IPNet Digest Volume 20, Number 08 September 30, 2013

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

Today's Topics:

Conference: Inverse Problems: Modeling and Simulation Conference: Advances in Math. and Num. Analysis of Inverse Problems Conference: Computational and Experimental Biomedical Sciences Conference: Copper Mountain Conference on Iterative Methods Conference: Spectral and High-Order Methods Jobs: Four Posdoctoral Positions in Statistical Inverse Problems Table of Contents: Journal of Inverse and Ill-Posed Problems Table of Contents: Inverse Problems in Science and Engineering Table of Contents: Inverse Problems Table of Contents: Inverse Problems Table of Contents: Inverse Problems

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

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

Subject: Inverse Problems: Modeling and Simulation From: Alemdar Hasanov <alemdar.hasanoglu@izmir.edu.tr> Date: 9/5/2013

THE SEVENTH INTERNATIONAL CONFERENCE "INVERSE PROBLEMS: MODELING & SIMULATION"

http://www.ipms-conference.org

Lykia World Ölüdeniz Hotel, Fethiye - Turkey

Following the success of previous IPMS Conferences The Seventh International Conference "Inverse Problems: Modeling and Simulation" will be held during May 26 – 31, 2014, in one of the distinguished hotels of the Mediterranean Region, in the famous Lykia World Ölüdeniz Hotel, Fethiye, Turkey. The objective of this meeting 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 be held under the auspices of Izmir University and also the leading international journals "Inverse Problems", "Inverse Problems and Imaging", "Journal of Inverse and Ill-Posed Problems" and "Inverse Problems in Science and Engineering". 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 challenges of inverse problems in current interdisciplinary sciences.

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

Co-Chairs: H.T. Banks, S.I. Kabanikhin, D. Lesnic, A.K. Louis

International Program Committee:

G. Dulikravich, A. El Badia, W. Freeden, D. Gintides, A. Grünbaum, U. Hämarik, D.N. Hào, B. Hofmann, V. Isakov, A. A. Khan, F.J. Küçük, P. Maass, M. Z. Nashed, A. Neubauer, B. Nilsson, H.R.B. Orlande, L. Päivärinta, E.T. Quinto, V. G. Romanov, O. Scherzer, M. Slodicka, V. Vasin, A. Yagola, V. Yakhno, F. Zirilli

Main Topics: *Inverse Problems in: Electromagnetism, Tomography; Mechanics, Material Science, Heat and Mass Transfer, Chemistry, Biology, Medicine, Economics, Acoustics, Geophysics; Learning Theory; *Imaging; *Statistical and Probabilistic Methods; *Numerical Inversion Methods; *Identification in Nonlinear Differential Equations; *Regularization Methods;*Optimization; *Inverse Scattering and Time Reversal; *Determination of Boundary and Initial Conditions; *Computational; *Identifiability Concepts; *Spectral Inversion; *Data Analysis

Plenary Speakers

Alexander Bukhgeym, Inverse problems and integral geometry, Wichita State University, USA

Jens Flemming, Regularization of autoconvolution equations and other ill-posed problems of quadratic sturcture, Chemnitz University of Technology, Germany

Michael V. Klibanov, Approximate global convergence for coefficient inverse problems, University of North Carolina at Charlotte, USA

Roman Novikov, Inverse problems of quantum and acoustic scattering at fixed frequency, Ecole Polytechnique, France

Announced Minisymposia:

M1. Recent Developments in Inverse Problems and Tomography (Dedicated to the 65th birthday of Professor Alfred K. Louis)

M2. Inverse Problems in Wave Phenomena, in Financial and Actuarial Applications (Dedicated to the 65th birthday of Professor Francesco Zirilli)

M3. Recent Developments in Inverse Coefficient and Source Problems (Dedicated to the 60th birthday of Professor Alemdar Hasanoglu Hasanov)

M4. Inverse Problems in Guides (Organizer: Y.V. Shestopalov, Karlstad University)

M5. Inverse Problems in Nonlinear PDEs (Organizer: M. Slodicka, Ghent University)

