4th International Symposium on
INVERSE PROBLEMS, DESIGN AND OPTIMIZATION (IPDO-2013)

Albi, France
June 26-28, 2013

http://ipdo2013.ipdos.org

IPDO Symposium's main objectives are to bring the three communities of researchers (inverse problems experts, design theory experts, and optimization experts) together and provide a common forum for presenting different applications, problems, and solution strategy concepts. Moreover, the groups of theoretical, computational and experimental researchers need to interact and share some appropriate tools that rigorously bridge the gap between the information stemming from measurements and that corresponding to theoretical predictions. Hence, IPDO Symposium is a privileged place for scientific exchanges relating the measurement and theory approaches through the use of suitable optimization algorithms, and offers a unique international forum that is expected to provide an excellent basis for cross-fertilization of ideas that will combine the three fields of research so that more general, robust, accurate and computationally economical design methods are created for multi-disciplinary applications. Successful previous versions of the IPDO Symposium were held in Rio de Janeiro, Brazil (2004), Miami Beach, USA (2007) and Joao Pessoa, Brazil (2010).

Organizers of IPDO-2013:
O. Fudym (chair), G.S. Dulikravich (Honorary Chair),
J.-L. Battaglia, H.R.B. Orlande, M. J. ColaÃ§o (co-chairs)

Areas of interest:

Contributions dealing with theoretical concepts in inverse techniques, optimization and design theory are expected. Methods that are applicable to multiple disciplines for practical applications are encouraged, such as energy storage, biomass valorization, solar energy conversion, material functionalization, material processing, remote sensing, nonÂ-destructive evaluation, material properties determination, nano and micro technologies, petrochemistry, aeronautics, astronautics, biomedicine, transport and sensing of pollutants, imaging, geoprospecting, financial analysis, etc.

Instructions on how to prepare and submit a two-page abstract of a paper can be found on the web site at http://ipdo2013.ipdos.org.

Extended versions of papers presented at IPDO-2013 dealing with inverse problems will be reviewed for possible publication in a special issue of Inverse Problems in Science and Engineering (IPSE) journal.

Location

IPDO-2013 will be held in the Ecole des Mines d'Albi. Albi is 70 km from Toulouse, France, which can be reached by direct flights from most of the larger cities in Europe, followed by the one hour trip to Albi via a direct highway. Transportation by bus and/or shuttle will be planed to pick up the participants at Toulouse airport. Albi is a very nice old medieval town whose Episcopal City belongs to the UNESCO World Heritage List having a deep historical background with the Albigensian Crusade against the Cathar heretics (13th century), and a famous museum dedicated to the painter "Toulouse-Lautrec" who was born in the city. See http://www.albi-tourisme.fr

For information contact:
Olivier Fudym; tel. +33 (0) 5 63493024;
E-mail: olivier.fudym@mines-albi.fr

Submitted by: Olivier Fudym
RAPSODEE FRE CNRS 3213 Ecole des Mines d'Albi
Campus Jarlard - Route de Teillet
81013 Albi CT Cedex 09 http://www.enstimac.fr

Subject: Position: Nonlinear Filtering in High Dimensions
From: andrew stuart <A.M.Stuart@warwick.ac.uk>
Date: 12/20/2011

Nonlinear Filtering in High Dimensions
Research Fellow at Warwick University
12 Months from October 2012

Working in a research group in the area of Bayesian Inverse Problems in Differential Equations, led by Andrew Stuart.
For details see:

http://www.warwick.ac.uk/~masdr/openpositions.html

Submitted by: Andrew Stuart, a.m.stuart@warwick.ac.uk
Mathematics Institute Office: +UK (0)24-7652-2685
University of Warwick Department: +UK (0)24-7652-4661
Coventry CV4 7AL Fax: +UK (0)24-7652-4182
England
http://www2.warwick.ac.uk/fac/sci/maths/people/staff/andrew_stuart/

Subject: Professorial post in Imaging at Manchester
From: Bill Lionheart <bill.lionheart@manchester.ac.uk>
Date: 1/24/2012

Please see below advert for a professorial appointment in imaging and visualization

For full details see
http://www.jobs.ac.uk/job/ADP692/chair-in-imaging-and-visualization/

Chair in Imaging & Visualization
The University of Manchester - Faculty of Engineering & Physical Sciences

Closing date: 31/03/2012
Salary: Negotiable
Reference: E&PS-00515

The Faculty of Engineering and Physical Sciences wishes to appoint a number of world-leading Professors to support its strategic growth in Imaging and Visualization. We are looking for leading scholars in all areas of engineering and physical sciences who will enhance our Henry Moseley Facility (http://xray-imaging.org.uk/) and our Â£9M investment into the X-ray Imaging and Coherence beamline at Diamond (I13) which is designed for a broad range of scientific users from biomedicine, materials science, geophysics, astrophysics and archaeology. We are also interested to hear from you if have leading expertise in information processing of imaging.

The ideal candidate will be a leading authority in their field with a strong track record in journal publication and research funding. In addition, a strong track record of teaching excellence covering undergraduate, postgraduate and CPD/executive education is essential. We would also expect the candidate to take a leading role in developing imaging and visualization across the Faculty and University.

Successful candidates will join one on the nine Schools within the Faculty, where they will be expected to provide leadership promoting interdisciplinary research and education.

Informal enquiries

Informal enquiries can be made to Professor Colin Bailey,
Vice-President and Dean of the Faculty of Engineering & Physical Sciences.

Email: Colin.Bailey@manchester.ac.uk

Telephone: 0161 306 9111

The University of Manchester values a diverse workforce and welcomes applications from all sections of the community.

The Faculty is committed to Athena SWAN principles to promote women in Science, Engineering and Technology.

Subject: Announcement of TT faculty position
From: "Borges, Carlos (CIV)" <borges@nps.edu>
Date: 12/2/2011 12:12 PM

Tenure-Track Faculty Positions in Applied Mathematics,
Naval Postgraduate School

The Department of Applied Mathematics at the Naval Postgraduate School, in Monterey, California invites applications for one or more tenure-track positions at the level of Assistant Professor (exceptional candidates at all levels may be considered).

Candidates should possess an earned doctorate. Teaching experience is highly desirable, and evidence of exceptional research potential is necessary. All areas of research will be considered, but preference will be given to candidates specializing in areas of computational mathematics that support existing departmental research efforts, including fluid dynamics, control, game theory, and others. Effective teaching is essential and candidates must have excellent communication skills (both written and oral), as well as strong interpersonal and organizational abilities. U.S. citizenship is REQUIRED. For a full description of the positions and our research interests please visit our web page at http://math.nps.edu.

Applicants should submit a cover letter describing their qualifications for these positions, a comprehensive curriculum vitae or resume and contact and e-mail address information for a minimum of three references. The application material must clearly state the applicantÂ's citizenship. Applications may be submitted electronically or in hard copy to:

Prof. Wei Kang
Department of Applied Mathematics
Naval Postgraduate School
Monterey, CA 93943-5121
(831) 656-3337
wkang@nps.edu

Review of applications will begin immediately and applications will be accepted until the positions are filled. The Naval Postgraduate School is an Equal Opportunity Employer.

Submitted by: Carlos Borges, Chairman
Department of Applied Mathematics
Naval Postgraduate School
Monterey, CA 93943
Tel. (831)656-2207 Fax. (831)656-2355
email borges@nps.edu

Subject: New book: "Inverse and Ill-posed Problems" by S. I. Kabanikhin
From: <anja.moebius@degruyter.com>

Date: 1/20/2012

New Book: Inverse and Ill-posed Problems. Theory and Applications
Inverse and Ill-Posed Problems Series 55
ISBN 978-3-11-022400-9

The book demonstrates the methods for proving the existence (if at all) and finding of inverse and ill-posed problems solutions in linear algebra, integral and operator equations, integral geometry, spectral inverse problems, and inverse scattering problems. It is given comprehensive background material for linear ill-posed problems and for coefficient inverse problems for hyperbolic, parabolic, and elliptic equations. A lot of examples for inverse problems from physics, geophysics, biology, medicine, and other areas of application of mathematics are included. For further information please visit
www.degruyter.com/view/product/43024?result=1&rskey=lAkYAC&format=G.

Submitted by:
Anja MÃ¶bius
Project Editor Mathematics & Physics
DE GRUYTER
Genthiner Str. 13
10785 Berlin, Germany
T +49 (0)30.260 05-105 F +49 (0)30.260 05-352
anja.moebius@degruyter.com www.degruyter.com

Subject: New book: On the Mathematics of Signal Processing
From: Steve Damelin <steve.damelin@gmail.com>
Date: 12/16/2011

New Book: On the Mathematics of Signal Processing
by Steven Damelin and Willard Miller
Cambridge Texts in Applied Mathematics

Arising from courses taught by the authors, this largely self-contained treatment is ideal for mathematicians who are interested in applications or for students from applied fields who want to understand the mathematics behind their subject. Early chapters cover Fourier analysis, functional analysis, probability and linear algebra, all of which have been chosen to prepare the reader for the applications to come. The book includes rigorous proofs of core results in compressive sensing and wavelet convergence. Fundamental is the treatment of the linear system y = phi x in both finite and infinite dimensions. There are three possibilities: the system is determined, overdetermined or underdetermined, each with different aspects. The authors assume only basic familiarity with advanced calculus, linear algebra and matrix theory and modest familiarity with signal processing, so the book is accessible to students from the advanced undergraduate level. Many exercises are also included.

For ordering information, see:

http://www.cambridge.org/gb/knowledge/isbn/item6560879/?site_locale=en_GB

Subject: Special Issue on Practical Perspective of Digital Imaging for Comput Appl
From: <IJTS-owner@yahoogroups.com>
Date: 1/20/2012

Call for Papers

International Journal of Imaging & Robotics

http://www.ceser.in/iji.html

Special Issue on
Practical Perspective of Digital Imaging for Computational Applications

We are pleased to announce the launching of special issue of "International Journal of Imaging & Robotics" which is a peer-reviewed issue that will publish original research devoted to imaging and computational applications. This special issue will be indexed in many databases such as SCOPUS, INDEX COPERNICUS, etc. which will enable the papers to receive world-wide attention. The scope of this special issue is given below (but not limited to):

Image acquisition, Image de-noising, spectral enhancement, image retrieval, image compression, equalization, image analysis, image understanding, etc. Application areas such as biomedical image analysis, remote sensing, cryptography, watermarking, tracking, animation & graphics, video applications, etc. Any other innovative ideas related with these areas are also welcome.

SUBMISSION INFORMATION:

The manuscripts should be submitted to the issue Guest Editors-in-Chief (e-mail id given below) and a copy to eic.ijir@yahoo.com with a covering letter. It is recommended to send the in journal format with pdf version of the paper. No other kind of submission is accepted. Detailed "Author Instructions" can be found at (http://www.ceser.in/iji.html). Manuscripts will be subject to the usual peer reviewing procedure.

