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IPNet Digest Volume 11, Number 01 January 31, 2004

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.mth.msu.edu/ipnet
Mail to ipnet-request@math.msu.edu

From: Bill Lionheart <Bill.Lionheart@umist.ac.uk>
Subject: British one-day Workshop on Inverse Problems Workshop, March 8th 2004
Date: Wed, 14 Jan 2004

The British Inverse Problems Society will be holding the next

British one-day Workshop on Inverse Problems Workshop
(supported by the London Mathematical Society)

on Monday, March 8th 2004, at the Department of Mathematics, University of
Manchester Institute of Science and Technology (UMIST). The programme will be
announced on the web site http://www.ma.umist.ac.uk/bl/ukipws .

Bill Lionheart
Department of Mathematics,
UMIST Bill.Lionheart@umist.ac.uk

From: Connie Young <cyoung@siam.org>
Subject: SIAM Conference on Imaging Science (IS04)
Date: Thu, 08 Jan 2004

SIAM Conference on Imaging Science (IS04)
May 3-5, 2004
Marriott City Center, Salt Lake City, Utah
Sponsored by the SIAM Activity Group on Imaging Science

The program schedule is now available http://www.siam.org/meetings/is04/.

Sponsored by the SIAM Activity Group on Imaging Science (SIAG/IS)

ABOUT THE CONFERENCE
Current developments in the technology of imaging have led to an explosive growth in the interdisciplinary field of imaging science. With the advent of new devices capable of seeing objects and structures not previously imagined, the reach of science and medicine has been extended in a multitude of different ways. The impact of this technology has been to generate new challenges associated with the problems of formation, acquisition, compression, transmission, and analysis of images. By their very nature, these challenges cut across the disciplines of physics, engineering, mathematics, biology, medicine, and statistics. While the primary purpose of this conference is to focus on mathematical issues, the biomedical aspects of imaging will also play an important role.

PROGRAM COMMITTEE CO-CHAIRS
Chris Johnson, University of Utah
Ross Whitaker, University of Utah

INVITED SPEAKERS (partial list)
Peter Basser, National Institutes of Health
Gadiel Seroussi, Hewlett Packard
Albert Tarantola, Institut de Physique du Globe de Paris, France
Arthur Toga, University of California, Los Angeles
Brian Wandell, Stanford University

CONFERENCE THEMES
* Image acquisition
* Image reconstruction and restoration
* Image storage, compression, and retrieval
* Image coding and transmission
* PDEs in image filtering and processing
* Image registration and warping
* Image modeling and analysis
* Statistical aspects of imaging
* Wavelets and multiscale analysis
* Multidimensional imaging sciences
* Inverse problems in imaging sciences
* Mathematics of visualization
* Biomedical imaging
* Applications

http://www.siam.org/meetings/is04/

From: Luciano Pandolfi <luciano.pandolfi@polito.it>
Subject: IFIP TC 7 Conference on System Modeling and Optimization
Date: Fri, 16 Jan 2004

The 22nd IFIP TC 7 Conference on System Modeling and Optimization

will be held in Turin, Italy, July 18-22, 2005. Regularly updated information on the conference (invited sessions, deadlines etc.) can be found in the WEB page of the conference
http://www.polito.it/ifip2005

A short description of the topics of the conference is below. Interested people are invited to submit abstracts at the address of the conference

ifip2005@polito.it
Information on the format required for the abstract can be found at the web page of the conference.

THEMES AND SCOPE OF THE CONFERENCE
Mathematical models methods and algorithms in optimization, identification, simulation and their applications: Optimization; optimization with PDE constraints; structural systems optimization; algorithms for linear and nonlinear programming; stochastic optimization; control and game theory; combinatorial and discrete optimization. Identification and inverse problems; fault detection; shape identification. Complex systems; stability and sensitivity analysis; neural networks; fractal and chaos; reliability. computational techniques in distributed systems and in information processing environments; transmission of information in complex systems; data base design. Applications of optimization techniques and of computational methods to scientific and technological areas (such as medicine, biology, economics, finances, aerospace and aeronautics etc.) are very welcome.

Local organizing committee: L. Pandolfi (chair), F. Fagnani (cochair), A. Bacciotti, F. Ceragioli

Submitted by: Luciano Pandolfi
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http://calvino.polito.it/~lucipan/
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10129 Torino, ITALY

From: "Theodore Simos" <tsimos@mail.ariadne-t.gr>
Subject: Intl. Conference of Numerical Analysis and Applied Mathematics
Date: Sat, 06 Dec 2003

FIRST ANNOUNCEMENT AND CALL FOR PAPERS

International Conference of Numerical Analysis and Applied Mathematics 2004 (ICNAAM 2004)
Chalkis , Greece , 10-14 September 2004.

URL address: http://www.uop.gr/~icnaam/

The aim of ICNAAM 2004 is to bring together leading scientists of the international Numerical & Applied Mathematics community and to attract original research papers of very high quality. The topics to be covered include (but are not limited to): All the research areas of Numerical Analysis and Computational Mathematics and all the research areas of Applied Mathematics (see http://www.uop.gr/~icnaam/res8/aimscope.htm).

Chairmen and Organisers
Dr. T.E. Simos, Active Member of the European Academy of Sciences and Arts and Corresponding Member of the European Academy of Sciences, Department of Computer Science and Technology, Faculty of Sciences and Technology, University of Peloponnese, Greece and Dr. Ch. Tsitouras , Technological Educational Institute of Chalkis, Greece.

Vice-Chairman:
Dr. G. Psihoyios, Anglia Polytechnic University , Cambridge , UK.

Scientific Committee
Prof. G. vanden Berghe, Belgium, Prof. P. E. Bjorstad, Norway, Prof. J. Cash, UK, Prof. R. Cools, Belgium, Prof. A. Cuyt, Belgium, Prof. B. Fischer, Germany, Prof. R. W. Freund, USA, Prof. I. Gladwell, USA, Prof. B. Hendrickson, USA, Prof. A. Klar, Germany, Prof. W. F. Mitchell, USA, Dr. T.E. Simos, Greece, Prof. W.Sproessig, Germany, Dr. Ch. Tsitouras, Greece, Prof. G. Alistair Watson, UK.

Proceedings: Extended abstracts will be published in a Special Volume of Wiley-VCH. The journals in which selected Proceedings of ICNAAM 2004 will be published are: (i) Applied Numerical Analysis and Computational Mathematics (ANACM) (Wiley-VCH). This is the official journal of European Academy of Computational Methods in Sciences and Engineering and (ii) Mathematical Methods in the Applied Sciences (Wiley & Sons).

Call for Sessions Workshops and Minisymposia: We invite proposals for Sessions, Workshops or Minisymposia. Each session should have at least 6 paper presentations. For this session the organiser or his team can have at most 2 papers. Each workshop or minisymposium should have at least 8 paper presentations. For this workshop or minisymposium the organiser or his team can have at most 2 papers. The Session, Workshop or Minisymposium organizer will be responsible for advertising the workshop, reviewing and selecting the papers. The Session organisers will have free registration in ICNAAM 2004. The Workshop or Minisymposium organizers will have free registration and a participation in the Accommodation. Papers accepted for Sessions, Workshops or Minisymposia will be published in the Proceedings of ICNAAM 2004. After the Conference the papers presented at the Sessions, Workshops or Minisymposia will be considered for publication in the appropriate journals.

Submission of Proposals
Proposals to organize Sessions, Workshops or Minisymposia should include the following information: Title of the workshop name, affiliation, mailing address and e-mail address of the proposer(s) description of the topic of the session (not exceeding 100 words) a short description on how the session will be advertised. The deadline for proposal submission is January 15, 2004. Please send your proposal to icnaam@uop.gr

Contact information: Secretary ICNAAM, E-mail: icnaam@uop.gr, Postal Address: 26 Menelaou Street, Amfithea Paleon Faliron, GR-175 64, Athens, Greece, Fax: +30210 94 20 091

From: Connie Young <cyoung@siam.org>
Subject: 2004 SIAM Annual Meeting - Submission Deadlines
Date: Mon, 08 Dec 2003

The submission deadlines for the 2004 SIAM Annual Meeting are fast approaching!
Go to http://www.siam.org/meetings/AN04/ to submit.

MEETING DATES AND LOCATION: July 12-16, 2004, Portland, Oregon

SUBMISSION DEADLINES
Minisymposium proposals: December 16, 2003
Minisymposium abstracts and contributed abstracts: January 13, 2004
Contributed papers in lecture (or poster) format: January 13, 2004

INVITED PLENARY SPEAKERS (partial list)
Alexandre Chorin, University of California, Berkeley
Leah Edelstein-Keshet*, University of British Columbia, Canada
Tom Grandine, The Boeing Company
Yannis Kevrekidis, Princeton University
George Oster*, University of California, Berkeley

*Joint speakers with the SIAM Life Sciences Conference
http://www.siam.org/meetings/LS04/

THE I.E. BLOCK COMMUNITY LECTURER
Michael B. Ray, ExxonMobil Upstream Research Company
"Mathematical Challenges in the Upstream Energy Business"

ORGANIZING COMMITTEE
John Bell (Co-chair), Lawrence Berkeley National Laboratory
Steve Cox, Rice University
Clint Dawson, University of Texas, Austin
John Dennis (Co-chair), Rice University
George Karniadakis, Brown University
Dianne O'Leary, University of Maryland, College Park
Linda Petzold, University of California, Santa Barbara
Mary Pugh, University of Toronto, Canada
Greg Shubin, The Boeing Company

For more information visit http://www.siam.org/meetings/AN04/

From: "Darrell Ross" <ross@siam.org>
Subject: 2004 SIAM Conference on Partial Differential Equations (PD04)
Date: Tue, 20 Jan 2004

SIAM Conference on Partial Differential Equations
December 6-8, 2004
Houston at Post Oak Doubletree Hotel
Houston, Texas
http://www.siam.org/meetings/pd04/

The SIAM Conference on Partial Differential Equations is now accepting abstracts!