M6. Recent Developments in Regularization Techniques: Theory and Applications (Organizers: B. Hofmann, Chemnitz University of Technology; A. Neubauer, University of Linz)

M7. Regularization and parameter choice (Organizers: U. Hämarik, T. Raus, University of Tartu; B. Kaltenbacher, Klagenfurt University)

M8. Inverse Source Problems (Organizers: A. El Badia, Univ. of Technology of Compiegne; D.Lesnic, University of Leeds)

M9. Analytical and Numerical Methods for InverseProblems (Organizer: M. V. Klibanov, University of North Carolina at Charlotte)

M10. Inverse Problems and Imaging (Dedicated to the 60th anniversary of Professor Lassi Päivärinta)

M11: Inverse and Data Assimilation Problems in Geophysical Hydrodynamics: Theory and Applications (Organizers: V. Shutyaev, V. Agoshkov, V. Zalesny, Institute of Numerical Mathematics, RAS, Russia; R. Potthast, German Meteorogical Service DWD, Germany and University of Reading, UK)

M12: Multidimensional Ill-Posed Problems (Organizer: A. Yagola, Moscow State University, Russia)

M13: Inverse Problems in Tomography and Related Areas (Organizers: P. Maass, University of Bremen, Germany; E. T. Quinto, Tufts University, USA, todd.quinto@tufts.edu)

M14: Inverse Problems in Partial Differential Equations and Variational Inequalities (Organizers: Akhtar A. Khan, Rochester Institute of Technology, USA: M. Sama, Universidad Nacional de Educacin a Distancia Madrid, Spain; C. Tammer, Martin-Luther-University of Halle-Wittenberg, Germany; F. Raciti, University of Catania, Italy)

Contact Address: Pinar Baris, (Ms), Department of Mathematics and Computer Sciences, Izmir University, Izmir – TURKEY;

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Submitted by: Alemdar Hasanoglu (Hasanov) Ph.D, Doctor of Physical and Mathematical Sciences Home page: http://www.izmir.edu.tr/ahasanoglu/ Department of Mathematics and Computer Science Izmir University Gursel Aksel Bulvari, No:14, 35350, Uckuyular, Izmir - TURKEY

Subject: Conference "Advances in Mathematical and Numerical Analysis of Inverse Problems" From: "michel cristofol (AMU)" <michel.cristofol@univ-amu.fr> Date: 9/24/2013

The conference "Advances in Mathematical and Numerical Analysis of Inverse Problems" will be held at CIRM in Marseille, France from May 19th to 23th, 2014

See the web site of the conference :

http://invmars14.sciencesconf.org/

or

http://www.cirm.univ-mrs.fr/index.html/spip.php?rubrique2&EX=info_rencontre&annee=2014&id_renc=1038

Submitted by: Michel Cristofol

Subject: ICCEBS 2013 - Announce & Invitation From: <iccebs@fe.up.pt> Date: 9/6/2013

Dear Colleague,

We are pleased to announce the International Conference on Computational and Experimental Biomedical Sciences (ICCEBS2013 www.fe.up.pt/~iccebs) in Ponta Delgada, S Miguel Island, Azores, October 20-22, 2013.

The use of more robust, affordable and efficient techniques and technologies with application in Biomedical Sciences is presently a subject of huge interest and demand, and ICCEBS is intended to be a privileged discussion forum to define their key stakeholders.

ICCEBS will bring together researchers from around the world representing several scientific fields related to Biomedical Sciences, including Engineering, Medicine, Biomechanics, Bioengineering, Biomaterials, Experimental Mechanics, Computer Sciences, Computational Mathematics, Hardware Developers and Manufactures, Electronic and Instrumentation and Materials Science.