IMPORTANT DATES:

Deadline for Paper Submission: 30th March 2012
Paper Review (acceptance/rejection) Notification: 1st May 2012
Final Version Submission: 25 May 2012

SPECIAL ISSUE Guest Editors-in-Chief:

D.JUDE HEMANTH
Guest Editor-in-Chief,
International Journal of Imaging & Robotics

http://www.ceser.in/iji.html
Department of ECE
Karunya University
Coimbatore, India
E-mail:judespecialissue@gmail.com

Subject: Contents list for Inverse Problems, volume 27, issue 12, December 2011
From: Stephanie Kent <Stephanie.Kent@iop.org>
Date: Fri, 9 Dec 2011

Inverse Problems December 2011 Volume 27, Issue 12

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related discrepancy principle
A Staglian\`o, P Boccacci and M Bertero

An analytic reconstruction for the Compton scattering tomography in a plane V P Palamodov

Optimal experimental design for nonlinear ill-posed problems applied to gravity dams Tom Lahmer

Recovery of the parameters of cancellous bone by inversion of effective velocities, and transmission and reflection coefficients
James L Buchanan, Robert P Gilbert and Miao-jung Y Ou

On a generalization of the iterative soft-thresholding algorithm for the case of non-separable penalty
Ignace Loris and Caroline Verhoeven

Adaptive discretizations for the choice of a Tikhonov regularization parameter in nonlinear inverse problems
Barbara Kaltenbacher, Alana Kirchner and Boris Vexler

An inverse source problem in radiative transfer with partial data
Mark Hubenthal

An inverse transmission scattering problem for periodic media
Jiaqing Yang and Bo Zhang

Adaptive anchored inversion for Gaussian random fields using nonlinear data Zepu Zhang

Submitted by: Stephanie Kent, Production Editor, Inverse Problems
E-mail: stephanie.kent@iop.org

Subject: Table of Contents, Nonlinear Analysis: Modelling and Control
From: Romas Baronas <romas.baronas@mif.vu.lt>
Date: Fri, 9 Dec 2011

Nonlinear Analysis: Modelling and Control 2011 Vol. 16, No. 4
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EEG analysis -- automatic spike detection
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Geodesic distances in the maximum likelihood estimator of intrinsic dimensionality
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An efficient new iterative method for finding exact solutions of nonlinear time-fractional partial differential equations
Huseyin Kocak, Ahmet Yildirim

Optimal control of malaria chemotherapy
Gesham Magombedze, Christinah Chiyaka, Zindoga Mukandavire

Limit theorems for a quadratic variation of Gaussian processes
Raimondas Malukas

On a variance related to the Ewens sampling formula
Eugenijus Manstavicius, Zydrunas Zilinskas

On the kinetics of the Langmuir-type heterogeneous reactions
Vladas Skakauskas, Pranas Katauskis

Analytical solution of MHD free convective flow of couple stress fluid in an annulus with Hall and Ion-slip effects
Darbhashayanam Srinivasacharya, Kolla Kaladhar

Visual analysis of self-organizing maps
Pavel Stefanovic, Olga Kurasova

For a paper submission, please refer to http://www.mii.lt/NA/

A free on-line edition is available at:
http://www.lana.lt/journal/issues.php

Submitted by: Dr. Romas Baronas, Deputy-Editor-in-Chief,
Nonlinear Analysis: Modelling and Control

Subject: Table of Contents, International Journal of Mathematics and Computation (IJMC)
From: Haydar Akca <ceser_info@yahoo.com>
Date: Mon, 12 Dec 2011

Intern. Journal of Mathematics and Computation 2012 Vol. 15, No. 2
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Computation and Visualization of The Pareto Set in the Criterion Space for the Bicriteria Linear Programming Problem
Francois Dubeau, Anis Kadri

Axial solutions of multiple objective linear problems under interval data S. Kordrostami, F. Keshavarz Gildeh, V. Hoseinnezhad

Global Exponential Stability Results for Delayed Neural Networks with Impulsive Perturbations Guanghui Sun, Diwang Lin, Chunming Zhang

Ranked Set Sampling and Rao-Hartley-Cochran Strategies Using the Randomized Procedure of Eichhorn-Hayre
Carlos N. Bouza-Herrera, Dante Covarrubias-Melgar

Erratum: Recurrence Relations For Moments Of GOS From
Marshall-Olkin-Extended Burr XII Distribution
N. A. Mokhlis, Y. Abdel-Aty, Marwa M. Mohie El-Din

Scientific Computing: Theory, Developments and Applications
Haydar Akca, Makhtar Sarr, Valery Covachev

The structure of the roots of the q-Genocchi polynomials
C. S. Ryoo

On q-deformed Stirling Numbers Yilmaz Simsek

Two Sample Test Based On Progressive Censoring
Ulku Gokal Erisoglu, Mehmet Fedai Kaya

A Study on Best Approximation Elements in Normed Spaces
Sahar Mohamed Ali AboBakr

k - Quasi - Normal Operators
R. Senthilkumar, P. Maheswari Naik, R. Santhi

Manuscripts can be sent to the Editor-in-Chief
(Haydar.Akca@adu.ac.ae, akcahy@yahoo.com) and a copy at
eic.ijai@yahoo.com. Detailed instructions on how to prepare your
manuscript are available at Author Instructions
http://ceser.in/ijmc.html.

An on-line edition is available at:
http://www.ceserp.com/cp-jour/index.php?journal=ijmc&page=issue&op=view&
path%5B%5D=131

Submitted by: Prof. Haydar Akca, Editor-in-Chief,
International Journal of Mathematics & Computations
Email: Haydar.Akca@adu.ac.ae , akcahy@yahoo.com
URL: http:/ceserp.com/cp-jour/, http://ceser.in/ijmc.html

Subject: Contents: International Journal of Imaging and Robotics
From: "Int. J. Tomography & Statistics" <tanujfma@yahoo.com>
Date: 12/12/2011

International Journal of Imaging and Robotics
ISSN 2231-525X

[Formerly known as the International Journal of Imaging (ISSN 0974-0627)]
www.ceser.in/iji.html
http://www.ceserp.com/cp-jour/index.php

Dear Colleague,

Greetings from International Journal of Imaging and Robotics.

The online Content and Abstract of Volume 7, Issue Number 1, Year 2012
(of International Journal of Imaging and Robotics) can be view at :
http://www.ceser.in/ceserp/index.php/iji/issue/current
or
http://www.ceserp.com/cp-jour/index.php?journal=iji&page=issue&op=current

Sincerely

Dr. Tanuja Srivastava
Editor-in-Chief,
International Journal of Imaging and Robotics
www.ceserp.com
www.ceser.in/iji.html
------- end -------

IPNet Digest Volume 19, Number 02 March 03, 2012

Today's Editors:

Patricia K. Lamm, Michigan State University
Stephan W. Anzengruber, Michigan State University

Today's Topics:

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

http://www.math.msu.edu/ipnet

Subject: International Conference on Inverse Problems & PDE Control
From: Gunther Uhlmann <gunther@math.washington.edu>
Date: 2/13/2012

International Conference on Inverse Problems and PDE Control

This conference will be held in Chengdu, China, July 27-August 3, 2012.
You can find more information at the webpage:

http://math.scu.edu.cn/conference/pcontrol/index.html

Thanks to a generous grant from NSF there will be travel support for a limited number of graduate students and postdocs working at US Universities. To apply for support please send by email to Gunther Uhlmann <gunther@math.washington.edu> a CV and a message explaining your interest in the topics of the conference. Also arrange for a letter of reference from a senior scientist to be sent to the same address. The deadline for application for support is March 31, 2012. Women and member of underrepresented groups in the sciences are encouraged to apply.

Gunther Uhlmann

Subject: 2012 Inverse Problems Symposium
From: "Dolan, Kirk" <dolank@msu.edu>
Date: 2/28/2012

Dear Inverse Problems Researchers and Instructors,

Registration is now open for 2012 Inverse Problems Symposium, June 10-12 at Michigan State University Kellogg Center. Early registration ends May 5th. Abstract submission ends March 20th. The 2012 symposium in East Lansing, Michigan, will retain the single session format of these symposia, and will have sessions addressing both the theoretical and applied aspects of inverse problems. Please circulate this announcement to interested colleagues.

Agenda

Sunday June 10

15:30-17:30: James Beck, tutorial on the inverse heat conduction problem (IHCP)

Evening: Informal dinner on our own

Monday, June 11

7:45-8:30: Registration

8:00: Continental breakfast

8:30: Welcome

8:40 -9:25: Keynote address:
Dr. Daniel Inman, Department Chair and Clarence "Kelly" Johnson Professor, Aerospace Engineering, University of Michigan

9:25-17:00: Oral and poster presentations, Lunch provided

19:00: Symposium Banquet

Satish Udpa, University Distinguished Professor, Dean of MSU College of Engineering, speaker

Tuesday, June 12

8:00: Continental breakfast

8:30 -9:15: Keynote address:

Dr. Jay Frankel, Professor, Mechanical, Aerospace and Biomedical Engineering, University of Tennesee

9:25-17:00: Oral presentations, Lunch provided

17:00: Finish

The early registration fee $150/$100 regular/student covers Monday/Tue continental breakfast, lunch, breaks, Monday banquet, and CD.

We are interested in a wide range of topics in engineering, agriculture, natural sciences, mathematics, statistics, etc. A written paper is not required and the papers will not be subject to copyright. The website is:

www.inverseproblems2012.org

Kirk Dolan, Conference Chairman
Associate Professor
Department of Food Science & Human Nutrition
Department of Biosystems & Agricultural Engineering
135 Trout Food Science Building
Michigan State University

Subject: Table of contents for Inverse Problems and Imaging (IPI)
From: Liwei Ning <newsletter@aimsciences.org>
Date: Tue, 28 Feb 2012

Inverse Problems and Imaging (IPI) 2012 Vol. 6, No. 1
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A free on-line edition is available at:
http://aimsciences.org/journals/contentsListnew.jsp?pubID=498

Submitted by: Liwei Ning, Editorial Manager,
American Institute of Mathematical Sciences

Subject: Table of contents for Electronic Transactions on Numerical Analysis (ETNA)
From: Lothar Reichel <reichel@math.kent.edu>
Date: Fri, 3 Feb 2012

Electronic Transactions on Numerical Analysis 2012 Vol. 6, No. 1
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incompressible fluid dynamics M. A. Olshanskii and L. G. Rebholz

Perturbation analysis for complex symmetric, skew symmetric, even and odd matrix polynomials Sk. S. Ahmad and V. Mehrmann

Computation of the torsional modes in an axisymmetric elastic layer
M. Kara, B. Merouani and L. Chorfi

Stieltjes interlacing of zeros of Jacobi polynomials from different sequence K. Driver, A. Jooste and K. Jordaan

A posteriori error estimation for the Legendre collocation method applied to integral-algebraic Volterra equations
S. Pishbin, F. Ghoreishi and M. Hadizadeh

Reduced rank extrapolation applied to electronic structure computations S. Duminil and H. Sadok

Block factorizations and qd-type transformations for the MR3 algorithm P. R. Willems and B. Lang

ETNA is available at:
http://etna.math.kent.edu

Submitted by: Lothar Reichel, Editor-in-chief, Electronic Transactions on Numerical Analysis

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Subject: Table of Contents, Nonlinear Analysis: Modelling and Control
From: Romas Baronas <romas.baronas@mif.vu.lt>
Date: Fri, 24 Feb 2012

Nonlinear Analysis: Modelling and Control 2012 Vol. 17, No. 1
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Lie group analysis for the effects of chemical reaction on MHD stagnation-point flow of heat and mass transfer towards a heated porous stretching sheet with suction or injection
Ahmed A. Afify, Nasser S. Elgazery

Some applications of IFS based on square symmetries
Gintautas Bareikis, Algirdas Maciulis

Adapted SETAR model for Lithuanian HCPI time series
Nomeda Bratcikoviene

Unsteady three dimensional flow of couple stress fluid over a stretching surface with chemical reaction
Tasawar Hayat, Muhammad Awais, Ambreen Safdar, Awatif A. Hendi

Solitary wave solutions of the Vakhnenko-Parkes equation
Fayequa Majid, Houria Triki, Tasawar Hayat, Omar M. Aldossary, Anjan Biswas

Pest control using virus as control agent: A mathematical model
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Alternating direction method for two-dimensional parabolic equation with nonlocal integral condition
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Analysis of a frictionless contact problem for elastic-viscoplastic materials Mohamed Selmani, Lynda Selmani

Analogue modelling an array of the FitzHugh-Nagumo oscillators
Elena Tamaseviciute, Gytis Mykolaitis, Arunas Tamasevicius

For a paper submission, please refer to http://www.mii.lt/NA/

A free on-line edition is available at:
http://www.lana.lt/journal/issues.php

Submitted by: Dr. Romas Baronas, Deputy-Editor-in-Chief,
Nonlinear Analysis: Modelling and Control
------- end -------

IPNet Digest Volume 19, Number 03 March 31, 2012

Today's Editor:

Patricia K. Lamm, Michigan State University

Today's Topics:

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

http://www.math.msu.edu/ipnet

Subject: 100 years of Electrical Imaging
From: Bill Lionheart <bill.lionheart@manchester.ac.uk>
Date: 3/6/2012

100 years of electrical imaging

In 1912, Conrad Schlumberger made the first electric field imaging experiment at his family house in Normandy. Over the last 100 years, electrical imaging has grown to be used in many other fields such as medical and process tomography

To celebrate EIT's 100th birthday, we are organizing a workshop: 9-10 July 2012 in Paris. We aim to bring together the disparate electrical imaging communities (geophysical, medical and industrial process imaging, as well as other specialist applications), and encourage interactions and knowledge transfer between the communities on image analysis and algorithm techniques.