This is the first conference organized by the recently formed SIAM Activities Group on Analysis of Partial Differential Equations. There will be nine, one hour, plenary lectures, as well as minisymposia and contributed talks.

All researchers in Partial Differential Equations are encouraged to participate, especially those whose interests lie at the intersection of Analysis and Applications. Younger researchers are especially welcome to participate. Limited funding is available for graduate students and recent PhDs.

The Call for Presentations for this conference is now available at:

http://www.siam.org/meetings/pd04/

For additional information, contact SIAM Conference Department at meetings@siam.org

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From: ida <ida.tassens@esat.kuleuven.ac.be>
Subject: MTSN 2004 Update
Date: Thu, 18 Dec 2003

16th International Symposium on Mathematical Theory of Networks and Systems(MTNS 2004)
Katholieke Universiteit Leuven (K.U.Leuven-Belgium),
July 5-9, 2004

http://www.mtns2004.be
(!! on-line registration and submission possible !!)

MTNS is one of the main conferences in the general area of mathematical systems and control theory. The symposium is interdisciplinary and is aimed at mathematicians, engineers and researchers interested in any aspect of systems theory. MTNS is usually organized every two years and traditionally covers areas involving a wide range of research directions in mathematical systems, networks and control theory.

MTNS 2004 will be held on the campus of the Katholieke Universiteit Leuven (K.U.Leuven - Belgium) in July 2004. The symposium program will include plenary and semi-plenary lectures, mini-symposia, mini-courses, contributed papers.

More information: info@mtns2004.be or at the conference secretariat :

Ida Tassens, ida.tassens@esat.kuleuven.ac.be
Bart Motmans, bart.motmans@esat.kuleuven.ac.be
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Kasteelpark Arenberg 10 B-3001 Leuven Belgium
T: +32-(0)16321709 F: +32-(0)16321970

Bart De Moor, K.U.Leuven (Chair)
Vincent Blondel, U.C.L (co-Chair)
Paul Van Dooren, U.C.L. (co-Chair)
Jan Willems, K.U.Leuven (co-Chair)

From: Roel Snieder <rsnieder@mines.edu>
Subject: Summer School on Mathematical Geophysics and Uncertainty in Earth Models
Date: Thu, 22 Jan 2004

Announcement

!! REGISTRATION DEADLINE, February 6, 2004 !!

Summer School on Mathematical Geophysics and Uncertainty in Earth Models

June 14-25, 2004
Colorado School of Mines, Golden, Colorado

Scope of the School

The goal of this interdisciplinary school is to expose graduate students and researchers from mathematics and geophysics to key issues in mathematical modeling and uncertainty analysis in geophysics. The program includes tutorials as well as presentations on current

research that are of academic and industrial interest.

The school will also define collaborative research directions between mathematics and the geosciences in the quantification of uncertainty in geophysical imaging and inversion. The summer school is financially supported by the program for Collaborations in Mathematical Geosciences (CMG) of the National Science Foundation.

Topics of the School

Lectures on inverse problems, statistical inference, optimization, numerical modeling in geophysics, wave propagation, seismological imaging, and reservoir simulation. Presentations include current research in regularization of inverse problems, theory and applications of optimization, uncertainty analysis in seismological imaging, and physical constraints on inverse problems. A visit to the visualization center of the National Center of Atmospheric Research and a local geological field trip are part of the program.

Target Audience

The school will bring together graduate students, post-docs, and senior researchers in mathematics or the geosciences. For logistic reasons the number of participants is limited. About 40 students may receive financial support to attend the school. Speakers will be by invitation only. There will be an opportunity to present research through poster presentations.

Selection criteria

Because of logistic reasons, the number of participants is limited. Priority is given to students or researchers that display an interest in interdisciplinary work as evidenced by current research or by a statement of research goals. In the admission to the school, and the selection for financial support, the organizing committee will pay special attention to the participation of underrepresented groups as defined by race, gender, or other criteria.

Organizing Committee

- Roel Snieder (Colorado School of Mines)
- Luis Tenorio (Colorado School of Mines)
- Eldad Haber (Emory University)
- Alberto Malinverno (Schlumberger-Doll Research)
- Mike Ritzwoller (University of Colorado at Boulder)

Speakers

- Brian Borchers (New Mexico Tech)
- Chris Farmer (Schlumberger Abingdon Technology Centre)
- Omar Ghattas (Carnegie Mellon University)
- Alexandra Newman (Colorado School of Mines)
- Doug Oldenburg (University of British Columbia)
- Malcolm Sambridge (Australian National University)
- Philip Stark (University of California at Berkeley)
- Terry Young (Colorado School of Mines)
- Brian Kennett (Australian National University)
- Anthony Dahlen (Princeton University)
- Alan Levander (Rice University)
- Henning Omre (Norwegian University for Science and Technology)

- George Papanicolaou (Stanford University)
- John Scales (Colorado School of Mines)
- Bill Symes (Rice University)
- Jeannot Trampert (Utrecht University)

For more information and registration visit:

http://www.mines.edu/outreach/cont_ed/summerschool/uncertainty.html

A pdf-file with the colour-version of the flyer can be downloaded from:

http://www.mines.edu/~rsnieder/summer_school_flyer.pdf

Contact person:
Roel Snieder, rsnieder@mines.edu

Submitted by: Prof. R.K. Snieder, Dept. of Geophysics,
Colorado School of Mines, Golden CO 80401-1887, USA
tel. +1-303-273.3456 (or 384.2178), fax +1-303-273.3478
http://www.mines.edu/~rsnieder
email rsnieder@mines.edu

From: Eric Miller <elmiller@ECE.NEU.EDU>
Subject: Postdoctoral Opening in Signal Processing and Modeling
Date: Thu, 29 Jan 2004

Postdoctoral Opening in Physics-based Signal Processing and Modeling

It is anticipated that a postdoctoral position in signal processing and modeling for buried object classification will be available in the Department of Electrical and Computer Engineering at Northeastern University in Boston MA USA starting in the late spring or early summer of 2004. The ideal candidate will have a PhD in an area such as electrical engineering, physics, or applied mathematics with experience in algorithms development as well as experimental data collection and processing. The project will be funded by the Strategic Environmental Research and Development Program (SERDP) and involves a collaboration among researchers from Northeastern University, ALPHATECH Inc (Burlington MA), Johns Hopkins Applied Physics Laboratory (Laurel MD) and Geophex Inc, (Raleigh NC). The primary objective is the development, validation, and transition into practice of physics-based algorithms for the classification of buried unexploded ordnance from electromagnetic induction data. The responsibilities of the job being advertised here will include work in sensor modeling, experimental data collection, as well as the development and field-data validation of algorithms for classifying buried objects. Issues of sensor optimization may also be addressed. Because the successful candidate will interact closely with all member of the team, both verbal and written English communications skills are a priority.

The project is expected to last three years. Appointment for this job will be on a year-by year basis.

For more information about this position, please contact
Prof. Eric Miller
Dept. of Electrical and Computer Engineering
315 Stearns Center
Northeastern University

360 Huntington Ave
Boston MA 02115
email: elmiller@ece.neu.edu
Web: http://www.ece.neu.edu/faculty/elmiller/elmhome/

Interested candidates should provide (preferably via email) Prof. Miller with a copy of their CV, list of references, and copies of relevant articles, theses, technical reports etc.

From: Chuck Gartland <gartland@math.kent.edu>
Subject: Faculty Position in Math/Comp Finance at Kent State University
Date: Fri, 9 Jan 2004

Kent State University
Department of Mathematical Sciences
Kent, OH 44242

Tenure-Track Positions in Mathematics

We invite applications for one tenure-track position in applied mathematics in the areas of financial mathematics or computational finance and one or more tenure-track positions (pending budget approval) in mathematics in the areas of algebra or analysis. The appointments are to be at the Assistant Professor level and are to begin August 16, 2004.

Candidates are required to have a Ph.D. within the mathematical sciences and preference will be given to candidates with some postdoctoral experience. They are expected to have strong potential in research (including the potential to attract external funding) and in teaching. They should be able to contribute to the interdisciplinary outreach of the department or to support established research strengths.

The successful candidate for the applied mathematics position will be expected to contribute to and help develop our highly-rated, cross-disciplinary Master's program in Financial Engineering (http://business.kent.edu/msfe) and should have a background in financial mathematics and/or computational finance. Desirable research areas include, but are not limited to, theoretical or computational aspects of differential equations (stochastic or deterministic), statistical modeling, optimization, and wavelet analysis.

Candidates in algebra or analysis should have a background that complements or broadens our existing strengths in these areas.

Kent State University is a spacious, residential campus serving more than 24,000 students. It is situated in a small university town within 30 miles of the major metropolitan area of Cleveland, Ohio. The Department of Mathematical Sciences is in the College of Arts and Sciences and houses programs through the doctoral level in pure and applied mathematics. There are currently 24 tenure-track or tenured faculty. For further information about the department, please visit the website (http://www.math.kent.edu).

Applicants should send a cover letter, a curriculum vitae, and at least three letters of reference to the Mathematics Search Committee at the above address. Applicants are also requested to use the AMS standardized application format, forms for which are available through

the American Mathematical Society (http://www.ams.org). Questions regarding these positions may be sent to math-search@math.kent.edu. Applicants whose completed applications are received by January 20, 2004, are assured of receiving full consideration.