TOPICS

In ICCEBS2013 will be considered topics of (not limited to):

- Analysis and diagnosis;
- Applications in medicine;
- Applications in veterinary;
- Artificial organs;
- Bioengineering;
- Biofluid;
- Biological microelectromechanical systems, Labs-on-chips and Life-chips;
- Biomaterials;
- Biomedical devices;
- Computational bio- imaging and visualization;
- Computational methods;
- Computer aided diagnosis;
- Computer assisted surgery;
- Experimental mechanics;
- Implantology;
- Medical robotics;
- Minimally invasive devices and techniques;
- Molecular and Cellular Biomechanics;
- Numeral methods;
- Prosthesis and orthosis;
- Rehabilitation;
- ImagingSignal processing and analysis;
- Simulation;
- Software development;
- Sustainability;
- Technical aids;
- Telemedicine;
- Tissue engineering;
- Virtual reality.

Due to your very interesting and key research activities, we would like to invite you to participate in ICCEBS2013 and share your expertize. Your contribution is welcomed, and we would be honored if you could accept this invitation.

INVITED KEYNOTES

"The Biomechanics Detective & Clues to Expensive Unintentional Injuries" James A. Ashton-Miller - University of Michigan, USA

"Experimental and numerical microstructural modelling of vascular tissues" Estefanía Peña Baquedano - Universidad de Zaragoza, Spain

"Modelling flow induced ATP/ADP concentration transport in patient-specific arteries"

Perumal Nithiarasu - Swansea University, UK

DATES

- Deadline for one page abstract submission: 30th September 2013;
- Authors' notification: 5th October 2013;
- Deadline for full papers (not mandatory): 15th January 2014.

PUBLICATIONS

- Abstracts: All accepted abstracts will be distributed in a USB pen.

- Full Papers (not mandatory): The proceedings book of ICCEBS2013, with all full papers, will be published by Springer under the Book Series Lecture Notes in Computational Vision and Biomechanics (www.springer.com/series/8910).

The organizers will prepare the publishing of a book with 20 invited works from the most important ones presented in ICCEBS2013 (extended versions). The book will be published by Springer under the Book Series Lecture Notes in Computational Vision and Biomechanics (www.springer.com/series/8910).
Additionally, the organizers will encourage the submission of extended versions of the accepted works to related International Journals; particularly, for special journal issues dedicated to ICCEBS2013. Two already confirmed possibilities are: Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization (www.tandfonline.com/loi/tciv20) and International Journal for Computational Vision and Biomechanics

(www.fe.up.pt/~ijcvb).

AWARD

A best work prize will be given by the conference organizers to the best work presented in ICCEBS2013.

Best wishes,

João Manuel R. S. Tavares, Universidade do Porto, Portugal (tavares@fe.up.pt) Renato Natal Jorge, Universidade do Porto, Portugal (rnatal@fe.up.pt) (ICCEBS co-chairs)

PS. For more information, you are invited to visit the conference webpage at: www.fe.up.pt/~iccebs.

Subject: 2014 Copper Mountain Conference on Iterative Methods From: Annette Anthony Date: 9/20/2013

ANNOUNCING:

The Thirteenth Copper Mountain Conference on Iterative Methods April 6 – April 11, 2014 Copper Mountain, Colorado, USA

ORGANIZED BY:

Front Range Scientific Computations, Inc.

CO-ORGANIZED BY:

Sandia National Laboratory The University of Colorado Applied Math Department Emory University

IN CO-OPERATON WITH:

The Society for Industrial and Applied Mathematics

CONFERENCE DEADLINES:

Student Competition Papers	January 10, 2014
Author Abstracts	January 17, 2014
Early Registration	March 6, 2014
Guaranteed Lodging	March 4, 2014

HIGHLIGHTED TOPICS:

Stochastic PDEs and Uncertainty Quantification Scale-free/Small World Graphs, Page Rank and Markov Chains Multigrid and Other Iterative Schemes on GPU & Multicore Architectures Inverse Problems and Regularization Optimization of Complex Systems Nonlinear Solution Methods, Nonlinear Least-Squares Multigrid All-At-Once and Block Approaches to PDE Systems Coupled Multi-Physics Problems Time-Parallel Algorithms Krylov Accelerators Hybrid Direct-Iterative Linear Solvers Iterative Methods in Challenging Applications (e.g., Electromagnetics, Energy, Envronmental, Data Assimilation, MHD, Neutronics, Transport/Reaction, Chemical Engineering)