The workshop will consist of keynote speakers in various applications of electrical imaging, as well as poster presentations of new research and applications.

Please see the announcement:
http://100electrical.geosciences.mines-paristech.fr/first_announcement

and the workshop web site:
http://100electrical.geosciences.mines-paristech.fr

Subject: New: Conference Inverse Problems and Applications (IPA)
2-6 April, 2013, LinkÃ¶ping University, Sweden
From: George Baravdish <george.baravdish@liu.se>
Date: 3/13/2012

Dear Colleagues,

We gladly announce the conference

Inverse Problems and Applications (IPA2013) 2-6 April, 2013, Linköping University, Sweden

http://www.mai.liu.se/IPA2013

The conference is a collaboration between Linköping University and Institut Mittag-Leffler.

The aim of the conference is to present the state of the art in Inverse Problems and to foster greater exchange of experience and knowledge of applying inverse problem in different areas of applications.

Main topics: Inverse Problems: Theory, Algorithms and Applications; Identification in Partial Differential Equations; Inverse Scattering; Computational Methods; Regularization Techniques; Inverse problems with small parameters; Imaging Techniques.

The following invited speakers will give a plenary lecture:

S. Arridge (University College London, UK)

G. Bal (Columbia University, USA)

V. Isakov (Wichita State University, USA)

M. Lassas (University of Helsinki, Finland)

D. Lesnic (University of Leeds, UK)

L. Ljung (Linköping University, Sweden)

Z. Nashed (University of Central Florida, USA)

M. Salo (University of Helsinki, Finland)

O. Scherzer (University of Vienna, Austria)

G. Uhlmann (University of Washington, USA)

Important deadlines:

Registration: April 10 2012 -- Mars 10 2013

Abstract submission: April 10 2012 -- November 5 2012.

Some financial support will be available for PhD students.

Organizing committee:

George Baravdish (Linköping University), Vladimir Kozlov (Linköping University), Yaroslav Kurylev (University College London, UK), Lassi Päivärinta (University of Helsinki, Finland)) and Luba Kulesh (Linköping University).

On the behalf of the organizing committee,

George Baravdish, George.baravdish@liu.se and Vladimir Kozlov, vladimir.kozlov@liu.se

---

Subject: 2nd call for papers OIPE 2012'
From: <chairman.oipe2012@ugent.be>
Date: 3/14/2012

Dear colleagues,

We cordially invite you to participate to the 12th Workshop on Optimization and Inverse Problems in Electromagnetism, OIPE 2012, to be held on September 19th-21st, 2012, in Ghent, Belgium.

Prior to the workshop, several PhD courses on the topic will be organized on September 17th-18th, 2012.

We invite members of the scientific community in universities, research centers and industry to attend the workshop and present their recent achievements. Abstract submission deadline will be May 14th, 2012.

More information about the workshop and PhD course can be found on http://www.oipe2012.com/.

We look forward to meet all of you in Ghent at OIPE 2012.

Prof. dr. ir. Luc Dupre, Chairman
dr. ir. Guillaume Crevecoeur, Conference secretary

Subject: IPS 2012
From: "Dolan, Kirk" <dolank@msu.edu>
Date: 3/30/2012

Dear Inverse Problems Researchers and Instructors,

Registration is now open for 2012 Inverse Problems Symposium, June 10-12 at Michigan State University Kellogg Center. Early

registration ends May 5th. Abstract and poster submission ends April 18th. The 2012 symposium in East Lansing, Michigan, will retain the single session format of these symposia, and will have sessions addressing both the theoretical and applied aspects of inverse problems. Please circulate this announcement to interested colleagues.

Agenda

Sunday June 10

15:30-17:30: James Beck, tutorial on the inverse heat conduction problem (IHCP)

Evening: Informal dinner on our own

Monday, June 11

7:45-8:30: Registration

8:00: Continental breakfast

8:30: Welcome

8:40 -9:25: Keynote address:

Dr. Daniel Inman, Department Chair and Clarence "Kelly" Johnson Professor, Aerospace Engineering, University of Michigan

9:25-17:00: Oral and poster presentations, Lunch provided

19:00: Symposium Banquet

Satish Udpa, University Distinguished Professor, Dean of MSU College of Engineering, speaker

Tuesday, June 12

8:00: Continental breakfast

8:30 -9:15: Keynote address:

Dr. Jay Frankel, Professor, Mechanical, Aerospace and Biomedical Engineering, University of Tennesee

9:25-17:00: Oral presentations, Lunch provided

17:00: Finish

The early registration fee $150/$100 regular/student covers Monday/Tue continental breakfast, lunch, breaks, Monday banquet, and CD.

We are interested in a wide range of topics in engineering,

agriculture, natural sciences, mathematics, statistics, etc. A written paper is not required and the papers will not be subject to copyright. The website is:

www.inverseproblems2012.org

Kirk Dolan, Conference Chairman
Associate Professor
Department of Food Science & Human Nutrition
Department of Biosystems & Agricultural Engineering
135 Trout Food Science Building
Michigan State University

Subject: Two PhD Positions, Technical University of Denmark
From: Kim Knudsen <K.Knudsen@mat.dtu.dk>
Date: 3/14/2012

Two PhD positions are available at DTU Informatics, Technical University of Denmark, starting August 1, 2012. Both are funded by the ERC project "High-Definition Tomography" headed by Professor Per Christian Hansen.

The goal of this project is to develop the enabling mathematical technology and computational algorithms to produce a new generation of tomographic reconstruction methods that can incorporate many different kinds of available prior information in order to produce high-definition reconstructions, i.e., sharper images with more reliable details.

Project 1: Statistical Priors in Variational Reconstruction Methods

This PhD project aims at bridging the gap between Bayesian and variational reconstruction methods by setting up a mathematical and computational framework that utilizes the connections between parametric priors for the solutions, in the form of probability distributions, and corresponding norms or filters. See http://www.dtu.dk/English/About_DTU/vacancies.aspx?guid=d093d5ed-bfec-4bc6-ae39-86dd803a00e3

Project 2: Training Sets in Large-Scale Reconstruction Methods

This PhD project aims at providing a theoretical and methodological framework for the use of training sets as non-parametric priors for the solutions in tomographic reconstruction. We will study and further develop the use of artificially generated training sets for incorporation of structural information about the solution. See http://www.dtu.dk/English/About_DTU/vacancies.aspx?guid=7f4ce369-e70f-4f4f-803a-c77b0d46fe68

For more information, see the home pages for the two projects. Applications must be written in English and submitted online via the home pages by April 22, 2012.

More information can be obtained from Professor Per Christian Hansen,
DTU Informatics

Email pch@imm.dtu.dk
Tel +45 45.25.30.97

Submitted by: Kim Knudsen, Lektor, DTU Matematik
Danmarks Tekniske Universitet
http://www.dtu.dk/images/DTU_email_logo_01.gif
Institut for Matematik
Matematiktorvet
Bygning 303 S
2800 Kgs. Lyngby
Direkte telefon 45253026
k.knudsen@mat.dtu.dk
www.mat.dtu.dk/

Subject: a new book on inverse problems
From: "Klibanov, Michael" <mklibanv@uncc.edu>
Date: 3/20/2012

A new book on Inverse Problems

Title: Approximate Global Convergence and Adaptivity for Coefficient Inverse Problems

Authors: Larisa Beilina and Michael V. Klibanov

Publisher: Springer, New York, 2012

Hardcover, ISBN 978-1-4419-7804-2

http://www.springer.com/mathematics/dynamical+systems/book/978-1-4419-7804-2

Chapters:

The field of Inverse Problems is an applied one. Because of many applications, it is important to develop non-local numerical methods for Coefficient Inverse Problems (CIPs). On the other hand, the goal of the development of such methods is a very challenging one because of both nonlinearity and ill-posedness of CIPs. Both the most important and the most difficult question in this regard is about

obtaining a good approximation for the unknown coefficient without any advanced knowledge of a small neighborhood of this coefficient. This is the case of many applications. And this is what Â“non-localÂ” means. This is the first book in which an answer to the above question can be found. Two new concepts of numerical solutions of multidimensional CIPs for a hyperbolic PDE are presented here: Approximate Global Convergence and the Adaptive Finite Element Method (adaptivity for brevity).

Chapter 1 might be used as an introductory graduate course to the theories of Ill-Posed and Coefficient Inverse Problems. In the beginning of this chapter two central questions of this book are presented (see below). The major part of this chapter is devoted to an introduction in the theory of Ill-Posed Problems. In addition, some uniqueness theorems for CIPs with single measurement data are proved in this chapter via the method of Carleman estimates. T

The book combines a detailed convergence analysis with recipes for various numerical implementations of developed algorithms. A reader who would want to focus on numerical implementations, might skip reading proofs of convergence theorems. Many numerical examples are presented. It is important that all numerical results are in a good agreement with the convergence analysis.

Only CIPs with single measurement data are considered in this book. "Single measurement" means that the data are generated by either a single position of the point source or a single direction of the incident plane wave. This is the most economical way of data collection, which is preferable in many applications. For example, in military applications one wants to minimize both the number of measurements and the measurement angle: because of dangers on the battlefield. The single measurement case means the minimal amount of the available information. Therefore, this case is the most challenging one to handle.

The numerical technique of this book is applied to two types of experimental data. The most challenging case of blind data is considered in both cases. A clear advantage of the blind data case is that it is unbiased. The first type of experimental data is collected in a controlled laboratory environment (Chapter 5). The second type (section 6.9) is collected in the field in a cluttered environment by the Forward Looking Radar of US Army Research Laboratory. The result for the second type addresses a real World problem. This is the problem of imaging of dielectric constants in shallow explosive-like targets using the data collected by the above radar.

In both types of experimental data huge discrepancies between the measured data and computationally simulated ones are evident. This is the main challenge here. Those discrepancies are addressed via two new data pre-processing procedures. The noise in the resulting pre-processed data includes both: the natural measurement noise and the modeling noise. Therefore, the noise level is unknown and is very large. Nevertheless, accurate imaging results are obtained in blind

data cases by the approximately globally convergent method of this book. This points towards a high stability of algorithms of this book. In fact, the stability observed in the studies of experimental data is better than the one predicted by the convergence analysis. This is because any convergence analysis assumes that the noise in the data is small, whereas it is large in our case.

In 2008-2011 the authors have developed a new technique, which has addressed the above question for n-dimensional (n=2,3) CIPs for an important hyperbolic PDE. The book addresses the following two central questions for the above CIPs:

Question 1. How to obtain a good approximation for the exact solution without any knowledge of a small neighborhood of this solution?

Question 2. Given that approximation, how to refine it?

It is well known that the first question is an enormously challenging one. Therefore, one inevitably faces a tough dilemma: either ignore this question, or try to address it in the expense of using some approximate mathematical models. The authors have chosen the second option. These models amount to the truncation of a certain asymptotic series. In the case of second and third approximate models, this truncation is done only on the first iteration, and all subsequent iterations do not use it. As a result, the authors have introduced a new term "approximate global convergence" for corresponding numerical methods addressing Question 1. Justification of those approximate models is done via numerical studies of computationally simulated data and, most persuasively, of blind experimental data.