Kent State University is an Equal Opportunity, Affirmative Action Employer.

From: "Elizabeth Martin" <liz.martin@iop.org>
Subject: Contents list for Inverse Problems
Date: Mon, 12 Jan 2004

Inverse Problems February 2004 Volume 20, Issue 1

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All articles are free for 30 days after publication on the web. This issue is available at: http://stacks.iop.org/0266-5611/20/i=1

theory J H Rose

Levenberg--Marquardt level set methods for inverse obstacle problems
M Burger

Elastic modulus imaging: on the uniqueness and nonuniqueness of the elastography inverse problem in two dimensions
P E Barbone and N H Gokhale

An extension of the Toda lattice: a direct and inverse spectral transform connected with orthogonal rational functions
J Coussement and W Van Assche

Submitted by: Elizabeth Martin, Senior Production Editor
Inverse Problems
Institute of Physics Publishing
Dirac House, Temple Back,
Bristol BS1 6BE UK
Tel: +44 (0)117 929 7481 E-mail: liz.martin@iop.org
Fax: +44 (0)117 929 4318 WWW: http://www.iop.org

From: Lothar Reichel <reichel@kansas.math.kent.edu>
Subject: Table of Contents, ETNA vol 16, 2003
Date: Mon, 19 Jan 2004

Electronic Transactions on Numerical Analysis 2003 Volume 16
Table of Contents

Preconditioning strategies for 2D finite difference matrix sequences
Stefano Serra Capizzano and Cristina Tablino Possio

Vaidya's preconditioners: implementation and experimental study
Doron Chen and Sivan Toledo

General theorems for numerical approximation of stochastic processes on the Hilbert Space Henri Schurz

A fast algorithm for filtering and wavelet decomposition on the sphere
Martin Bohme and Daniel Potts

A rational spectral problem in fluid-solid vibration Heinrich Voss

A parameter choice method for Tikhonov regularization Limin Wu

A block version of BiCGStab for linear systems with multiple right-hand sides A. El Guennouni, K. Jbilou, and H. Sadok

A quadrature formula of rational type for integrands with one endpoint singularity J. Illa'n

Analysis of two-dimensional FETI-DP preconditioners by the standard additive Schwarz framework S. C. Brenner

Gradient method with dynamical retards for large-scale optimization problems F. Luengo and M. Raydan

ETNA is available at http://etna.mcs.kent.edu and at several mirror sites, as well as on CDROM.

ETNA is in the extended Science Citation Index and the CompuMath Citation Index.

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA contents
Date: Wed, 31 Dec 2003

Linear Algebra and its Applications February 2004 Volume 378

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http://www.sciencedirect.com/science/issue/5653-2004-996219999-475426

These papers and over 80 articles in press for LAA are now available at
http://www.sciencedirect.com/ .

Submitted by: Hans Schneider
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IPNet Digest Volume 11, Number 02 February 29, 2004

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.mth.msu.edu/ipnet
Mail to ipnet-request@math.msu.edu

From: "Rainer.Kress" <kress@math.uni-goettingen.de>
Subject: PhD program on Identification in Mathematical Models
Date: Tue, 03 Feb 2004

The Faculty of Mathematics at the University of Goeöttingen will establish a PhD program on

Identification in Mathematical Models:
Synergy of Stochastic and Numerical Methods

beginning at July 1st, 2004. This research training group (Graduiertenkolleg) is supported by the Deutsche Forschungsgemeinschaft (DFG) and offers
14 Scholarships for PHD students and
one Postdoctoral Scholarship.

The research program includes inverse problems for partial differential equations (for example, inverse scattering theory and impedance tomography), parameter and model identification in statistical inverse problems (for example statistical learning algorithms) and, combining the two preceding areas, new identification and classification problems in mathematics and in applications (for example classification of stochastic processes, geometric identification of fingerprints, identification of alien genes).

The topics cover a broad range connecting theoretical mathematical problems, application relevant problems from numerical analysis and statistics, and interdisciplinary projects in collaboration with members of other sciences.

The concept of the integrated teaching and research program aims at a solid education in applied mathematics both for science and industry. This will be achieved through dissertations within current mathematical research areas at the borderline of numerical analysis and stochastics and through an interdisciplinary teaching program that

integrates elements from stochastics and numerical analysis. Further information on the research and teaching program and, in particular, on the participating research groups can be found on

http://www.num.math.uni-goettingen.de/gk

The University of Goettingen is aiming at increasing the portion of women among the graduates.

Application should be sent to the director of the program,
Prof. Dr. Rainer Kress,
Institut für Numerische und Angewandte Mathematik,
Georg-August-Universaet Goeöttingen,
Lotzestr. 16-18,
37083 Goeöttingen.

In addition to the curriculum vitae, copies of relevant academic transcripts or university degrees and two letters of recommendation, the applications should contain specifications on the intended direction of research within the PhD program and preferences for one of the research groups.

From: Sergio Vessella <sergio.vessella@DMD.UNIFI.IT>
Subject: Invited Session on Inverse Problems for PDE
Date: Mon, 02 Feb 2004

Dear Colleague,

I am organizing an Invited Session on

Inverse Problem for PDE.
Identification of Coefficients and Domains.
Theory and Applications

in the context of the 22th IFIP TC7 Conference, to be held in Turin (Italy), July 18-22, 2005. Information about the Conference can be found at the address

http://www.polito.it/ifip2005/

In particular I would like to emphasize that, if you plan to participate, you should inform me as soon as possible and submit, by October 2004, two abstracts:
1) a "long abstract" (three pages at most) with a brief introduction and a clear statement of the main results,
2) a "short abstract" (fifteen lines at most).

To prepare the "short abstract", please keep to the form that can be downloaded from the web page given above. The abstract should be sent by electronic mail in *.ps or *.pdf format to the address

sergio.vessella@dmd.unifi.it

The Organizing Committee plans to organize the possibility of submitting journal quality papers,

We would appreciate very much if you could contact other colleagues potentially interested in this conference.

Best Regards.
Sergio Vessella

From: Daniel Lesnic <amt5ld@maths.leeds.ac.uk>
Subject: 5th Int. Conf. Inverse Problems in Eng.: Theory and Practice
Date: Sun, 1 Feb 2004

Dear Colleagues,

The general announcement and the first call for papers for the "5th International Conference on Inverse Problems in Engineering: Theory and Practice", 11-15 July 2005, Cambridge, UK, is now posted at the site:

www.engconfintl.org/5ai.html

Please note that the abstracts are due by 30th of June 2004.

Dr. Daniel Lesnic
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University of Leeds,
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tel: +44-(0)113-3435181,
fax: +44-(0)113-3435090

From: Kirsten Wilden <wilden@siam.org>
Subject: SIAM Conference on Discrete Mathematics
Date: Fri, 20 Feb 2004

Subject: SIAM Conference on Discrete Mathematics
Registration Dates and Program Now Available!

Conference Name: SIAM Conference on Discrete Mathematics

Location: Loews Vanderbilt Plaza Hotel, Nashville, TN

Dates: June 13-16, 2004

Invited Plenary Speakers:
Jennifer Chayes, Microsoft Research
Martin Grötschel, Konrad-Zuse-Zentrum für Informationstechnik Berlin (ZIB),
DFG-Forschungszentrum "Mathematik für Schlüsseltechnologien," and
Technische Universitaet Berlin, Germany
Jon Kleinberg, Cornell University
Tom Leighton, Massachusetts Institute of Technology and Akamai Technologies, Inc.
Paul Seymour, Princeton University
Bernd Sturmfels, University of California, Berkeley
Alexander Vardy, University of California, San Diego
Michael Waterman, University of Southern California

Registration is Now Available!

Pre-Registration Deadline: Thursday, May 13, 2004

Registration and the preliminary program for this conference are available at: http://www.siam.org/meetings/dm04/

For additional information, contact the SIAM Conference Department at meetings@siam.org.

From: Kirsten Wilden <wilden@siam.org>
Subject: Tenth International SIAM Conference on Numerical Combustion
Date: Thu, 05 Feb 2004

Subject: Tenth International Conference on Numerical Combustion
Registration Dates and Program

Conference Name: Tenth International Conference on Numerical Combustion

Location: Hilton Sedona Resort & Spa, Sedona, Arizona

Dates: May 9-12, 2004

Invited Plenary Speakers:

Malte Braack, University of Heidelberg, Germany
Michael Frenklach, University of California, Berkeley
Thomas Jackson, University of Illinois, Urbana-Champaign

Registration is Now Available!

Pre-Registration Deadline: Monday, April 12, 2004

Registration and the conference program for this conference is available at: http://www.siam.org/meetings/nc04/

For additional information, contact SIAM Conference Department at meetings@siam.org.

From: michelle montgomery <montgomery@siam.org>
Subject: SIAM Outreach Membership
Date: Mon, 23 Feb 2004

The SIAM Board of Trustees has reduced the annual dues amount for the membership option for individuals who live and work in developing countries. This category of SIAM membership, called "Outreach Membership," was created to help make SIAM products and services accessible to a wider and more global group of applied and computational mathematicians. This is a great alternative for individuals in developing countries who cannot afford the full SIAM dues. Eligible individuals' dues are just US $10 per year.

Outreach Members receive all print issues of "SIAM News" and electronic-only access to "SIAM Review". They can join any of the SIAM Activity Groups at $10 per group, are entitled to 30% off list prices on all SIAM books, and receive member discounted registration at SIAM sponsored meetings. No additional journal subscriptions at membership rates are available as part of the Outreach Membership.