IMPORTANT FEATURES:

Student Paper Competition. Travel and lodging assistance will be awarded to students and new PhDs judged to have submitted the best research papers

Workshops - Informal Topical Discussions

FURTHER INFORMATION:

Please access our website at:

http://grandmaster.colorado.edu/~copper/2014/

or contact the conference coordinator:

Annette Anthony Front Range Scientific Computations copper@colorado.edu (480) 332-2026

Subject: Conference Announcement: ICOSAHOM 2014 From: Yekaterina Epshteyn <epshteyn@math.utah.edu> Date: 9/17/2013

ICOSAHOM'14 International Conference on Spectral and High-Order Methods 2014 June 23-27 2014, Salt Lake City, Utah, USA http://www.icosahom2014.org/

First Call for Mini-Symposium Proposal: Submission Deadline December 15 2013

The 10th International Conference on Spectral and High-Order Methods, will be hosted by the University of Utah, Salt Lake City, Utah, on June 23-June 27, 2014. The purpose of this conference series is to bring together researchers and practitioners with an interest in the theoretical, computational and applied aspects of high-order and spectral methods for the solution of differential equations.

Plenary speakers:

Susanne Brenner, Louisiana State Univ., USA Martin Costabel, Univ. of Rennes 1, France Sigal Gottlieb, Univ. of Massachusetts, Dartmouth, USA Thomas Hagstrom, Southern Methodist Univ., USA Ricardo Nochetto, Univ. of Maryland, USA Per-Olof Persson, Univ. of California, Berkeley, USA Jennifer Ryan, Univ. of East Anglia, UK Thomas Wihler, Bern Univ., Switzerland

All interested participants are encouraged to submit a mini-symposium proposal. For submission guidelines as well as additional conference information, please visit the conference webpage: http://www.icosahom2014.org/

It is anticipated that partial financial support will be available for students and junior researchers. Information regarding application will be posted on the website of the conference.

If you have questions, please email us at icosahom2014-questions@sci.utah.edu

We look forward to seeing you in Salt Lake City in June 2014!

Yekaterina Epshteyn and Rodrigo Platte on behalf of the organizing committee.

Subject: Four Posdoctoral Positions in Statistical Inverse Problems From: andrew stuart <andrewmstuart@gmail.com> Date: 9/14/2013

Four Posdoctoral Positions in Statistical Inverse Problems Enabling Quantification of Uncertainty for Inverse Problems (EQUIP) As part of the EPSRC funded EQUIP Programme Grant, Warwick University and Heriot-Watt University are advertising four postdoctoral positions in statistical inverse problems. Three posts will be based at the University of Warwick and another post at the University of Heriot-Watt. Each will have a two year duration, and may start at a mutually agreed date in the calendar year 2014. EQUIP is led by Andrew Stuart (Mathematics, Warwick) and comprises Mike Christie (Petroleum Engineering, Heriot-Watt), Mark Girolami (Statistical Science, currently UCL but moving to Warwick) and Gareth Roberts (Statistics, Warwick). Applicants with expertise in the areas of inverse problems, numerical analysis, computational partial differential equations, computational and theoretical statistics and subsurface geophysics are encouraged to apply.

For details about EQUIP, and links to the application process, see:

http://www2.warwick.ac.uk/fac/sci/maths/research/grants/equip

Submitted by: Andrew Stuart a.m.stuart@warwick.ac.uk http://www2.warwick.ac.uk/fac/sci/maths/people/staff/andrew_stuart/

Subject: Table of Contents 'Journal of Inverse and Ill-Posed Problems' From: <noreply@degruyter.com> Date: 9/10/2013

Journal of Inverse and Ill-Posed Problems August Vol. 21, Issue 4 Table of Contents

Carleman estimates for global uniqueness, stability and numerical methods for coefficient inverse problems Michael V. Klibanov