Question 2 is addressed via the adaptivity. The adaptivity is likely the best technique for refinements of images obtained on the first stage. Thus, a natural two-stage numerical procedure is developed. On the first stage the approximately globally convergent method provides a guaranteed good approximation for the exact solution. And on the second stage the locally convergent adaptivity technique refines that approximation. Rigorous convergence analysis is conducted for both stages. Some new analytical results for the adaptivity for CIPs are presented.

Michael V. Klibanov
------- end -------

IPNet Digest Volume 19, Number 04 May 18, 2012

Today's Editor:

Patricia K. Lamm, Michigan State University

Today's Topics:

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

http://www.math.msu.edu/ipnet

Subject: OIPE2012 Abstract Submission Deadline Extended
to June 1st, 2012
From: <chairman.oipe2012@ugent.be>
Date: 5/14/2012 3:11 AM

12th OIPE 2012
International Workshop on Optimization and Inverse Problems in Electromagnetism

Due to numerous requests, the OIPE2012 Organizing Committee has decided to extend the deadline for submission of abstracts.

The abstract submission deadline is now June 1st, 2012.

Please submit your abstract using the information given on:
http://www.oipe2012.ugent.be/digsubmis.php
For registration of OIPE2012 workshop, please follow:
http://www.oipe2012.ugent.be/registrationfees.php
Early bird registration is 11th june.

For further information, see: http://www.oipe2012.com/

We hope to welcome you in Ghent from 19th-21st September 2012.

Best regards,
Luc Dupré
Conference Chairman

Subject: Fulbright U.S. Scholar Program Announcement

From: Andriy <a.synyavskyy@gmail.com>
Date: 5/9/2012 7:41 AM

The Faculty of Applied Mathematics of Ivan Franko National University of L'viv (IFNU) http://blues.lnu.edu.ua/ami/index_e.htm and Physico-Mechanical Institute http://www.ipm.lviv.ua/index.php?language=en&menu=0 of the National Academy of Sciences of Ukraine invite U.S. scholars to apply to the Fulbright U.S. Scholar Program to join these Ukrainian institutions in the Industrial Applied Mathematics Program (Award # 3351) supported by the Fulbright Program in Ukraine.

These host institutions are seeking internationally-renowned scholars whose research interests are in the fields of mathematical modeling in industrial applications, which include such areas as inverse problems, multi-scale and domain decomposition numerical analysis, parallel computing, etc. In addition to lecturing, involvement in research with the existing research groups of the relevant departments in these Ukrainian institutions is expected, as well as advising on the development of new educational programs (M.Sc. and Ph.D.).
The goal of the program is threefold:

1. to establish at IFNU and formalize a new educational program for the preparation of a Master of Science degree in Mathematical and Computer Modeling;
2. to develop standards and curriculum for a new Ph.D. program in applied mathematics in addition to upgrading the existing Candidate Degree program;
3. to formulate mathematical problems and develop solutions which employ direct and inverse strategies of interpretation of phenomena that occur or are used in industry.

More information about the Industrial Applied Mathematics Award (#3351) goals and organization can be found in the project proposal.
http://znc.com.ua/ukr/cooperation/fulbright/industrial_applied_mathematics_project_proposal.pdf

The deadline for applications to the Fulbright Scholar Program for the 2013-2014 academic year (Award # 3351) is August 1, 2012. The award will be in effect for 5 years. The term of the position can vary from 3 months to 10 months (one or two semesters). Requirements for applicants and other conditions are specified by the Fulbright U.S. Scholar Program.

For further information about the U.S. Fulbright Scholar Program and the Fulbright Program in Ukraine, please consult:
Fulbright Program in Ukraine: http://www.fulbright.org.ua
Institute of International Education in the USA:
http://www.cies.org/us_scholars.

Sincerely yours,
Andriy Synyavskyy

Subject: Some questions about inverse problem of root water uptake
From: weiz1983 <weiz1983@126.com>
Date: 4/29/2012

I want to solve the inverse problem of root water uptake. I have done some work about the inverse problem of one-dimensional equation by MATLAB in April, but the inverse problems of two-,or three-dimensional equation are beyond my ability. I want to solve these inverse problem coupled with Genetic Algorithms.

Please see the document

http://janus.math.msu.edu/ipnet/ipnet_archive/digest_appendices/Appendix_to_Digest_v19n04/root_water_uptake.pdf
for your reference. The equation and unknown variable(s)can be seen from the document.

Any help would be appreciated.

Best Regards,
Zheng

Subject: Free Textbook: New Hypertext Edition of
Introduction to Real Analysis by William F. Trench
From: William Trench <wmtrench@gmail.com>
Date: 5/2/2012 3:02 PM

An updated hypertext edition of my textbook "Introduction to Real Analysis" is now available for download free of charge.

DOWNLOAD INSTRUCTIONS

1. Click on ramanujan.math.trinity.edu/wtrench/misc/index.shtml.

2. Click on HYPERTEXT EDITION: DOWNLOAD FREE OF CHARGE.

3. Adobe Acrobat, a free download from Adobe.com, will open the the file.

4. Click on File in the upper left corner of the screen.

6. Select the folder where you want to download the file.

7. Click Save. This should complete the download.

An updated and bookmarked complete instructor's solution manual is available by email to requestors with verifiable faculty status.

I would appreciate it if you would pass this along to colleagues, friends, and students who may be interested

William F. Trench

Professor Emeritus
Mathematics Department
Trinity University
San Antonio, Texas, USA
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IPNet Digest Volume 19, Number 05 July 2, 2012

Today's Editor:

Patricia K. Lamm, Michigan State University

Today's Topics:

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

http://www.math.msu.edu/ipnet

Subject: IPDO 2013 First Call for papers
From: Olivier Fudym <fudym@mines-albi.fr>
Date: 5/20/2012

CALL FOR PAPERS IPDO-2013

4th International Symposium on
INVERSE PROBLEMS, DESIGN AND OPTIMIZATION (IPDO-2013)

Albi, France

June 26 – 28, 2013

http://ipdo2013.congres-scientifique.com

Objectives and areas of interest:

IPDO Symposium's main objectives are to bring the three communities of researchers in the fields of inverse problems, design theory, and optimization together and provide a common forum for presenting different applications, problems, and solution strategy concepts. Successful previous versions of the IPDO Symposium were held in Rio de Janeiro, Brazil (2004), Miami Beach, USA (2007) and Joao Pessoa, Brazil (2010). Contributions dealing with theoretical concepts in inverse techniques, optimization and design theory are expected.

IMPORTANT DATES

December 25, 2013 deadline for submission of two-page abstracts

January 15, 2013 informing about acceptability of abstracts

April 15, 2013 deadline for submission of full eight-page papers

May 15, 2013 deadline for early registration

Venue:

IPDO-2013 will be held in the Ecole des Mines d'Albi. Albi is located 70 km from Toulouse, France, which can be reached by direct flights from most of the larger cities in Europe, followed by the one hour trip to Albi via a direct highway. Transportation by bus and/or a shuttle will be planed to pick up the participants at Toulouse airport. Albi is a very nice old medieval town whose Episcopal City belongs to the UNESCO World Heritage List having a deep historical background with the Albigensian Crusade against the Cathar heretics (13th century), and a famous museum dedicated to the painter "Toulouse-Lautrec" who was born in the city. See http://www.albi-tourisme.fr

International Scientific Committee

Habib Ammari (France), H.T. Banks (U.S.A.), J.C. Batsale (France), Tadeusz Burczynski (Poland), Christian Clason (Austria), Bernard Claudet (France), Carolina P.N. Cotta (Brazil), Jay Frankel (USA), Gloria Frontini (Argentina), Omar Ghattas (USA), Gilmar Guimarães (Brazil), Dinh Nho Hào (Vietnam), Alemdar Hasanog(lu (Turkey), Yvon Jarny (France), Tomas Johansson (UK), Alain J. Kassab (U.S.A.), Michael V. Klibanov (U.S.A.), Ville Kolehmainen (Finland), Daniel Lesnic (UK), B. Ladevie (France), Jijun Liu (P.R. China), Denis Maillet (France), Roman Novikov (France), Andrzej J. Nowak (Poland), Gui-Rong Liu (U.S.A.), Fernando Rochinha (Brazil), Rubens Sampaio (Brazil), Otmar Scherzer (Austria), Antonio J. Silva Neto (Brazil), Zaqueu E. Silva (Brazil), Ireneusz Szczygie? (Poland), Haroldo C. Velho (Brazil), Yanfei Wang (P.R. China), Zhihai Xiang (P. R. China), Anatoly G. Yagola (Russia), Nicholas Zabaras (U.S.A.), Jun Zou (Hong Kong PRC).

Honorary Chair : G.S. Dulikravich (U.S.A.)

Organizing Committee: O. Fudym (France), J.-L. Battaglia (France), H.R.B. Orlande (Brazil), M. J. Colaço (Brazil)

For information contact:
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Submitted by : Olivier Fudym
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81013 ALBI Cedex 9, FRANCE
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http://rapsodee.mines-albi.fr

Subject: Table of Contents, Inverse Problems
Date: 6/03/2012

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Analysis of the Hessian for inverse scattering problems: II. Inverse medium scattering of acoustic waves Tan Bui-Thanh and Omar Ghattas

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Thermoacoustic tomography in elastic media Justin Tittelfitz

Regularization methods for ill-posed problems in multiple Hilbert scales
Gisela L Mazzieri and Ruben D Spies

An image method for a sphere in an acoustic waveguide
Doo-Sung Lee and R P Gilbert

Inverse problems for Jacobi operators: I. Interior mass–spring perturbations in finite systems Rafael del Rio and Mikhail Kudryavtsev

Conditioning bounds for traveltime tomography in layered media
H Baek and L Demanet

Computing estimates of material properties from transmission eigenvalues Giovanni Giorgi and Houssem Haddar

Estimation of position and intensity of a pollutant source in channel flow using transmittance functions T Maalej, D Maillet and J-R Fontaine

A Jacobi–Legendre polynomial-based method for the stable solution of a deconvolution problem of the Abel integral equation type
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On uniqueness of an inverse problem in electromagnetic obstacle scattering for an impedance cylinder FEATURED ARTICLE
Gen Nakamura, Brian D Sleeman and Haibing Wang

On the reconstruction of interfaces using complex geometrical optics solutions for the acoustic case Mourad Sini and Kazuki Yoshida

Inversion of ocean environmental variations via time-reversal acoustics
Jianlong Li, Wen Xu and Liling Jin

Left and right preconditioning for electrical impedance tomography with structural information Daniela Calvetti, Debra McGivney and Erkki Somersalo

Joint inversion approaches for geophysical electromagnetic and elastic full-waveform data A Abubakar, G Gao, T M Habashy and J Liu

A large-time asymptotics for the solution of the Cauchy problem for the Novikov–Veselov equation at negative energy with non-singular scattering data
A V Kazeykina

Source localization using rational approximation on plane sections
M Clerc, J Leblond, J-P Marmorat and T Papadopoulo

Toward efficient computation of the expected relative entropy for nonlinear experimental design
Darrell Coles and Michael Prange

Online availability: http://iopscience.iop.org/0266-5611/28/5

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Identifiability for the pointwise source detection in Fisher's reaction–diffusion equation Faker Ben Belgacem

Numerical reconstruction of a piecewise constant Robin parameter in the two- or three-dimensional case S Chaabane, I Feki and N Mars

Tomography of small residual stresses
Vladimir Sharafutdinov and Jenn-Nan Wang

An algebraic reconstruction of a moving point source for a scalar wave equation Etsushi Nakaguchi, Hirokazu Inui and Kohzaburo Ohnaka

Multiscale analysis for ill-posed problems with semi-discrete Tikhonov regularization Min Zhong, Shuai Lu and Jin Cheng

Identification of minimum-phase-preserving operators on the half-line
Peter C Gibson and Michael P Lamoureux

Thermal based methods for damage detection and characterization in porous materials H T Banks and Amanda Keck Criner

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Corrigenda

Corrigendum: Inverse problems for pseudo-Jacobi matrices: existence and uniqueness results N Bebiano and J da Providência

Corrigendum: The study of an iterative method for the reconstruction of images corrupted by Poisson and Gaussian noise
F Benvenuto, A La Camera, C Theys, A Ferrari, H Lantéri and M Bertero

Online availability: http://iopscience.iop.org/0266-5611/28/6

Subject: Table of Contents, 'Journal of Inverse and III-posed Problems'
From: "noreply@degruyter.com" <noreply@degruyter.com>
Date: 6/22/2012

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Inverse spectral problems for arbitrary order differential operators on noncompact trees Yurko, Vjacheslav Anatoljevich

Fourth International Scientific School–Conference for Young Scientists “Theory and Computational Methods for Inverse and Ill-Posed Problems”

International Conference “Inverse and Ill-Posed Problems of Mathematical Physics” dedicated to the 80th birthday of Academician M. M. Lavrentiev

Online availability:
http://www.degruyter.com/view/j/jip.2012.20.issue-1/issue-files/jip.2012.20.issue-1.xml

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J. Inverse and Ill-posed Problems June 2012 Vol. 20, Issue 2
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Kabanikhin, Sergey I. / Bektemesov, Maktagali A. / Nurseitov, Daniyar B. / Krivorotko, Olga I. / Alimova, Anel N.