The Outreach Membership application (secure) form can be found online at http://www.siam.org/cust_serv/index.cfm. You will be requested to create a profile for yourself; then you will receive a temporary username and password in order to use the online system. Alternatively, you can use a fill-in form at

https://www.siam.org/membership/outreachmem.htm.

The list of developing countries can be found at
http://www.siam.org/membership/outreachlist.htm.

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Submitted by: Michelle Montgomery
Marketing Manager, SIAM

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA proceedings of the Haifa 2005 conference on matrix theory
Date: Fri, 6 Feb 2004

LAA proceedings of the Haifa 2005 conference on matrix theory

LAA will publish proceedings of the conference on matrix theory to be held in Haifa, Israel, January 3 - 7, 2005. The special editors are Abraham Berman, Leonid Lerer and Raphael Loewy. The submission deadline is expected to be April 30, 2005. Further details will appear in due course in the second conference announcement and at
http://www.math.wisc.edu/~hans/speciss.html .

Submitted by: Hans Schneider
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From: "James Beck" <beck@msu.edu>
Subject: Inverse Problems in Science and Engineering
Date: Tue, 24 Feb 2004

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Vibration-based Identification of Isotropic Material Properties by Quasi-binary Electronic Holography and Finite Element Modelling
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Passive Electric Potential CT Method Using Piezoelectric Material for Crack Identification
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Reconstruction of a Combination of the Absorption and Scattering Coefficients with a Discrete Ordinates Method Consistent with the Source-Detector System
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Inverse Radiative Transfer Problems in Two-Dimensional Participating Media
MARIELLA J. BERROCAL TITO, NILSON C. ROBERTY, ANTONIO J. SILVA NETO and JORGE BRAVO CABREJOS

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From: Hans Schneider <hans@math.wisc.edu>
Subject: Contents, Linear Algebra and its Applications
Date: Fri, 27 Feb 2004

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http://www.sciencedirect.com/science/issue/5653-2004-996209999-477635

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On a class of rational matrix differential equations arising in stochastic control G. Freiling and A. Hochhaus

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The inverse eigenvalue problem for symmetric doubly stochastic matrices Suk-Geun Hwang and Sung-Soo Pyo

Gradient flow methods for matrix completion with prescribed eigenvalues Moody T. Chu, Fasma Diele and Ivonne Sgura

Improved perturbation estimates for the matrix equations X+/-A*X-1A=Q
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Existence of minimal nonsquare J-symmetric factorizations for self-adjoint rational matrix functions
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Strong linear preservers of symmetric doubly stochastic or doubly substochastic matrices Shwu-Huey Lin and Bit-Shun Tam

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An estimation of the spectral radius of a product of block matrices
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A nonlinear matrix equation connected to interpolation theory
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Jeffrey Hood and David Perkinson

Eventually nonnegative matrices are similar to seminonnegative matrices Sarah Carnochan Naqvi and Judith J. McDonald

Numerical ranges of unbounded operators arising in quantum physics
N. Bebiano, R. Lemos and J. da Providencia

NOTE: The ScienceDirect website
http://www.sciencedirect.com
contains all articles published in LAA beginning with vol 1 (1968).
Also about 100 articles in press beyond vol. 381 have been posted there.

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IPNet Digest Volume 11, Number 03 March 30, 2004

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

Today's Topics:
Applied Inverse Problems: Opening Conference for IPRPI
Eurotherm Winter School: Thermal Measurements and Inverse Techniques
ACM-SIAM Symposium on Discrete Algorithms
Table of Contents: Inverse Problems
Table of Contents: Inverse Problems in Science and Engineering
Table of Contents: Linear Algebra and Its Applications

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

Information about IPNet:
http://www.mth.msu.edu/ipnet
Mail to ipnet-request@math.msu.edu

From: "Joyce R. McLaughlin" <mclauj@rpi.edu>
Subject: Applied Inverse Problems: Opening Conference for IPRPI
Date: Thu, 18 Mar 2004

We are pleased to announce the opening of IPRPI, Inverse Problems center at Rensselaer Polytechnic Institute, with the conference Interdisciplinary Inverse Problems which takes place April 5-7,2004. We look forward to your future involvement with the center and invite you to participate in this event. Contributed papers (30 minute talks) and poster presentations are welcome. Some funding is available for postdocs and graduate students who make presentations.

You can register at the conference site at http://www.iprpi.rpi.edu. Questions about the technical program can be directed to IPRPI Director, Joyce McLaughlin (mclauj@rpi.edu). All other inquiries go to Alice Baker (mclauj3@rpi.edu).

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email: mclauj@rpi.edu

Assistant: Alice Baker, email: mclauj3@rpi.edu

From: Denis Maillet <Denis.Maillet@ensem.inpl-nancy.fr>
Subject: Eurotherm Winter School: Thermal Measurements and Inverse Techniques
Date: Mon, 15 Mar 2004

The French Heat Transfer Society organizes a Winter School:

Thermal Measurements and Inverse techniques:
A tool for the Characterization of Multiphysical Phenomena

January 16 - 21, 2005 - Aussois (french Alps)

with the support of the Eurotherm Committee

You will find detailed information on the following website:
http://iusti.polytech.univ-mrs.fr/metti2005

This school, which will be held in english, is open to attendees (PhD students, academics, R&D engineers) from different countries of the European Community but participants from other countries are also welcome.

Objectives
Techniques for solving inverse problems as well as their applications are currently rapidly developing in all the different domains of physical sciences and particularly in Heat Transfer. Applied mathematicians, statisticians and signal processing specialists generally develop these techniques. Experimentalists desiring to go beyond traditional data processing techniques for estimating the parameters of a model with the maximum accuracy feel often ill-prepared in front of inverse techniques. In order to avoid biases at different levels of this kind of involved task, it seems compulsory that specialists of measurement inversion techniques, modelling techniques and experimental techniques share a wide common culture and language. These exchanges are necessary to take into account the difficulties associated to all these fields. It is in this state of mind that this school is proposed.

The METTI Group (Thermal Measurements and Inverse Techniques), which is a division of the Societe Francaise de Thermique (SFT: French Heat Transfer Society), has already run two similar schools, in the Alps (Aussois) in 1995 and in the Pyrenees (Bolqu=E8re-Odeillo) in 1999. For this third edition the school is open to participants from the European Community with the support of the Eurotherm Committee.

Lectures
Lectures will be given from 8:30 to 12:00 every morning from Monday to Friday on the following topics:

- model reduction
- parameter estimation
- function estimation (fluxes, temperatures)
- temperature and flux measurements (with or without contact)
- optimal conception and control of experiments
- signal processing

Workshops
Workshops will be held in the Aussois Centre between 17:00 and 20:00 from Monday to Thursday. They will include an experimental and/or a numerical part.

Submitted by: Prof. Denis Maillet
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From: Kirsten Wilden <wilden@siam.org>
Subject: ACM-SIAM Symposium on Discrete Algorithms

Date: Wed, 03 Mar 2004

Subject: ACM-SIAM Symposium on Discrete Algorithms (SODA05)

Conference Name: ACM-SIAM Symposium on Discrete Algorithms (SODA05)

Conference Program Chair: Adam Buchsbaum, AT&T Labs- Research

Location: Sheraton Vancouver Wall Center Hotel, Vancouver, British Columbia

Dates: January 23-25, 2005

The Call for Presentations will be available in April 2004 at www.siam.org/meetings/da05/

For additional information, contact SIAM Conference Department at meetings@siam.org.

From: "Elizabeth Martin" <liz.martin@iop.org>
Subject: Contents, Inverse Problems, Vol. 20, Issue 2, April 2004
Date: Fri, 05 Mar 2004

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All articles are free for 30 days after publication on the web. This issue is available at: http://stacks.iop.org/0266-5611/20/i=2

LETTER TO THE EDITOR
Inverse medium scattering for three-dimensional time harmonic Maxwell equations G Bao and P Li

PAPERS
$G _{m,n}^{p,q}$-system II and diagonalizable timelike immersions in $R^{p,m}$
D Zuo, Q Chen and Y Cheng

Transmissivity estimation for a two-dimensional aquifer by regularizing potential and stream functions J Liu and G Q Zhang

Adaptive B-spline scheme for solving an inverse scattering problem
A Baussard, E L Miller and D Pr\'emel

Deconvolution of non-stationary physical signals: a smooth variance model for insulin secretion rate G Pillonetto and B M Bell

Electromagnetic imaging of a three-dimensional perfectly conducting object using a boundary integral formulation H Tortel

On the attenuated Radon transform with full and partial measurements
G Bal

Equivalence of time-domain inverse problems and boundary spectral problems A Katchalov, Y Kurylev, M Lassas and N Mandache

A Cauchy problem for the nonlocal nonlinear Schr\"odinger equation
Y Matsuno

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From: "jamesverebeck" <jamesverebeck@comcast.net>
Subject: Inverse Prob. in Science and Engineering
Date: Mon, 29 Mar 2004

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Identification of velocity distribution in a turbulent flow inside parallel-plate ducts from wall temperature measurements
M. Girault, D. Petit and F. Penot

Backward specification of prior in Bayesian inference as an inverse problem A. V. Gribok, A. M. Urmanov, J. W. Hines and R. E. Uhrig

Metal-mold heat transfer coefficients during horizontal and vertical unsteady-state solidification of Al-Cu and Sn-Pb alloys
C. A. Santos, C. A. Siqueira, A. Garcia, J. M. V. Quaresma and J. A. Spim

Multi-objective parameter estimation problems: an improved strategy
C. M. Silva and E. C. Biscaia Jr