Two-parameter discrepancy principle for combined projection and Tikhonov regularization of ill-posed problems Teresa Regin'ska

A source identification problem in linear parabolic problems: A semigroup approach Marián Slodicka

Online: http://www.degruyter.com/view/j/jip.2013.21.issue-4/issue-files/jip.2013.21.issue-4.xml

Subject: Table of Contents for IPSE in IPNet Digest From: "Gray, Helen" <Helen.Gray@tandf.co.uk> Date: 9/16/2013

The latest issue of Inverse Problems in Science and Engineering (Volume 21, ISsue 6) is now available online at: http://www.tandfonline.com/toc/gipe20/current

We are pleased to present in this issue a special section of selected papers from the 2nd International Symposium on Inverse Problems of Mechanics of Structures and Materials-IPM 2011, 27-30 April 2011, Rzeszòw-Sieniawa, Poland.

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Foreword Zenon Waszczyszyn

Passive electric potential CT method using piezoelectric film for identification of defects Shiro Kubo, Takahide Sakagami & Seiji Ioka

Damage identification in multifield materials using neural networks Gabriel Hattori & Andrés Sáez

Soft computing methods in the analysis of elastic wave signals and damage identification Piotr Nazarko

Hybrid artificial immune system in identification of room acoustic properties A. Poteralski, M. Szczepanik, J. Ptaszny, W. Kus & T. Burczynski

Solution of electromagnetic inverse medium scattering problems by the adaptive finite element method and perfectly matched layer Waldemar Rachowicz

Numerical modelling of slumps under highways located on a mining damage area, based on experimental measurements Slawomir Milewski & Janusz Orkisz

Inverse source problem in a one-dimensional evolution linear transport equation with spatially varying coefficients: application to surface water pollution Adel Hamdi & Imed Mahfoudhi

Reconstruction for the spherically symmetric speed of sound from nodal data Yu Ping Wang, Zhen You Huang & Chuan Fu Yang

A bivariate Gaussian function approach for inverse cracks identification of forced-vibrating bridge decks Myung-Hyun Noh & Sang-Youl Lee

A new multimodal cortical source imaging algorithm for integrating simultaneously recorded EEG and MEG Jong-Ho Choi, Young-Jin Jung, Hyun-Kyo Jung & Chang-Hwan Im

Regularization of an ill-posed problem in corneal topography L Plociniczak & W Okrasinski

Submitted by: Helen Gray, Publishing Editor Mathematics, Statistics & History of Science Taylor & Francis Group. 4 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN, UK. Tel: +44 (20) 755 19435 Web: www.tandfonline.com e-mail: helen.gray@tandf.co.uk

Subject: Inverse Problems, Volume 29, Number 10, October 2013 From: <custserv@iop.org> Date: 9/18/2013

Inverse Problems October 2013 Volume 29, Number 10 Table of Contents

Transmission Eigenvalues

Transmission eigenvalues Fioralba Cakoni and Houssem Haddar

Spectral analysis of the interior transmission eigenvalue problem Luc Robbiano

Completeness of generalized transmission eigenstates Eemeli Blåsten and Lassi Päivärinta

Applications of elliptic operator theory to the isotropic interior transmission eigenvalue problem E Lakshtanov and B Vainberg

Strongly oscillating singularities for the interior transmission eigenvalue problem Anne-Sophie Bonnet-Ben Dhia and Lucas Chesnel

Transmission eigenvalues for Maxwell's equations in isotropic absorbing media with frequency-dependent electrical parameters Fabrice Delbary

Transmission eigenvalues for a class of non-compactly supported potentials Esa V Vesalainen

Transmission eigenvalues for dielectric objects on a perfect conductor Peter Monk and Virginia Selgas

Complex eigenvalues and the inverse spectral problem for transmission eigenvalues David Colton, and Yuk-J Leung

Transmission eigenvalues in one dimension John Sylvester

A computational method for the inverse transmission eigenvalue problem Drossos Gintides, and Nikolaos Pallikarakis

The inside–outside duality for scattering problems by inhomogeneous media Andreas Kirsch, and Armin Lechleiter