An adaptive wavelet solver for a nonlinear parameter identification problem for a parabolic differential equation with sparsity constraints
Dahlke, Stephan / Friedrich, Ulrich / Maass, Peter / Raasch, Thorsten / Ressel, Rudolf A.

V. V. Vasin

The Sixth International Conference “Algorithmic Analysis of Unstable Problems”

Conference announcement “Inverse and Ill-Posed Problems of Mathematical Physics” dedicated to the 80th birthday of Academician M. M. Lavrentiev

Fourth International Scientific School–Conference for Young Scientists “Theory and Computational Methods for Inverse and Ill-Posed Problems”

Online availability:
http://www.degruyter.com/view/j/jip.2012.20.issue-2/issue-files/jip.2012.20.issue-2.xml

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Subject: Contents: Vol. 29, Year 2012: International Journal of Applied Mathematics and Statistics

From: <mathematics@ceserp.co.cc>
Date: 5/30/2012

Int'l J. Applied Mathematics & Statistics 2012 Volume 29, Number 5
Table of Contents

www.ceser.in/ijamas.html

http://www.ceserp.com/cp-jour/index.php?journal=ijamas
------- end -------

IPNet Digest Volume 19, Number 06 August 15, 2012

Today's Editor:

Patricia K. Lamm, Michigan State University

Today's Topics:

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

http://www.math.msu.edu/ipnet

Subject: Workshop: Optimization Techniques for Inverse Problems
From: Marco Prato <marco.prato@unimore.it>
Date: 7/19/2012

WORKSHOP
OPTIMIZATION TECHNIQUES FOR INVERSE PROBLEMS (OIP2012)
Modena, Italy, September, 20-21, 2012

Aims and scopes:

The format of the workshop is made by a limited number of extended talks held by international experts in numerical optimization and inverse problems, followed by shorter presentations. At the end of each seminar, the program provides time for free discussion about possible exchanges of information and ideas on topics that include theoretical and applied aspects of optimization techniques, with particular attention to related developments in specific inverse problems as image restoration, compressive sensing, and machine learning.

Invited Speakers:
Laure Blanc-Feraud, Universite Nice Sophia Antipolis
Antonin Chambolle, Ecole Polytechnique, Paris
Christine De Mol, Universite Libre de Bruxelles
Roger Fletcher, University of Dundee
James Nagy, Emory University, Atlanta, GA
Alessandro Verri, Universita di Genova

All the information about the workshop can be found at the website
http://www.oip2012.unimore.it/

Contacts:
Marco Prato - Luca Zanni
University of Modena and Reggio Emilia, Italy
Email: marco.prato@unimore.it - luca.zanni@unimore.it

Submitted by:
Dott. Marco Prato Dipartimento di Matematica Pura ed Applicata
UniversitÃ di Modena e Reggio Emilia Via Campi 213/b 41100
Modena (Italy) Tel: +39 059 205 5590 / 5510 (Lab) Fax: +39 059 370513
cdm.unimo.it/home/matematica/prato.marco

Subject: IFIP TC7 Conference 2013, Klagenfurt, Austria
From: <Barbara.Kaltenbacher@uni-klu.ac.at>
Date: 7/30/2012

Dear Colleagues,

the 26th IFIP TC7 Conference on System Modelling and Optimization
will take place September 9-13, 2013, in Klagenfurt, Austria.

Following a long tradition of this conference series, the conference
is devoted to theory and applications of all fields of nonlinear
optimization and optimal control and to related problems of
modelling.

For more information, please visit the conference website

http://ifip2013.uni-klu.ac.at

We kindly invite you to participate in the conference by submitting a
contributed talk or a minisymposium proposal. Submission of abstracts
for contributed talks will be possible via our web page in fall of
this year. Submission of minisymposia proposals is solicitated from
now on as a reply to this email, including title, short (at most one
page) summary and tentative list of speakers. The format of a
minisymposium should be one or two blocks of two hours with either one
keynote speaker (50+10min) and 2 regular speakers (25+5min) or 4
regular speakers (25+5min) per block

We would be very happy to welcome you at our conference in Klagenfurt!

Sincerely yours,
the local organizing commitee

Clemes Heuberger
Barbara Kaltenbacher
Christian Potzsche
Franz Rendl

Subject: Book on regularization methods in Banach spaces
From: "Prof. Dr. Thomas Schuster" <thomas.schuster@uni-oldenburg.de>
Date: 7/18/2012

I'd like to inform you that Barbara Kaltenbacher, Bernd Hofmann, Kamil Kazimierski and I are the authors of a monograph entitled with

"Regularization Methods in Banach Spaces"

which just appeared at de Gruyter publishing, see
http://www.degruyter.com/view/product/129286?rskey=TwxPRs&result=1&q=
as a link.

[From the website:]

Aims and Scope

Regularization methods aimed at finding stable approximate solutions are a necessary tool to tackle inverse and ill-posed problems. Inverse problems arise in a large variety of applications ranging from medical imaging and non-destructive testing via finance to systems biology. Many of these problems belong to the class of parameter identification problems in partial differential equations (PDEs) and thus are computationally demanding and mathematically challenging. Hence there is a substantial need for stable and efficient solvers for this kind of problems as well as for a rigorous convergence analysis of these methods.

This monograph consists of five parts. Part I motivates the importance of developing and analyzing regularization methods in Banach spaces by presenting four applications which intrinsically demand for a Banach space setting and giving a brief glimpse of sparsity constraints. Part II summarizes all mathematical tools that are necessary to carry out an analysis in Banach spaces. Part III represents the current state-of-the-art concerning Tikhonov regularization in Banach spaces. Part IV about iterative regularization methods is concerned with linear operator equations and the iterative solution of nonlinear operator equations by gradient type methods and the iteratively regularized Gauss-Newton method. Part V finally outlines the method of approximate inverse which is based on the efficient evaluation of the measured data with reconstruction kernels.

Submitted by:
Prof. Dr. Thomas Schuster
Carl von Ossietzky Universitaet Oldenburg
Fakultaet V - Mathematik und Naturwissenschaften
Institut fur Mathematik, 26111 Oldenburg, Germany
Tel.: ++49 (0)441 798 3944 FAX: ++49 (0)441 798 3004
email: thomas.schuster@uni-oldenburg.de

Subject: Table of Contents, Inverse Problems
Date: 8/15/2012

Inverse Problems July 2012 Vol. 28, Number 7
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Papers

EIT Cedric Bellis, Andrei Constantinescu, Thomas Coquet, Thomas Jaravel and Armin Lechleiter

A stability analysis of the harmonic continuation
A Elcrat, V Isakov, E Kropf and D Stewart

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Imaging from Coupled Physics

Foreword
Imaging from coupled physics S R Arridge and O Scherzer

Inverse anisotropic diffusion from power density measurements in two dimensions Francois Monard and Guillaume Bal

Electrical tissue property imaging using MRI at dc and Larmor frequency Jin Keun Seo, Dong-Hyun Kim, Joonsung Lee, Oh In Kwon, Saurav Z K Sajib and Eung Je Woo

A convergent algorithm for the hybrid problem of reconstructing conductivity from minimal interior data
Amir Moradifam, Adrian Nachman and Alexandre Timonov

Formulas for detecting a spherical stiff inclusion from interior data: a sensitivity analysis for the Helmholtz equation
Joyce McLaughlin, Assad Oberai and Jeong-Rock Yoon

Resolution and stability analysis in acousto-electric imaging
Habib Ammari, Josselin Garnier and Wenjia Jing

Conductivity imaging by the method of characteristics in the 1-Laplacian Alexandru Tamasan and Johann Veras

Stabilizing inverse problems by internal data
Peter Kuchment and Dustin Steinhauer

Hybrid tomography for conductivity imaging
Thomas Widlak and Otmar Scherzer

Reconstructing absorption and scattering distributions in quantitative photoacoustic tomography
T Tarvainen, B T Cox, J P Kaipio and S R Arridge

On some inverse problems arising in elastography
Enrique Fernandez-Cara and Faustino Maestre

An inverse diffusivity problem for the helium production-diffusion equation Gang Bao and Xiang Xu

Inverse boundary value problems with partial data in unbounded domains
Xiaosheng Li

Solving the split feasibility problem without prior knowledge of
matrix norms
Genaro Lopez, Victoria Marti-n-Marquez, Fenghui Wang and Hong-Kun Xu

On convergence rates for iteratively regularized procedures with
linear penalty terms Alexandra Smirnova

Improved solution methods for an inverse problem related to a
population balance model in chemical engineering
Andreas Groh and Jochen Krebs

Fixed energy potentials through an auxiliary inverse eigenvalue
problem Tamas Palmai and Barnabas Apagyi

Inverse spectral problems for energy-dependent Sturm-Liouville
equations Rostyslav Hryniv and Nataliya Pronska

A linearized inverse scattering problem for the polarized waves and
anisotropic targets Mikhail Gilman, Erick Smith and Semyon Tsynkov

Reciprocity principle for the detection of planar cracks in
anisotropic elastic material P Steinhorst and A-M Sandig

Subject: Table of Contents, 'Journal of Inverse and III-posed Problems'
From: "noreply@degruyter.com" <noreply@degruyter.com>
Date: 6/22/2012

J. Inverse and Ill-posed Problems March 2012 Vol. 20, Issue 1
Table of Contents

A Monte Carlo based analysis of optimal design criteria
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Analysis of ill-posedness and numerical methods of solving a nonlinear
inverse problem in pharmacokinetics for the two-compartmental model
with extravascular drug administration
Ilyin, A. / Kabanikhin, S. I. / Nurseitov, D. B. / Nurseitova, A. T. /
Asmanova, N. A. / Voronov, D. A. / Bakytov, D.

Identification problems in Banach spaces for linear first-order
partial differential equations in one space dimension and applications
Lorenzi, Alfredo

Inverse problem of determining absorption coefficient in the wave
equation by BC method Pestov, Leonid

Inverse spectral problems for arbitrary order differential operators
on noncompact trees Yurko, Vjacheslav Anatoljevich

Fourth International Scientific School -- Conference for Young Scientists
"Theory and Computational Methods for Inverse and Ill-Posed Problems"

International Conference "Inverse and Ill-Posed Problems of
Mathematical Physics" dedicated to the 80th birthday of Academician
M. M. Lavrentiev

Online availability:
http://www.degruyter.com/view/j/jip.2012.20.issue-1/issue-files/jip.2012.20.issue-1.xml

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J. Inverse and Ill-posed Problems June 2012 Vol. 20, Issue 2
Table of Contents

Online availability:
http://www.degruyter.com/view/j/jip.2012.20.issue-2/issue-files/jip.2012.20.issue-2.xml

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Subject: International Journal of Applied Mathematics and Statistics:
Content Volume 30, Issue 6, Year 2012
From: <mathematics@ceserp.co.cc>
Date: 7/8/2012

International Journal of Applied Mathematics & Statistics
2012 Volume 30, Issue 6
Table of Contents

Author Instructions available at:
http://www.ceser.in/ceserp/index.php/ijamas/about/submissions#authorGuidelines

www.ceserp.com
www.ceser.in
------- end ------- .