Estimation of initial condition in heat conduction by neural network
E. H. Shiguemori, J. D. S. da Silva and H. F. de Campos Velho

Identifying counter-gradient term in atmospheric convective boundary layer D. R. Roberti, H. F. de Campos Velho and G. A. Degrazia

Computation of magnetic field sources from measurements using iterative regularization
S. Begot, E. A. Artioukhine, P. Hiebel and J. M. Kauffmann

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From: Hans Schneider <hans@math.wisc.edu>
Subject: Contents, Linear Algebra and its Applications
Date: Tue, 2 Mar 2004

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Special section dedicated to the GAMM workshop Applied and Numerical Linear Algebra with special emphasis on Numerical Methods for Structured and Random Matrices
Andreas Frommer, Volker Mehrmann and Reinhard Nabben

On doubly structured matrices and pencils that arise in linear response theory Christian Mehl, Volker Mehrmann and Hongguo Xu

The behavior of symmetric Krylov subspace methods for solving Mx=(M-[gamma]I)v V. Simoncini and M. Pennacchio

On finite dimension exchange algorithms Holger Arndt

Generalized Hessenberg matrices Miroslav Fiedler and Zdenk Vavin

A unified approach to fast image registration and a new curvature based registration technique Bernd Fischer and Jan Modersitzki

A note on the second largest eigenvalue of a tree with perfect matchings Ji-Ming Guo and Shang-Wang Tan

Representability of convex sets by analytical linear inequality systems Daniel A. Jaume and Ruben Puente

Generalization of Flanders' theorem to matrix triples
J. Gelonch and C. R. Johnson

On graphs with at most three Laplacian eigenvalues greater than or equal to two
Miroslav Petrovi, Bojana Borovianin and Aleksandar Torgaev

Additive preservers of rank-additivity on the spaces of symmetric and alternate matrices Hong You and Xiao Min Tang

Inverse eigenproblems and associated approximation problems for matrices with generalized symmetry or skew symmetry
William F. Trench

The N-matrix completion problem under digraphs assumptions
C. Mendes Araujo, Juan R. Torregrosa and Ana M. Urbano

A unified treatment for the matrix Stieltjes moment problem
Yong-Jian Hu and Gong-Ning Chen

Generic canonical form of pairs of matrices with zeros
Tat'yana N. Gaiduk and Vladimir V. Sergeichuk

Subresultants and locally nilpotent derivations
M'hammed El Kahoui

Some partial inverse eigenvalue problems: recovering diagonal entries of symmetric matrices D. Paul Phillips

http://www.sciencedirect.com/science/issue/5653-2004-996199999-483681

NOTE: Contents of vol. 381 have already been circulated.
The ScienceDirect website
    http://www.sciencedirect.com
contains all articles published in LAA beginning with vol 1 (1968).
Also about 100 articles in press beyond vol. 381 are posted there.

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IPNet Digest Volume 11, Number 04 April 30, 2004

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

Today's Topics:
SIAM Conference on Partial Differential Equations
SIAM Conference on Mathematical Aspects of Materials Science
SIAM 2004 Annual Meeting
ACM-SIAM Symposium on Discrete Algorithms
CISM Course on Nonsmooth Mechanics of Solids
New Book in the Inverse and Ill-Posed Problems Series
Postdoc, Student Positions in Applications of Imaging Science
Editor Nominations for International Journal of Tomography
Table of Contents: Nonlinear Analysis: Modelling and Control
Table of Contents: Linear Algebra and Its Applications

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

Information about IPNet:
http://www.mth.msu.edu/ipnet
Mail to ipnet-request@math.msu.edu

From: "Darrell Ross" <ross@siam.org>
Subject: SIAM Conference on Partial Differential Equations
Date: Fri, 16 Apr 2004

Conference Name: SIAM Conference on Partial Differential Equations

Location: Houston Post Oak Doubletree Hotel, Houston, Texas

Dates: December 6-8, 2004

The Call for Presentations for this conference is now available at:
www.siam.org/meetings/pd04/index.htm

For additional information, contact SIAM Conference Department at
meetings@siam.org

Darrell Ross
SIAM, Conference Program Manager
Conference Web Master
ross@siam.org

From: "Darrell Ross" <ross@siam.org>
Subject: SIAM Conference on Mathematical Aspects of Materials Science
Date: Tue, 13 Apr 2004

Conference Registration Reminder

SIAM Conference on Mathematical Aspects of Materials Science (MS04)
May 23-26, 2004
Hyatt Regency Los Angeles at Macy's Plaza
Los Angeles, California
http://www.siam.org/meetings/ms04/index.htm

It's not too late!

The SIAM Conference on Mathematical Aspects of Materials Science
on-line registration is still open! Registration closes
Monday, May 3, 2004 at 4PM Eastern Time.

Register now and save $100!

http://www.siam.org/meetings/ms04/

Darrell Ross
SIAM, Conference Program Manager
Conference Web Master
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PLEASE NOTE: International attendees planning to attend conferences in the USA may already be aware that there have been recent changes to the visa program for scientific visitors, which affect even people from visa waiver countries. The site http://www7.nationalacademies.org/visas/ maintained by the National Academies, provides guidance on obtaining the necessary documents.

From: Connie Young <cyoung@siam.org>
Subject: 2004 SIAM Annual Meeting
Date: Fri, 23 Apr 2004

Conference Name: 2004 SIAM Annual Meeting

Location: Portland, Oregon

Dates: July 12-16, 2004

Program and registration information is available at:
http://www.siam.org/meetings/an04/

Meeting Registration Deadline: Monday, June 14, 2004
Hotel Reservation Deadline: Friday, June 11, 2004

For additional information visit http://www.siam.org/meetings/an04/ or contact SIAM Conference Department at meetings@siam.org.

From: Kirsten Wilden <wilden@siam.org>
Subject: ACM-SIAM Symposium on Discrete Algorithms
Date: Wed, 07 Apr 2004

Subject: ACM-SIAM Symposium on Discrete Algorithms
CFP Deadline

Conference Name: ACM-SIAM Symposium on Discrete Algorithms

Location: Sheraton Vancouver Wall Center Hotel, Vancouver,
British Columbia

Dates: January 23-25, 2005

The Call for Presentations for this conference is available at:
http://www.siam.org/meetings/DA05/

Deadline

Submission Deadline: July 5, 2004

For additional information, contact the SIAM Conference Department at meetings@siam.org.

From: "Georgios E. Stavroulakis" <gestavr@cc.uoi.gr>
Subject: CISM Course on Nonsmooth Mechanics of Solids
Date: Tue, 20 Apr 2004

International Centre for Mechanical Sciences
Centre International des Sciences Mecaniques

NONSMOOTH MECHANICS OF SOLIDS

Advanced School Coordinated by
J. Haslinger, and G.E. Stavroulakis

CISM, Udine, Italy, October 4 - 8, 2004
More details: in http://www.cism.it

Lecturers:

M. Fremond, Ch. Glocker, J. Haslinger, Z. Naniewicz, G.E. Stavroulakis

Short Description:

In many real-life problems coming from engineering or economics one can encounter nondifferentiable or discontinuous functions and set-valued mappings. A deep study of the properties of these maps including a certain generalized differential calculus is the subject of nonsmooth analysis. We shall focus on some problems in mechanics of solids which lead to such models.

The classical mechanics (statics and dynamics) of solids provide a large number of nonsmooth effects: contact problems, collisions, stick-slip motions connected with friction, delaminations in composites. All these effects can be mathematically described by means of differential inclusions. The mathematical research in this area began at sixties assuming multivalued parts to be represented firstly by maximal monoto-ne mappings, i.e. the case leading to variational inequalities. The monotonicity assumption however turns out to be very restrictive. In practice, we meet a lot of problems whose basic constitutive laws are no longer monotone. At the beginning of eighties Prof. P.D. Panagiotopoulos used tools of nonsmmoth analysis and introduced what he called hemivariational inequalities (HE). HE's represent an appropriate mathematical tool enabling us to involve nonmonotone multivalued relations into the model. Due to HE's, the range of problems which can be now rigorously treated is enlarged.

The goal of this course is to illustrate the potential of nonsmooth analysis in modelling of various problems in mechanics of solids. The emphasis will be laid on the completeness and mathematical correctness of the presentation, although several industrial applications will be presented. It will cover the following topics: nonsmooth modelling of problems in mechanics of solids, the mathematical theory of variational and hemivariational inequalities, approximation of variational and hemivariational inequalities by finite element and

boundary element methods, the numerical realization (including smoothing and regularisation techniques), algorithms and applications from civil and mechanical engineering and related optimal design and identification problems.

A number of well-known experts and active researchers in the field, including mathematicians and engineers, will report on classical and new results covering all the above mentioned topics. The presentation of all these topics will be carefully balanced between theory, numerical methods and applications. The summer school is addressed to graduate students, PhD candidates and young faculty members in mathematics, physical sciences and engineering.

Engineers working on advanced applications of computational mechanics and modelling of highly nonlinear and nonsmooth effects such as contact and friction problems in industry (civil, aerospace, automotive) as well as applied mathematicians and computer scientists (dealing with nonsmooth analysis, optimisation, calculus of variations, computational mechanics) will benefit from the course.