A numerical method to compute interior transmission eigenvalues Andreas Kleefeld

Computation of Maxwell's transmission eigenvalues and its applications in inverse medium problems Jiguang Sun and Liwei Xu

Asymptotic expansions for transmission eigenvalues for media with small inhomogeneities Fioralba Cakoni and Shari Moskow

Linear sampling method for the heat equation with inclusions Gen Nakamura and Haibing Wang

Transmission eigenvalues and thermoacoustic tomography David Finch and Kyle S Hickmann

Online: http://iopscience.iop.org/0266-5611/29/10/email-alert/1137908735

Subject: New IPI vol. 7, no. 3 2013 August issue is now available online From: Susan Cummins <newsletter@aimsciences.org> Date: 9/23/2013

Inverse Problems and Imaging August 2013 Volume 7, Number 3

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Preface

Raymond H. Chan, Thomas Y. Hou, Hong-Kai Zhao, Haomin Zhou, and Jun Zou

An anisotropic perfectly matched layer method for Helmholtz scattering problems with discontinuous wave number Zhiming Chen, Chao Liang, and Xueshuang Xiang

Nonlinear stability of the implicit-explicit methods for the Allen-Cahn equation Xinlong Feng, Huailing Song, Tao Tang, and Jiang Yang

Non-Gaussian dynamics of a tumor growth system with immunization Mengli Hao, Ting Gao, Jinqiao Duan, and Wei Xu

Nonstationary iterated thresholding algorithms for image deblurring Jie Huang, Marco Donatelli, and Raymond H. Chan

A local mesh method for solving PDEs on point clouds Rongjie Lai, Jiang Liang, and Hong-Kai Zhao

A direct sampling method for inverse scattering using far-field data Jingzhi Li and Jun Zou

Wavelet frame based color image demosaicing Jingwei Liang, Jia Li, Zuowei Shen, and Xiaoqun Zhang

Recent results on lower bounds of eigenvalue problems by nonconforming finite element methods Qun Lin and Hehu Xie

How to explore the patch space Jose-Luis Lisani, Antoni Buades, and Jean-Michel Morel

Video stabilization of atmospheric turbulence distortion Yifei Lou, Sung Ha Kang, Stefano Soatto, and Andrea L. Bertozzi

A conformal approach for surface inpainting Lok Ming Lui, Chengfeng Wen, and Xianfeng Gu

Multi-view foreground segmentation via fourth order tensor learning Michael K. Ng, Chi-Pan Tam, and Fan Wang

Statistical ranking using the 11-norm on graphs Braxton Osting, Jerome Darbon, and Stanley Osher

A texture model based on a concentration of measure Hayden Schaeffer, John Garnett, and Luminita A. Vese

3D adaptive finite element method for a phase field model for the moving contact line problems Yi Shi, Kai Bao, and Xiao-Ping Wang

Three steps on an open road Gilbert Strang

Energy conserving local discontinuous Galerkin methods for wave propagation problems Yulong Xing, Ching-Shan Chou, and Chi-Wang Shu The single-grid multilevel method and its applications Jinchao Xu

General convergent expectation maximization (EM)-type algorithms for image reconstruction Ming Yan, Alex A. T. Bui, Jason Cong, and Luminita A. Vese

Fast total variation wavelet inpainting via approximated primal-dual hybrid gradient algorithm Xiaojing Ye and Haomin Zhou

The Gaussian beam method for the wigner equation with discontinuous potentials Dongsheng Yin, Min Tang, and Shi Jin

A fast modified Newton's method for curvature based denoising of 1D signals Andy M. Yip and Wei Zhu

Four color theorem and convex relaxation for image segmentation with any number of regions Ruiliang Zhang, Xavier Bresson, Tony F. Chan, and Xue-Cheng Tai

Online: http://aimsciences.org/journals/contentsListnew.jsp?pubID=621

Submitted by: Susan Cummins Publication Editor, American Institute of Mathematical Sciences Springfield, MO 65801 USA Phone: 417-987-6421