IPNet Digest Volume 19, Number 07 October 1, 2012

Today's Editor:

Patricia K. Lamm, Michigan State University

Today's Topics:

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

http://www.math.msu.edu/ipnet

Subject: Calderon Prize
From: Gunther Uhlmann <gunther@math.washington.edu>
Date: 9/15/2012

CALDERON PRIZE

The Inverse Problems International Association (IPIA) will award the fourth Calderon Prize to a researcher under the age of 40 who has made distinguished contributions to the field of inverse problems broadly defined. The Calderon Prize Committee consists of Professors Habib Ammari, Guillaume Bal, Hiroshi Isozaki, Andreas Kirsch (chair), and Plamen Stefanov. Previous winners of the award are Matti Lassas (2007), Martin Burger (2009) and Guillaume Bal (2011).

IPIA will present the award at the Applied Inverse Problems Conference 2013 to be held in Daejeon Korea, July 1-5, 2013. The award will include a certificate, a $500 prize, and an invitation to give a plenary lecture at the conference. The prize also includes reimbursement for reasonable travel expenses to Daejeon.

Besides a nomination letter please include a complete CV of the nominee and a list of publications. Also additional supporting letters can be included. The Calderon Prize Committee can also solicit nominations. The deadline for nominations is February 28, 2013.

Nominations should be send to Professor Andreas Kirsch, to the e-mail address <kirsch@math.uni-karlsruhe.de>. Inquiries should be also be

addressed to Professor Kirsch.

Subject: Conference Inverse Problems and Applications (IPA)
2-6 April, 2013, Linkoping University, Sweden
From: George Baravdish <george.baravdish@liu.se>
Date: 8/21/2012

Dear Colleagues,

This is a friendly reminder of the upcoming conference
Inverse Problems and Applications (IPA2013) 2-6 April, 2013, Linkoping University, Sweden, http://www.mai.liu.se/IPA2013

We welcome you to participate in this conference (there is no conference fee) and kindly ask you to notice the following important deadlines

Abstract submission closes: November 5th, 2012

Registration closes: Mars 10th, 2013.

On the behalf of the organizing committee,

George Baravdish, George.baravdish@liu.se
and Vladimir Kozlov, vladimir.kozlov@liu.se

Subject: Postdoc Position, Scientific Computing, Univ College London
From: Simon ARRIDGE <S.Arridge@cs.ucl.ac.uk>
Date: 9/19/2012

Applications are invited for a Postdoctoral Research Associate in Scientific Computing/Numerical Modelling to work with Dr T. Betcke (UCL Mathematics) and Prof S. Arridge (UCL Centre for Medical Image Computing) on fast PDE solvers and inverse problems for image reconstruction with applications to medical imaging. This is part of a large interdisciplinary group, researching methods for Electrical Impedance Tomography, Ultrasound and Optical Tomography, including industrial collaboration.

The Research Associate will contribute to the development of forward and inverse solvers and their numerical implementation for large-scale problems. A strong background in mathematics, scientific computing or related areas is required. In particular, candidates should have experience with finite and or boundary element methods and inverse problems. Software development experience in C++ is essential.

This post is available from 1 November 2012 or as soon as possible thereafter, and is funded by the MRC from 1 November 2012 to 6 October 2014 in the first instance.

For further information and an online application form see
https://atsv7.wcn.co.uk/search_engine/jobs.cgi?owner=5041178&ownertype=fair&jcode=1277085

Informal enquiries may be addressed to Dr Timo Betcke, tel: +44 (0)20
3108 4068, email: t.betcke@ucl.ac.uk.

The closing date for the post is 3 October 2012.

Subject: Positions in Vision and Imaging at UCL
From: Simon ARRIDGE <S.Arridge@cs.ucl.ac.uk>
Date: 9/24/2012

UCL is currently advertising two positions in Vision and Imaging Science.
Chair:
http://tinyurl.com/cmgld89

Lecturer/Senior Lecturer:
http://tinyurl.com/d76e9jy

Inverse Problems is included as one of the possible areas of
specialisation for applicants.

Subject: TOC: 'Journal of Inverse and Ill-posed Problems'
From: "noreply@degruyter.com" <noreply@degruyter.com>
Date: 8/29/2012

Journal of Inverse and Ill-posed Problems Sept 2012 Vol. 20, Issue 3
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Laplace-distributed increments, the Laplace prior, and edge-preserving
regularization Bardsley, Johnathan M.

Identification of source terms in the Lotka-Volterra system
Gnanavel, Soundararajan / Barani Balan, Natesan / Balachandran, Krishnan

Energy and regularity dependent stability estimates for the Gel'fand
inverse problem in multidimensions
Isaev, Mikhail I. / Novikov, Roman G.

Parameter identification problem for a parabolic equation --
application to the Black-Scholes option pricing model
Korolev, Yury M. / Kubo, Hideo / Yagola, Anatoly G.

Numerical inversions for space-dependent diffusion coefficient in the
time fractional diffusion equation
Li, Gongsheng / Gu, Wenjuan / Jia, Xianzheng

A fast multiscale Galerkin method for ill-posed integral equations
with not exactly given input data via Tikhonov regularization
Luo, Xingjun / Yang, Xu / Huang, Xiantong / Li, Fanchun

Subject: Inverse Problems, Volume 28, Number 9, September 2012
From: <custserv@iop.org>
Date: 9/11/2012

Inverse Problems September 2012 Volume 28, Number 9
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Topical Review

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A Borsic and A Adler

Determination of an unknown source for a thermoelastic system with a memory effect Bin Wu and Jijun Liu

A numerical method for the inverse problem of cell traction in 3D
G Vitale, L Preziosi, and D Ambrosi

Detection of multiple inclusions from sweep data of electrical impedance tomography Nuutti Hyvonen and Otto Seiskari

Inverse problem by Cauchy data on an arbitrary sub-boundary for systems of elliptic equations O Yu Imanuvilov and M Yamamoto

An inverse acoustic scattering problem inside a cavity with dynamical back-scattering data Masaru Ikehata

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Registered Office: Dirac House, Temple Back, Bristol BS1 6BE England

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Subject: Contents, International Journal of Mathematics and Computation
From: <mathematics@ceserp.co.cc>
Date: 8/16/2012

International Journal of Mathematics & Computation 2012 Vol 17, No. 4
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The Expected Value of the product of the sum of random variables
Aludaat Khaked, Mahrous Ahmed

http://www.ceser.in/ceserp/index.php/ijmc/issue/current
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IPNet Digest Volume 19, Number 08 November 15, 2012

Today's Editor:

Patricia K. Lamm, Michigan State University

Today's Topics:

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

http://www.math.msu.edu/ipnet

Subject: International Conference IPDO 2013 - Second Call for papers
From: "ipdo2013@congres-scientifique.com" <ipdo2013@congres-scientifique.com>
Date: 10/3/2012

International Conference IPDO 2013 - Second Call for papers

Objectives

IPDO Symposium's main objectives are to bring the three communities of researchers in the fields of inverse problems, design theory, and optimization together and provide a common forum for presenting different applications, problems, and solution strategy concepts. Moreover, the groups of theoretical, computational and experimental researchers need to interact and share some appropriate tools that rigorously bridge the gap between the information stemming from measurements and that corresponding to theoretical predictions. Hence, IPDO Symposium is a privileged place for scientific exchanges relating the measurement and theory approaches through the use of suitable optimization algorithms, and is expected to provide an excellent basis for cross-fertilization of ideas so that more general, robust, accurate and computationally economical design methods are created for multi-disciplinary applications. Successful previous versions of the IPDO Symposium were held in Rio de Janeiro, Brazil (2004), Miami Beach, USA (2007) and Joao Pessoa, Brazil (2010).

Areas of interest

Contributions dealing with theoretical concepts in inverse techniques, optimization and design theory are expected. Methods that are applicable to multiple disciplines for practical applications are encouraged, such as energy storage, biomass valorization, solar energy conversion, material functionalization, material processing, remote sensing, non--destructive evaluation, material properties determination, nano and micro technologies, petrochemistry, aeronautics, astronautics, biomedicine, transport and sensing of pollutants, imaging, geoprospecting, financial analysis, etc.

Abstracts and papers submission

Please submit a two-page abstract in pdf format via the symposium website at http://ipdo2013.congres-scientifique.com. The templates can be found at the symposium website.
All accepted abstracts will be in a Book of Abstracts provided to all participants during IPDO-2013. Final papers passing a three-person review process will be provided electronically to all those that register by May 15, 2013.
Selected papers will be published in the Inverse Problems in Science and Engineering journal after an additional review.

IMPORTANT DATES

December 25, 2012 deadline for submission of two-page abstracts
January 15, 2013 informing about acceptability of abstracts
April 15, 2013 deadline for submission of full eight-page papers
May 15, 2013 deadline for early registration

For further information and updates please visit:
http://ipdo2013.congres-scientifique.com

Contact information:
Olivier Fudym Tel. +33 (0) 5 63493024
e-mail: olivier.fudym@mines-albi.fr

Subject: PhD position: Inverse modeling of magnetic fields in nanocrystals
From: Andreas Alpers <awalpers@yahoo.de>
Date: 10/8/2012

PhD position: Inverse modeling of magnetic fields in nanocrystals

A PhD studentship is available immediately in Forschungszentrum Juelich to develop computational methods for the reconstruction of magnetic fields in nansocale materials and devices with nanometre spatial resolution. This is a joint project of the Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons (ER-C) and the Institute of Energy and Climate Research - Stratosphere (IEK-7).

Background
The aim of the project is to measure the three-dimensional

distribution of magnetization inside an individual nanometre-sized magnetic crystal from a series of images acquired using the technique of electron holography. Nanoscale magnetic materials are of immense importance in scientific and technological disciplines. The project promises to provide a powerful new analytical tool at the frontiers of the highest spatial resolution analysis of spin and electronic structures that will have farreaching impact beyond a specific research domain.

Tasks
The student will develop a novel model-based inversion algorithm, which will be used to find the best-fitting distribution of magnetic moments in a specimen that is consistent with a series of experimental phase images acquired using electron holography. As this is an ill-posed problem, the sensitivity of the solution to errors in the data, the uniqueness of the result and the use of prior information will need to be addressed. The algorithm will be applied to experimental measurements acquired using a state-of-the-art transmission electron microscope available in the ER-C, beginning with simpler two-dimensional problems. The ultimate aim will be to provide quantitative measurements of three-dimensional internal magnetic fields in nanoparticles.

Requirements
Suitable candidates should have a university degree and a strong background in computional mathematics or physics.
The candidate should be fluent in English and interested in working in an interdisciplinary and international team of scientists.
Expressions of interest should be sent to Prof. Rafal Dunin-Borkowski (rdb@fz-juelich.de) or Dr. Joern Ungermann (j.ungermann@fz-juelich.de).

Dated: September 2012

Submitted by: Dr. Andreas Alpers
Zentrum Mathematik, Technische Universitaet Muenchen
Room: 02.04.034B Phone: +49 (0)89 289 16866
Email: awalpers@yahoo.de Webpage: http://www-m9.ma.tum.de/~alpers

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Subject: Postdoc position in computational math at MIT
From: Laurent Demanet <laurent@math.mit.edu>
Date: 10/8/2012

The Imaging and Computing group at MIT invites applications for one postdoctoral position. The areas of interest to the group include computational wave propagation, optimization, inverse problems, applied harmonic analysis, sparsity (compressive sensing), linear algebra, fast algorithms, radar imaging, seismic imaging.