For more details and application forms, please visit the web page of CISM http://www.cism.it

Submitted by:
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From: "Klibanov, Michael" <mklibanv@email.uncc.edu>
Subject: New book in the Inverse and Ill-Posed Problems Series
Date: Thu, 22 Apr 2004

Inverse and Ill-Posed Problems Series

Carleman Estimates for Coefficient Inverse Problems and Numerical Applications

Michael V. Klibanov and Alexandre Timonov

This is the first book dedicated to applying the Carleman estimates to coefficient inverse problems. Coefficient inverse problems consist of determining the variable coefficients of partial differential equations from the boundary measurements of their solutions. Such problems arise in a number of applications of particular interest to natural sciences and technology, such as medical imaging, underwater acoustics and electromagnetics, non-destructive evaluation, geophysics of exploration, etc.. The main difficulty in solving coefficient inverse problems is due to their nonlinearity and ill-posedness. This monograph presents one of the most powerful tools for the mathematical treatment of such problems, the method of Carleman estimates. Originally introduced in the field of inverse problems by A.L. Bukhgeim and M.V. Klibanov in 1981, the method of Carleman estimates has become popular in the applied mathematics community. Written in a readable and concise manner, the book introduces the reader to the essence of the techniques used for deriving Carleman estimates and using them for proofs of global uniqueness and stability results for coefficient inverse problems. The core of the book is two most recent advances of the authors. These are the global uniqueness of a multidimensional coefficient inverse

problem for a nonlinear parabolic equation and the so-called convexification framework for constructing globally convergent algorithms for the numerical solution of coefficient inverse problems. Several applications of the convexification to magnetotelluric frequency sounding, electrical impedance tomography, infra-red optical sensing of biotissies, and time reversal are discussed. The effectiveness of convexification algorithms is demonstrated in computational experiments.

This monograph is of value and interest to researchers in the fields of inverse problems in partial differential equations, numerical methods, mathematical modeling, scientific computing, in both academia and industry.

2004; vi+280 pages
ISBN 90-6764-405-6
Price: EUR 150/US$ 203

See http://www.vsppub.com/books/mathe/bk-CarEstCoeInvProNumApp.html

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From: Clifford Nolan <clifford.nolan@ul.ie>
Subject: Postdoc and Grad Student positions available at
University of Limerick
Date: 01 Apr 2004

Cliff Nolan at University of Limerick maths and stats department is seeking a postdoc and grad student(s) to work on a SFI (Science Foundation Ireland) funded project entitled 'High-frequency wave propagation and its applications to imaging science'.

The grant will run for at least four years, starting in September, 2004. The research team will consist of Cliff Nolan (principal investigator at UL), Margaret Cheney (RPI), Gunther Uhlmann (UW), Andrew Fowler (Oxford, and UL adjunct), Don Barry, (UL), Eugene Benilov (UL), Alan Hegarty (UL) and Stephen O' Brien (UL). Adequate computing and international travel funds are also included in the grant. UL maths and stats department has an active research program with numerous masters and Ph.D. students being trained. This should provide for a vigorous research environment.

The postdoc salary will be approximately 40,000 euro p.a.and a stipend of approximately 12,000 euro is available to support a postgraduate student. It also envisaged that at least one more IRCSET (or other independently) funded student will join the group.

Ideally (but not necessarily), the postdoc candidate will have training in applied mathematical analysis. An interest in wave propagation and scattering would also be an advantage. Therefore,

candidates from physics and engineering are also welcome to apply. A summary of the research proposal is given below. For further details, please contact Cliff Nolan by sending e-mail to clifford.nolan@ul.ie

University of Limerick is located centrally in the Republic of Ireland. An excellent summary of practical details of living in Ireland can be found at the following link http://old.emigrant.ie/living/ It is a little out of date (still uses Irish Pounds instead of Euro, but it is still a good reference).

The positions are open to Non-EU citizens but work permits will take longer to obtain.

Project summary:
Ultrasound images are a familiar sight to us all, especially those depicting the form of an unborn child in a mother's womb. To make such images, ultrasonic waves are emitted from a transducer on the surface of the mother's stomach. The sound waves travel inside, scatter from the baby and return to the transducer where they are measured. A simple time of flight to depth calculation indicates the location of various features of the baby and the image is displayed. By accounting for the waveform of the scattered waves, we will employ microlocal analysis to qualitatively improve images (in real time).

We will employ complimentary modalities for imaging, such as electromagnetic, elastic and RADAR. Electromagnetic waves are useful for imaging imperfections in silicon wafers. Radio waves employed by RADAR on-board satellites provide images of moving or stationary objects on the earth. This information can be used to monitor the health of a forest and evaluate its bio-mass. Elastic and RADAR waves can be used to detect buried hazardous waste.

The above examples are unified by the fact that measurements of scattered waves may be approximated by an integral transform of coefficients (e.g. density) in the associated wave equation. The scattered waves can be pre-processed for imaging via microchips on the detectors. Mathematically, an image is a plot of the high-frequency component of such coefficients. Using microlocal and numerical analysis, we will develop asymptotic inversion formulae for the integral transforms and obtain imaging algorithms, to be implemented via software development.

A more detailed description is available at www.ul.ie/nolanc/SFI.pdf

---

From: ceser_isder@yahoo.co.in
Subject: Nomination for Editors - International Journal of Tomography
Date: Sat, 10 Apr 2004

Nomination for Editors - International Journal of Tomography & Statistics (IJTS)

Nominations are invited for Editor-in-Chief, Associate Editors, and Assistant Editors for the International Journal of Tomography & Statistics (IJTS). If you have someone in mind to serve as Editor-in-Chief, Associate Editors, and Assistant Editors (including yourself), please nominate the person and attach their CV. If you are nominating someone else, please consult with that person to make sure they would be willing. All the posts are of two years term with

volunteer appointment policy. Also as per policy subscription of journal is required for all appointed.

The IJTS (http://www.geocities.com/ceser_isder/ijts1.html) publishes refereed, well-written original research articles, and studies that describe the latest research and developments in computerized Tomography and Statistics. It also covers the many potential applications and connections to other areas of Science and technology such as the use and development of WAVELETS in signal and image processing & reconstructions, applications in computerized tomography, and inter-disciplinary nature of applications. Applications in signal and image processing with Fourier analysis or WAVELETS are particularly welcome. IJTS is published quarterly in March, June, September and December by "Indian Society for Development & Environment Research" ISDER (http://www.geocities.com/ceser_isder).

Send the nominations with C.V. to:

Dr. Tanuja Srivastava,
Executive Editor IJTS,
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From: Romas Baronas <romas.baronas@maf.vu.lt>
Subject: Table of Contents: Nonlinear Analysis: Modelling and Control
Date: Wed, 07 Apr 2004

Nonlinear Analysis: Modelling and Control 2004 Vol. 9, No. 1
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Nonlinear Analysis: Modelling and Control, an official journal of the Lithuanian Association of Nonlinear Analysts (LANA), welcomes contributions from the international community.

For a paper submission, please refer to
http://www.mif.vu.lt/lana/nonlin

A free on-line edition is available at:
http://www.mif.vu.lt/lana/nonlin/issues.htm#iss91

Dr. Romas Baronas,
secretary of "Nonlinear Analysis: Modelling and Control".
E-mail: romas.baronas@maf.vu.lt
http://www.mif.vu.lt/lana/nonlin

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA contents
Date: Fri, 9 Apr 2004 10:46:09 -0500 (CDT)

Linear Algebra and its Applications May 1 2004 Volume 382

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Burnside's theorem: irreducible pairs of transformations
W. E. Longstaff

A note on the structure of algebraic curvature tensors
J. Carlos Diaz-Ramos and Eduardo Garcia-Rio

http://www.sciencedirect.com/science/issue/5653-2004-996179999-493382

Submitted by:
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Van Vleck Hall
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Madison, WI 53706-1313 USA
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http://www.math.wisc.edu/~hans
------- end -------

IPNet Digest Volume 11, Number 05 June 16, 2004

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.mth.msu.edu/ipnet
Mail to ipnet-request@math.msu.edu

From: "Christophe Le Niliot" christophe.leniliot@polytech.univ-mrs.fr
Subject: Inverse Techniques European Winter School, Jan. 2005
Date: Wed, 26 May 2004

Dear Colleagues,

We are pleased to inform you about the European winter school which will take place in Aussois in the French Alps (http://www.caes.cnrs.fr/Vacances/Explorer/Aussois/) from 16-21 January 2005.

The title of this winter school is:
Thermal Measurements and Inverse Techniques, a tool for the characterization of multiphysical phenomena.

The main aim is to present some experimental and numerical workshops.

This winter school is organized with the support of the SFT (Societe Francaise de Thermique) and the Eurotherm committee. You will find full details in the first announcement which is enclosed in the attached document. Furthermore, full information can be also found on the school web site: http://iusti.polytech.univ-mrs.fr/metti2005.

We sincerely hope that you will be able to join us in Aussois next January.

The organizers
Denis MAILLET and Christophe LE NILIOT

From: Roy Pike <roy.pike@kcl.ac.uk>
Subject: Third International Conference on Applied Inverse Problems
Date: Wed, 2 Jun 2004

The third International Conference on Applied Inverse Problems

(AIP2005) will be held at the Royal Agricultural College, Cirencester, UK from 26th to 30th June 2005, following AIP2001 held in Montecatini, Italy and AIP2003 held at Lake Arrowhead, USA.

This series of AIP Conferences aim to provide a primary international forum for academic and industrial researchers working on all aspects of inverse problems, such as mathematical modelling, functional analytic methods, computational approaches, numerical algorithms etc.

Each AIP Conference follows the pattern of a number of invited talks from international experts and a set of minisymposia on topical themes. The venues will been chosen to encourage the maximum interaction between all participants.