All the details are at http://math.mit.edu/icg/openings/

Subject: Postdoctoral Research Position in Computational Imaging at

Tufts University
From: Misha Kilmer <misha.kilmer@tufts.edu>
Date: 10/8/2012

Postdoctoral Research Position in Computational Imaging at Tufts University

A postdoctoral researcher, possible immediate start date, is sought in the area of computational imaging to support the following project.

Advanced Image Formation For Diffuse Optical Tomography (DOT): As part of a larger program in the area of breast cancer detection using optical tomography, the objective of this project is the development and deployment of image formation methods for the imaging of breast cancers from hyperspectral DOT data sets (i.e., data collected from over 100 narrowly spaced wavelengths in the near infrared). Geometric inversion techniques based on recently developed level set ideas are to form the basis for the inversion methods. The forward problem will require efficient solution of multiple large-scale discretized PDEs. In addition to large-scale algorithm development, a primary objective is the processing and analysis of clinical data being developed under a separate portion of the overall project. Initial funding for one year, with the possibility of annual renewal, subject to performance review, for up to 3 years. A PhD and relevant expertise in one or more of the following is expected: computational inverse problems, applied mathematics or scientific computing with experience in computational PDEs, numerical linear algebra, and/or optimization. Previous interdisciplinary project experience a plus. If interested, please send CV and cover letter to Prof. Eric Miller (elmiller@ece.tufts.edu) and Prof. Misha Kilmer (misha.kilmer@tufts.edu).

Tufts University is an Affirmative Action/Equal Opportunity employer. We are committed to increasing the diversity of our faculty. Members of underrepresented groups are strongly encouraged to apply.

Subject: 3 Postdoctoral positions at the Seismic Laboratory for Imaging and Modelling
From: Felix Herrmann <fherrmann@eos.ubc.ca>
Date: 11/1/2012

Dear colleagues,

We have three open postdoctoral positions at the Seismic Laboratory for Imaging and Modelling in the following areas:

* computational and theoretical seismology: seismic modelling, wave-equation based imaging and inversion
* observational seismology: development of practical data acquisition scenarios and workflows for full-waveform inversion
* compressive sensing: design and implementation of novel acquisition, sparse/low-rank recovery algorithms, and directional transforms including curvelets
* scientific computing & inverse problems: PDE-constrained optimization and direct and indirect solvers for the Helmholtz

equation, and
* optimization & machine learning: large-scale convex and stochastic optimization, etc.

For more information please follow

https://www.slim.eos.ubc.ca/node/50662

or to our add at mathjobs (Position ID: UBC-SLIMPDF [#4250])

https://www.mathjobs.org/jobs/UBC/4250

where the candidates can submit their applications. Please, forward this information to potential candidates. Thank you.

Kind regards,

Felix J. Herrmann
Director of UBC-Seismic Laboratory for Imaging and Modeling (SLIM)
EOS-UBC
phone: (+1) 604-822-8628
https://www.slim.eos.ubc.ca

Subject: New book, Linear and Nonlinear Inverse Problems
From: Bruce Bailey <Bailey@siam.org>
Date: 11/5/2012 5:09 PM

Announcing the October 31, 2012, publication by SIAM of:

Linear and Nonlinear Inverse Problems with Practical Applications
by Jennifer L. Mueller and Samuli Siltanen

2012 / xiv + 351 pages / Softcover / ISBN 978-1-611972-33-7 /
List Price $84.00 / SIAM Member Price $58.80 / Order Code CS10

This book explains how to identify ill-posed inverse problems arising in practice and how to design computational solution methods for them; explains computational approaches in a hands-on fashion, with related codes available on a website; and serves as a convenient entry point to practical inversion.

The guiding linear inversion examples are the problem of image deblurring, x-ray tomography, and backward parabolic problems, including heat transfer, and electrical impedance tomography is used as the guiding nonlinear inversion example.

The book's nonlinear material combines the analytic-geometric research tradition and the regularization-based school of thought in a fruitful manner, paving the way to new theorems and algorithms for nonlinear inverse problems. Furthermore, it is the only mathematical textbook with a thorough treatment of electrical impedance tomography, and these sections are suitable for beginning and experienced researchers

in mathematics and engineering.

To order, or for more information about this and all SIAM books,
please visit http://www.siam.org/books.

Subject: Table of Contents, Inverse Problems
From: <custserv@iop.org>
Date: 10/1/2012

Inverse Problems October 2012 Volume 28, Number 10
Table of Contents

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Inverse Problems November 2012 Volume 28, Number 11
Table of Contents

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Subject: Table of Contents, Journal of Inverse and III-posed Problems
From: "noreply@degruyter.com" <noreply@degruyter.com>
Date: 10/1/2012

Journal of Inverse and Ill-Posed Problems Oct 2012 Vol. 20, Issue 4
Table of Contents

Please click on the following link to view the new contents:
http://www.degruyter.com/view/j/jiip?recentIssue
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IPNet Digest Volume 19, Number 09 December 10, 2012

Today's Editor:

Patricia K. Lamm, Michigan State University

Today's Topics:

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

http://www.math.msu.edu/ipnet

Subject: International Conference Waves 2013 - Call for papers
From: <Fahmi.BenHassen@enit.rnu.tn>
Date: 11/24/2012

The 11th International Conference on Mathematical and Numerical Aspects of Waves (Waves 2013) is organized jointly by ENIT-LAMSIN, INRIA and ENSTA.

The conference will be held at Hotel El Mouradi (Gammarth - Tunis) from June 3rd to june 7th. This conference is the main venue where significant advances in the analysis and computational modeling of wave phenomena and exciting new applications are presented.

Conference website: http://www.lamsin.rnu.tn/waves13/

Conference Themes: The themes for this meeting include, but are not restricted to
Forward and Inverse Scattering, Fast Computational Techniques, Numerical Analysis, Approximate Boundary Conditions, Domain Decomposition, Analytical and Semi-analytical Methods, Nonlinear Wave Phenomena, Water Waves and Coastal Modeling, Guided Waves and Random Media, Medical and Seismic Imaging.

Important Dates:
Submissions of abstracts December 1st, 2012 (acceptance notification by February 16th, 2013).
Opening of registration January 1st, 2013.
Conference starts June 3, 2013 at 8h00.
Conference ends June 7, 2013, last talk at 12h30.

Contact/Information: waves13@lamsin.tn

Plenary Speakers

Grégoire Allaire (Ecole Polytechnique, FR)
Mourad Bellassoued (University of Science of Bizerte, TN)
Laurent Gizon (Max Planck Institute for Solar System Research, DE)
Ivan G. Graham (University of Bath, UK)
Marcus Grote (University of Basel, CH)
Sergei A. Nazarov (Russian Academy of Sciences, RU)
Francisco Sayas (University of Delaware, US)
Chrysoula Tsogka (University of Crete, GR)

Subject: ROKS-2013 July 8-10, 2013, Leuven Belgium
From: Johan Suykens <Johan.Suykens@esat.kuleuven.be>
Date: 11/28/2012

ROKS-2013

International workshop on advances in Regularization, Optimization, Kernel methods and Support vector machines: theory and applications

July 8-10, 2013, Leuven, Belgium
http://www.esat.kuleuven.be/sista/ROKS2013

SCOPE

One area of high impact both in theory and applications is kernel methods and support vector machines. Optimization problems, learning and representations of models are key ingredients in these methods. On the other hand considerable progress has also been made on regularization of parametric models, including methods for compressed sensing and sparsity, where convex optimization plays a prominent role. The aim of ROKS-2013 is to provide a multi-disciplinary forum where researchers of different communities can meet, to find new synergies along these areas, both at the level of theory and applications.

The scope includes but is not limited to:
- Regularization: L2, L1, Lp, lasso, group lasso, elastic net, spectral regularization, nuclear norm, others
- Support vector machines, least squares support vector machines, kernel methods, gaussian processes and graphical models
- Lagrange duality, Fenchel duality, estimation in Hilbert spaces, reproducing kernel Hilbert spaces, Banach spaces, operator splitting

- Optimization formulations, optimization algorithms
- Supervised, unsupervised, semi-supervised learning, inductive and transductive learning
- Multi-task learning, multiple kernel learning, choice of kernel functions, manifold learning
- Prior knowledge incorporation
- Approximation theory, learning theory, statistics
- Matrix and tensor completion, learning with tensors
- Feature selection, structure detection, regularization paths, model selection
- Sparsity and interpretability
- On-line learning and optimization
- Applications in machine learning, computational intelligence, pattern analysis, system identification, signal processing, networks, datamining, others
- Software

CALL FOR ABSTRACTS

The ROKS-2013 program will feature invited plenary talks, oral sessions and poster sessions. Interested participants are cordially invited to submit an extended abstract (max. 2 pages) for their contribution. After the workshop a number of selected contributions will be invited for an edited book.

For further information see http://www.esat.kuleuven.be/sista/ROKS2013 .

IMPORTANT DATES

- Extended abstract submission website opens: Jan 9, 2013
- Deadline extended abstract submission: March 4, 2013
- Notification of acceptance: April 8, 2013
- Deadline for registration: June 3, 2013
- International Workshop ROKS-2013: July 8-10, 2013

ORGANIZING COMMITTEE

Chair: Johan Suykens (KU Leuven)

Andreas Argyriou (Ecole Centrale Paris), Kris De Brabanter (KU Leuven), Moritz Diehl (KU Leuven), Kristiaan Pelckmans (Uppsala University), Marco Signoretto (KU Leuven), Vanya Van Belle (KU Leuven), Joos Vandewalle (KU Leuven)

Co-sponsored by ERC Advanced Grant

Subject: Inverse Problems Symposium, June 9-11, 2013 Announcement
From: Jon Woolley <j.w.woolley@gmail.com>
Date: 11/29/2012

Dear Inverse Problems Researchers and Instructors,

This is the announcement of the 2013 Inverse Problems Symposium that will be held June 9-11 in Huntsville, Alabama. Please mark this time in your calendars. This symposium is the 26th in the series of national and international meetings on Inverse Problems that were initiated at MSU in 1988 by Dr. James Beck. The last symposia were held at the University of Central Florida and Michigan State University in 2011 and 2012, respectively. The 2013 symposium in Huntsville, Alabama will retain the single session format of these symposia, and will have sessions addressing both the theoretical and applied aspects of inverse problems. We are actively seeking session organizers, so please let us know if you are interested.

The overall schedule for 2013 will be similar to that in 2012:

Sunday June 9:

15:00-17:00 Dr. Cara Brooks, tutorial on local regularization methods for solving inverse problems
Evening: Informal dinner on our own

Monday, June 10:

8:00-17:00 Oral and Poster Presentations. Lunch provided.
19:00 Symposium Banquet

Tuesday, June 11:

8:00-17:00 Oral presentations. Lunch provided.
17:00 Conclusion

Early registration is available through April 30, 2013. The early registration fee is $200 for regular registration and $150 for student registration. After April 30, the registration fee will go up to $250/$175 regular/student. The registration fee covers Monday/Tuesday continental breakfast, lunch, breaks, Monday banquet, and CD.

We are interested in a wide range of topics in engineering, agriculture, natural sciences, mathematics, statistics, etc. A written paper is not required and the papers will not be subject to copyright. The abstracts should be submitted before January 30, 2013. The program is being developed. On-line registration and submission will begin by December 1, 2012. The website is up and running:

www.inverseproblems2013.org

All the best,
Jon Woolley

Subject: Research Associate & Scientific Developers in Medical Image Analysis & Modelling - University of Sheffield, UK
From: Alejandro Frangi <a.frangi@sheffield.ac.uk>
Date: 11/17/2012

First Announcement:
Research Associate & Scientific Software Developer Openings
in image computing/modelling, Sheffield, UK

CISTIB Center for Computational Imaging & Simulation Technologies in Biomedicine

INSIGNEO Institute for in silico Medicine

The University of Sheffield

The INSIGNEO Institute for in silico Medicine is an initiative between the Faculty of Engineering and the Faculty of Medicine at the University of Sheffield and the Sheffield Teaching Hospitals Foundation Trust. INSIGNEO will realise the scientific ambition behind the Virtual Physiological Human (VPH), producing a transformational impact on healthcare. INSIGNEO performs cutting edge research in areas of fundamental and applied biomedical modelling, imaging and informatics. It will pursue the research agenda of the VPH initiative; in particular, in the first five years it will focus on the Digital Patient, In Silico Clinical Trials, and Personal Health Forecasting. It will achieve transformational impact on healthcare through multidisciplinary collaboration in strategic areas, which initially will include personalised treatments and independent, active and healthy ageing.

The Center for Computational Imaging and Simulation Technologies in Biomedicine (CISTIB) at the University of Sheffield is part of INSIGNEO. CISTIB focuses on algorithmic and applied research in the areas of computational imaging, modeling and simulation. CISTIB is working in different areas of medical image segmentation, anatomical modelling, statistical shape analysis, tissue characterisation and image-based personalized computational modelling in the cardiovascular, musculoskeletal and neurological domains. The centre hosts academic members from the University of Sheffield and collaborators at the Universitat Pompeu Fabra, Barcelona, as well as research fellows, research associates, PhD Students and scientific software developers forming a cross-disciplinary team of biomedical engineers, computer scientists, electrical engineers, mechanical engineers, physicists, and mathematicians.

The main objective of CISTIB is to contribute to the development of technologies for advanced screening, diagnostics, interventional guidance and therapy planning of cardio- and neurovascular diseases as well as growing activity in the musculo-skeletal system. Converging technologies such as computational imaging, computational physiology and virtual implantation of medical devices are integrated with state of the art multimodal acquisition systems to achieve an enhanced interpretation of human physiology and pathology and supply integrative approaches for in silico medical device customization, optimization and image-based efficacy assessment. Core technologies include spatial and temporal image segmentation, non-rigid image

registration, multimodal image fusion, pattern recognition, statistical shape analysis, multi-view geometry, image-based tissue property estimation, tissue deformation quantification, computational geometry, image-based mesh generation, computational fluid dynamics and electro-mechanical simulation.

CISTIB fosters basic and applied research and promotes technology transfer to industry. It participates to a number of national and international research projects funded by the European Commission, and holds collaborations with several national and international companies. CISTIB also very close cooperation with clinical centers at the local level and worldwide and has a strong clinically-oriented translational vision.

Call for prospective candidates

This is a pre-announcement of upcoming R&D positions. A couple of new exciting projects have been awarded to CISTIB and will start in early 2013. Both projects are funded by the European Commission and involve multi partner consortia with a combination of academic, clinical and industrial partners across Europe. Projects are related to patient-specific musculoskeletal and brain modelling in the context of paediatric diseases and dementia syndrome. We are receiving expressions of interest of prospective candidates for upcoming positions as Research Associates and Scientific Software Developers. We seek proactive and talented individuals with proven track record of publications in leading international journals and conferences. Candidates must hold a PhD degree and have expertise in the area of interest. Background or strong interest in biomedical engineering and proficiency in spoken and written English is expected.

The candidates will have to demonstrate expertise in one or various of the following areas of computational imaging and modelling:

- Non-rigid image registration: we are seeking individuals with experience in non-rigid image registration with application to brain, musculoskeletal, cardiac and vascular registration of multimodal imaging. Experience in advanced registration techniques for volumes and surfaces, diffeomorphic registration approaches, statistical deformation analysis, biomechanically-based non-rigid deformations

- Diffusion tensor image processing: we seek for candidates with experience in tensor-based image processing, diffusion tensor image analysis, connectivity analysis, fibre tracking, statistical modelling of fibre tracks, tensor processing. Strong background on mathematics and computing are required. We are seeking to characterise tissue anisotropy so as to be integrated in personalised models of brain biophysics.

- Statistical shape modelling and image analysis: we are seeking candidates with expertise in statistical shape and appearance

models interested in developing 3D and 3D+t multi object and multi resolution approaches for cardiovascular and musculoskeletal image segmentation and shape analysis.

- Image-based brain tissue elastography: we are looking for researchers with track record in soft-tissue mechanics and image analysis experience to develop novel ideas of image-based tissue elastography based on new MR-based imaging. In particular, we are interested in recovering brain tissue elastic and poroelastic properties. Methods will be generic so as to be applied to other soft-tissue domains like cardiac and vascular tissues.

- Subject-specific biophysically-based simulation of brain MRI in dementia: we are looking for researchers with experience in MR image formation and reconstruction as well as on MRI simulators. We aim at linking biophysical models of brain tissue degeneration with MRI intensity modelling through machine learning. Our aim is to understand how chronic biophysical conditions may influence image appearance in dementia patients so as to develop image-based biomarkers underpinned by mechanistic understanding of tissue degeneration.

- Modelling of circadian and lifestyle physiological changes: we are seeking an outstanding candidate with background in signal processing and modelling to develop circadian and lifestyle models of physiological signal variability based on pervasive sensing and monitoring. The goal is to utilise the derived models to establish personalised and lifestyle-specific boundary conditions for image-based patient-specific biophysical models. The ideal candidate will have substantive expertise in control theory, signal processing, system identification and physiological modelling.

- Scientific software developers: we are seeking scientific software engineers that will be providing services and expertise relating to the development of codes and software applications used by CISTIB researchers. The team works with researchers across the group to develop best practice for research programming. They will have a key role in furthering the development of the framework and clinical software prototypes based upon GIMIAS, our open source framework (www.gimias.org), and our computational imaging libraries, the CISTIB Toolkit.

We are interested in individuals with excellent communication and leadership skills, able to work in a multidisciplinary and international team and contribute to the visibility of the centre in the international scientific community. The ability to interact with other disciplines is essential. The candidate will cooperate with members of the lab working on related topics as well as with our collaborators at several academic institutions in UK and across Europe. If you feel you qualify and would be interested in applying for one of these positions, please, send your CV for an informal discussion to Prof Alejandro Frangi a.frangi@sheffield.ac.uk with CC to Dr Zeike Taylor (z.taylor@sheffield.ac.uk) and Dr Alberto Marzo

(a.marzo@sheffield.ac.uk).

Submitted by: Alejandro F. Frangi
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INSIGNEO Institute for In silico Medicine
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T: +44 114 2220153 | E: a.frangi@sheffield.ac.uk
W: www.cistib.org/afrangi

Subject: Lecturer in Inverse Problems in Manchester
From: Bill Lionheart <bill.lionheart@manchester.ac.uk>
Date: 11/25/2012

We are advertising for a permanent post of Lecturer in Applied Mathematics in Inverse Problems at Manchester. In US terminology this is a permanent faculty position. In Manchester we have a large and active School of Mathematics with active groups in, for example, numerical analysis, geometry and statistics. We have a wide range of collaborators in Manchester including the Manchester X-ray Imaging Facility which applies laboratory cone beam and synchrotron xray ct to problems in materials, NDT, biology and geology . The Biomedical Imaging Institute with a wide range of groups working in MRI and PET. We also collaborate with the Photon Science Institute, the Process Tomography Group, Petroleum Engineering, an Electron Microscope Tomography group, Astronomy, and groups in Electronic Engineering working on biomedical EIT and other electromagnetic inverse problems in medicine, biology and security screening. We have extensive industrial collaborations including biomedical, geophysical and security imaging.

The permanent members of the group are Bill Lionheart and Oliver Dorn, with Simon Cotter having recently joined the School as well. We typically have around half a dozen PhD students and two post docs and have been fortunate in securing external funding from both research councils and industry.

We are open to applications from those working in any area of theoretical or applied inverse problems that will strengthen existing areas of interest as well as extend our work in to new mathematical or application areas.

The official job advertisement can be seen at

https://www.jobs.manchester.ac.uk/DisplayJob.aspx?Jobid=20083

[Closing date is January 4th, 2013.]
Please check the advert or email me with informal queries

-- Bill Lionheart
Professor of Applied Mathematics
University of Manchester
http://www.maths.manchester.ac.uk/bl .

Subject: Postdoc positions at KU Leuven ESAT-SCD
From: Johan Suykens <Johan.Suykens@esat.kuleuven.be>
Date: 11/20/2012

The research group KU Leuven ESAT-SCD is currently offering 2 Postdoc positions (1-year, extendable) within the framework of the ERC Advanced Grant A-DATADRIVE-B http://www.esat.kuleuven.be/sista/ADB in connection to the OPTEC KU Leuven Center of Excellence: Optimization in Engineering http://www.kuleuven.be/optec/ .

The research positions relate to the following possible topics:
-1- Prior knowledge incorporation
-2- Kernels and tensors
-3- Modelling structured dynamical systems
-4- Sparsity
-5- Optimization algorithms
-6- Core models and mathematical foundations
-7- Next generation software tool

The research group ESAT-SCD http://www.esat.kuleuven.be/scd/ at the university KU Leuven Belgium provides an excellent research environment being active in the broad area of mathematical engineering, including systems and control theory, neural networks and machine learning, nonlinear systems and complex networks, optimization, signal processing, bioinformatics and biomedicine.

The research will be conducted under the supervision of Prof. Johan Suykens. Interested candidates having a solid mathematical background and PhD degree can apply for these positions by sending their CV and motivation letter to johan.suykens@esat.kuleuven.be. For further information on these positions you may contact johan.suykens@esat.kuleuven.be.

Subject: New Book
From: Rainer Kress <kress@math.uni-goettingen.de>
Date: 11/26/2012

The third edition of

D. Colton, R. Kress,
Inverse Acoustic and Electromagnetic Scattering Theory

has appeared recently, see
http://www.springer.com/mathematics/dynamical+systems/book/978-1-4614-4941-6

>From the back cover:

The inverse scattering problem is central to many areas of science and technology such as radar and sonar, medical imaging, geophysical exploration and nondestructive testing. This book is devoted to the mathematical and numerical analysis of the inverse scattering problem for acoustic and electromagnetic waves. In this third edition, new sections have been added on the linear sampling and factorization methods for solving the inverse scattering problem as well as expanded treatments of iteration methods and uniqueness theorems for the inverse obstacle problem. These additions have in turn required an expanded presentation of both transmission eigenvalues and boundary integral equations in Sobolev spaces. As in the previous editions, emphasis has been given to simplicity over generality thus providing the reader with an accessible introduction to the field of inverse scattering theory.

Submitted by: Professor Rainer Kress
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Lotzestr. 16-18, D 37083 Goettingen, Germany
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Subject: TOC, ETNA, vol. 39, 2012
From: Lothar Reichel <reichel@math.kent.edu>
Date: 12/3/2012

Electronic Transactions on Numerical Analysis 2012 Vol. 39

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

Subject: Inverse Problems, Volume 28, Number 12, December 2012
From: <custserv@iop.org>
Date: 12/8/2012

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Fast Markov chain Monte Carlo sampling for sparse Bayesian inference in high-dimensional inverse problems using L1-type priors Felix Lucka

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Subject: Table of Contents, Nonlinear Analysis: Modelling and Control
From: Romas Baronas <romas.baronas@mif.vu.lt>
Date: 11/29/2012

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For a paper submission, please refer to http://www.mii.lt/NA/

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

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Subject: Top articles from AIMS journal
Inverse Problems and Imaging access free
From: Liwei Ning <newsletter@aimsciences.org>
Date: 12/7/2012 6:06 PM

The American Institute of Mathematical Sciences offers selected articles from the journal Inverse Problems and Imaging access free until January 1, 2013.

http://www.aimsciences.org/journals/home.jsp?journalID=11

Microlocal sequential regularization in imaging
Daniela Calvetti and Erkki Somersalo

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Carlos E. Kenig, Mikko Salo and Gunther Uhlmann

Enjoy Reading,
Lassi Paivarinta
Editor-in-Chief
------- end -------