The invited speakers and minisymposia to date are:

Invited speakers

U. Ascher
University of British Columbia
"Artificial time integration and inverse problems"

J. Berryman
Stanford University
"Time-Reversal Data Processing and Its Relation to Other Linear Focusing and Imaging Methods"

L. Borcea
Rice University
"Theoretical and computational aspects of statistically stable imaging in random media"

A. Grunbaum
University of Berkeley
"Nonlinear inverse problems for multiterminal networks"

V. Isakov
University of Wichita
"Increased stability in continuation of wave fields and inverse problems in acoustics"

J. Kaipio
Kuopio University
"Recent results in the modelling of approximation errors in inverse problems"

R. Kress
University of Goettingen
"Conformal mapping and electrostatic imaging"

M. Lassas
University of Helsinki
"Anisotropic Inverse Problems"

A. Nachman
University of Toronto
"Progress on Analytic Inversion Methods"

S. Osher
UCLA

"Using geometry and iterated refinement for inverse problems"

L. Paivarinta
University of Helsinki
"Calderon's inverse conductivity problem and quasiconformal maps"

G. Papanicolao
Stanford University
"Interferometric Array Imaging"

T. Poggio
MIT
"Theory of Learning"

L. Reichel
Kent University

O. Scherzer
University of Insbruck
"Nonconvex Regularization for Inverse Problems"

J. Sylvester
University of Washington
"Locating a time harmonic scatterer or source"

R. Vogelius
Rutgers University
"Recent results concerning electromagnetic imaging for small inhomogeneities"

M. Yamamoto
University of Tokyo

V.V.Vasin
Ural State University
"Regularization and iterative approximation of non-smooth solutions for ill-posed problems"

Mini Symposia

Title : "Fundamental issues of uniqueness and stability in inverse problems"
Organisers : G. Alessandrini and S. Kurylev

"3D Electromagnetic Imaging"
Organisers : M. Hanke and A. Kirsch

"Microwave Imaging"
Organisers : M. Cheney and F. Natterer

"Inverse Problems in Wave Propagation"
Organisers : W. Symes and G. Uhlmann

"Optical and Astronomical Imaging"
Organisers : M. Bertero and R. Pike

"Industrial and Financial Applications"
Organisers : H. Engl and W.R.B. Lionheart

Further information about the conference and its organisers can be

found on the website
  http://www.cs.ucl.ac.uk/aip2005/
To be added to the mailing list for the conference please email
aip2005-attendees-request@cs.ucl.ac.uk

Submitted by: Professor E R Pike FRS
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http://www.kcl.ac.uk/kis/schools/phys_eng/physics/staff/acad/pike.htm

---

From: "Darrell Ross" <ross@siam.org>
Subject: SIAM 2005 Conference on Optimization
Date: Mon, 17 May 2004

Conference Name: SIAM 2005 Conference on Optimization

Location: City Conference Centre, Stockholm, Swedev

Dates: May 15-19, 2005

The Call for Presentations for this conference is now available at:
http://www.siam.org/meetings/op05/

For additional information, contact SIAM Conference Department at
meetings@siam.org
Darrell Ross
SIAM, Conference Program Manager
Conference Web Master
ross@siam.org

From: "Sarp Adali" <ADALI@ukzn.ac.za>
Subject: 6th World Conference on Structural, Multidisciplinary
Optimization
Date: Wed, 02 Jun 2004

6th World Conference on
Structural and Multidisciplinary Optimization
(WCSMO6)

Dates: 30 May - 3 June 2005

Location: Rio de Janeiro, Brazil

Conference Web Site: http://www.wcsmo6.org

IMPORTANT DATES:

30/05/2004 - One-page Abstract Submission Begins
15/01/2005 - One-page Abstract Submission Deadline
15/02/2005 - Notification of Acceptance
15/05/2005 - Deadline for Full Paper in Digital Form

Submitted by: Dr Sarp Adali
Sugar Millers' Professor of Mechanical Design
Head, School of Mechanical Engineering

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Secretary: + 27 31 260 3202
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e-mail: adali@ukzn.ac.za

From: Jesse Barlow <barlow@cse.psu.edu>
Subject: Householder Symposium XVI
Date: Fri, 04 Jun 2004

HOUSEHOLDER SYMPOSIUM XVI -- First Announcement

http://www.cse.psu.edu/~zha/householder

The Householder Symposium on Numerical Linear Algebra will be held May 23-27, 2005 at the Seven Springs Mountain Resort in Champion, Pennsylvania, http://www.7springs.com/. The resort is located about one hour (by car) southeast of Pittsburgh. This meeting is the sixteenth in a series, previously called the Gatlinburg Symposia. The name honors Alston S. Householder, one of the pioneers in numerical linear algebra and organizer of the first four meetings. The meeting has traditionally been held in an isolated location and is very informal in style. Each attendee is given the opportunity to present a talk, but a talk is not mandatory. The format of the meeting includes scheduled presentations during the day and more informal evening sessions that are organized electronically shortly before the meeting. Spirited discussion is encouraged.

At the meeting, the twelfth Householder prize will be awarded for the best thesis in numerical algebra written since 1 January 2002. We hope that the meeting will be attended by recent entrants into numerical linear algebra as well as more experienced researchers. We encourage attendance by core numerical linear algebra researchers, matrix theoreticians, and researchers in applications such as optimization, signal processing, control, etc.

The Program Committee welcomes your contribution. The meeting facility holds only 125 people, however, so attendance may need to be limited. We are seeking funding to provide financial assistance to recent PhDs and others who might need it. For full consideration, the committee must receive your abstract by 1 November 2004. Information concerning the application process may be found at the URL listed above. Please use the format provided at the Conference Website http://www.cse.psu.edu/~zha/householder.

The committee expects to complete the list of attendees and scheduled presentations by 7 January 2005.

After reading the files in the Conference Website, if you have any questions about local arrangements, please contact the local arrangements committee at householder2005@cse.psu.edu.

Local Arrangements Committee:
Jesse Barlow (Penn State University)
Hongyuan Zha (Penn State University)
Daniel Szyld (Temple University)

Other questions can be directed to house-request@cs.cornell.edu

The Program Committee consists of
Angelika Bunse-Gerstner (Bremen)
Tony Chan (UCLA)
Alan Edelman (MIT)
Nick Higham (University of Manchester)
Roy Mathias (College of William and Mary)
Dianne O'Leary (University of Maryland)
Michael Overton (New York University)
Henk van der Vorst (Utrecht)
Paul Van Dooren (Louvain-la-Neuve)
Charles Van Loan (Chair, Cornell University)

HOUSEHOLDER AWARD XI

Nominations are solicited for the Alston S. Householder Award XII (2005). The award will be presented to the author of the best dissertation in numerical algebra submitted by the recipient of a PhD earned between January 1, 2001, and December 31, 2004. The term numerical algebra is intended to describe those parts of mathematical research that have both algebraic aspects and numerical content or implications. Thus, for example, the term covers linear algebra that has numerical applications and the algebraic aspects of ordinary differential, partial differential, integral, and nonlinear equations. To qualify, the dissertation must have been submitted to fulfill requirements for a degree at the level of a United States Ph.D. Candidates from countries in which a formal dissertation is not normally written at that level may submit an equivalent piece of work. The Householder Award, given every three years, was established at the 1969 Gatlinburg Symposium (now renamed the Householder Symposium) to recognize the outstanding contributions of Alston S. Householder, 1904--1993, to numerical analysis and linear algebra. Entries will be assessed by an international committee consisting of

James Demmel (University of California, Berkeley),
Sabine Van Huffel (K.U. Leuven),
Volker Mehrmann (TU Berlin)
Charles Van Loan (Cornell University)
Olof Widlund (Courant Institute, New York University).

The candidate's sponsor (the supervisor of the candidate's research) should submit five copies of the dissertation (or qualifying work), together with an appraisal by the sponsor and at least one additional letter of recommendation supporting the nomination, by February 1, 2005, to

Professor Olof Widlund
Courant Institute
251 Mercer Street
New York, New York 10012
U.S.A.

The award will be presented at the Householder Symposium XVI, to be held May 23-27, 2005 at the Seven Springs Mountain Resort in Champion, Pennsylvania. See http://www.cse.psu.edu/~zha/householder.

Candidates on the short list will receive invitations to the meeting. Previous Householder Award winners were F. Robert (Grenoble) in 1971, Ole Hald (New York University) in 1974, Daniel D. Warner

(University of California, San Diego) in 1977, E. Marques de Sa' (Coimbra) and Paul Van Dooren (K. U. Leuven) in 1981 (shared), Ralph Byers (Cornell University) and James M. Demmel (University of California, Berkeley) in 1984 (shared), Nicholas J. Higham (University of Manchester) in 1987, Alan Edelman (Massachusetts Institute of Technology) and Maria Beth Ong (University of Washington) in 1990 (shared), Hong-Guo Xu (Fudan University) and Barry Smith (New York University) in 1993 (shared), Ming Gu (Yale University) in 1996, Jorg Liesen (Bielefeld) in 1999, and Jing-Rebecca Li (Massachusetts Institute of Technology) in 2002.

From: "Jiri Simunek" <Jiri.Simunek@ucr.edu>
Subject: Postdoctoral Research Associate, U. California Riverside
Date: Tue, 18 May 2004

Dear all,

As part of an ARO funded project (and other projects), we seek applications for a post-doctoral research position at UC Riverside, Department of Environmental Sciences. The position description is given below. We are looking for a unique individual that has knowledge of numerical techniques, computer languages, and simulation models. Your consideration of suitable applicants is highly appreciated. Please, forward this email to suitable applicants. Thanks.

Jirka Simunek
Professor and Hydrologist, Department of Environmental Sciences
University of California Riverside, Riverside, CA, 92521

****

Postdoctoral Research Associate at University of California Riverside, Department of Environmental Sciences.

Incumbent will support development of advanced numerical modeling tools to describe processes in the vadose zone and groundwater. Possible projects involve development of new modules for transport of organic explosives, and coupled water, vapor, and energy transport, as well as coupling the HYDRUS-1D vadose zone flow and transport software package with the MODFLOW groundwater flow model, the PHREEQC biogeochemical model, a C/N cycle model, colloid facilitated transport, and/or an overland flow module.

Qualification: Ph.D. Degree in Civil Engineering, Soil Physics, Hydrology, or related disciplines. Experience with numerical modeling of water flow and solute transport in the subsurface. Knowledge of Fortran is required and C desirable. Knowledge of numerical models HYDRUS, MODFLOW, and/or PHREEQC is desirable. Applications will be accepted until a suitable candidate is found. Salary is $33,671 per annum plus full benefits. Submit letter of application, resume, and names of two references to Dr. Jirka Simunek, Department of Environmental Sciences, University of California, Riverside, CA 92521, Phone: 909-827-7854. Email: Jiri.Simunek@UCR.edu. The University of California is an affirmative action/equal opportunity employer.

From: "Elizabeth Martin" <liz.martin@iop.org>
Subject: Contents, Inverse Problems, Volume 20, Issue 3, June 2004

Date: Thu, 20 May 2004

Inverse Problems June 2004 Volume 20, Issue 3

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PAPERS

Inverse problems for ODEs using contraction maps and suboptimality of the `collage method' H E Kunze, J E Hicken and E R Vrscay

All articles are free for 30 days after publication on the web.
This issue is available at: http://stacks.iop.org/0266-5611/20/i=3

Submitted by: Elizabeth Martin, Senior Production Editor
Inverse Problems, Institute of Physics Publishing
Dirac House, Temple Back, Bristol BS1 6BE UK
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E-mail: liz.martin@iop.org WWW: http://www.iop.org

From: "jamesverebeck" <jamesverebeck@comcast.net>
Subject: Contents, IPISE, August 2004
Date: Sat, 29 May 2004

Inverse Problems in Science and Engineering August 2004 Vol 12, No. 4

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From: Hans Schneider <schneidh@math.wisc.edu>
Subject: LAA contents
Date: Thu, 20 May 2004

Linear Algebra and Its Applications 15 May 2004 Volume 383

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The simplest proof of Burnside's theorem on matrix algebras
Victor Lomonosov and Peter Rosenthal

Sets of matrices with common Stein solutions and H-contractions
T. Ando

Stable rank of C*-algebras of type I Takahiro Sudo

Conjugacy classes of involutions in the Lorentz group [Omega](V) and in SO(V) Erich W. Ellers

Norm inequalities for sums and differences of positive operators
Fuad Kittaneh

Subspace gaps and range-kernel orthogonality of an elementary operator
B. P. Duggal

Simultaneous symmetrization Mirko Doboviek

Irreducible operator semigroups such that AB and BA are proportional
R. Drnovek and T. Koir

Reduction theorems for groups of matrices
Janez Bernik, Robert Guralnick and Mitja Mastnak

Companion matrices: reducibility, numerical ranges and similarity to contractions Hwa-Long Gau and Pei Yuan Wu

Locally linearly dependent operators and reflexivity of operator spaces
Roy Meshulam and Peter emrl

On polynomial numerical hulls of normal matrices
Ch. Davis and A. Salemi

On decomposability of periodic semigroups of non-negative matrices
Leo Livshits

The smallest eigenvalue for reversible Markov chains
Xiao-Dong Zhang

A general view of multipliers and composition operators
Don Hadwin and Eric Nordgren

Completely rank-nonincreasing linear maps on spaces of operators
Don Hadwin, Jinchuan Hou and Hassan Yousefi

A variety of commuting triples Matja Omladi

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Linear Algebra and its Applications
Volume 385, (1 July 2004)
Special Issue in honor of Peter Lancaster
Special Editors H. Bart, I. Koltracht, A. Markus and L. Rodman
http://www.sciencedirect.com/science/issue/5653-2004-996149999-502732

Linear Algebra and its Applications
Volume 386, (15 July 2004)
Special Issue on the Conference on the Numerical Solution of Markov Chains 2003

Urbana-Champaign, IL, USA, 3 - 5 September 2003
Edited by W. Grassmann, C. Meyer, B. Stewart and D. Szyld
http://www.sciencedirect.com/science/issue/5653-2004-996139999-505025

Due to a system problem, the table of contents cannot be retrieved. To access the TOC in ScienceDirect, click the hyperlink near the top of this e-mail. The TOC is freely available, however accessing full papers requires a subscription by your institution to ScienceDirect or to LAA.

Submitted by: Hans Schneider
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------- end -------

IPNet Digest Volume 11, Number 06 July 20, 2004

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

Today's Topics:
IFIP TC 7 Conference on System Modeling and Optimization
SIAM Conference on Computational Science & Engineering
SIAM Conference on Nonlinear Waves and Coherent Structures
European Soc. of Computational Methods in Sciences & Engineering
Postdoctoral Position in Biomedical Optics
Announcement: Doctorate Honoris Causa to Prof. L. Ljung
Table of Contents: Inverse Problems
Table of Contents: Nonlinear Analysis: Modelling and Control

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

Information about IPNet:
http://www.mth.msu.edu/ipnet
Mail to ipnet-request@math.msu.edu

From: Luciano Pandolfi <luciano.pandolfi@polito.it>
Subject: IFIP TC 7 Conference on System Modeling and Optimization
Date: Fri, 16 Jul 2004

Final list of invited speakers and invited sessions of the
22nd IFIP TC 7 Conference on System Modeling and Optimization to be held in Turin, Italy, July 18-22, 2005. Please note the deadline of October 1st for submission of the abstracts.

Updated information can be found in the conference web page:
http://www.polito.it/ifip2005

Best whishes, L. Pandolfi

INVITED SPEAKERS

Roger Fletcher
Anders Forsgren "Interior point methods for nonlinear optimization" (preliminary title)
Dan M. Frangopol
William Hager
Janos Mayer
Jorge Nocedal
Alfio Quarteroni
H. Mete Soner "Stochastic optimal control in finance" (preliminary title)
Gunther Uhlmann "Electrical Impedance Tomography and Travel Time Tomography"
Riccardo Zecchina

Special Session: A.V. Balakrishnan, "On the Possio Equation and its Central role in AeroElasticity"

INVITED SESSIONS

"Analysis and optimization of systems modeled by Partial Differential

Equations", G. Avalos, F. Bucci
"Case studies in stochastic optimization" M. Gasparini, E. Riccomagno
"Complementarity problems and variational inequalities", S. Scholtes
"Control under communication constraints", S. Zampieri
"Controllability and inverse problems for distributed parameter systems", V. Agoshkov, M. Polis, I.F. Sivergina
"Dynamic Games and its Applications", D. Carlson, A. Haurie
"Geometric methods in optimal control" U. Boscain, B. Piccoli
"Inconsistency and uncertainty resolution in distributed information systems" , N.T. Nguyen, R. Katarzyniak, J. Sobecki, K.Juszczyszyn
"Inverse problems for PDE: identification of coefficients and domain. Theory and applications", S. Vessella
"Large scale nonlinear optimization", H. Scolnik
"Mathematical models for granular matter", P. Cardaliaguet, P. Cannarsa
"Modeling and computation in finance", A. Bagchi
"Modeling and optimization in liberalized markets", A. Kalliauer
"Multi-Objective Optimization in Structural and Mechanical Systems", H. Furuta
"Numerical Analysis of Optimization in PDEs", V. Maksimov, F. Troeltzsch
"Recent advances in semi-infinite optimization", M. A. López
"Semi-infinite stochastic optimization" D. Dentcheva, A. Ruszczynski
"Shape analysis and applications", J. Cagnol, M. Delfour, J. Sokolowski, D. Tiba, J.-P. Zolesio
"Singular perturbations of control systems", M. Bardi, O. Alvarez
"Stability in optimization and applications", D. Klatte, B. Kummer
"Stochastic Optimization Methods in Engineering and Finance", K. Marti, J.
Mayer, P. Kall
"Stochastic simulation", A. Bagchi
"Stochastic Systems and Control", E. Priola, G. Tessitore, J. Zabczyk
"Well-posedness and conditioning in optimization and optimal control", A. Dontchev , T. Zolezzi

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10129 Torino, ITALY

From: cyoung@siam.org
Subject: SIAM CSE05 Conference
Date: Tue, 22 Jun 2004

Conference Name: SIAM Conference on Computational Science & Engineering
Location: Disney's Coronado Springs Resort, Orlando, Florida
Dates: February 12-15, 2005

Reminder, the Call for Presentations deadlines for the SIAM Conference on Computational Science & Engineering (CSE05):

Deadline for minisymposium proposals: August 2, 2004
Deadline for contributed lectures and posters: August 11, 2004

Visit http://www.siam.org/meetings/cse05/ to submit.

For additional information, contact SIAM Conference Department at meetings@siam.org

---
From: cyoung@siam.org
Subject: SIAM Conf. on Nonlinear Waves and Coherent Structures (NW04)
Date: Tue, 20 Jul 2004

The program schedule and registration information is available for this conference at: http://www.siam.org/meetings/nw04/

Pre-registration deadline: Thursday, September 2, 2004
On-line registration form will be disconnected at 4PM EDT!
Visit http://www.siam.org/meetings/NW04/reginfo.htm for more information about registration.

Hotel Reservation deadline: Thursday, September 2, 2004
Visit http://www.siam.org/meetings/NW04/htlinfo.htm for more hotel information.

CONFERENCE THEMES
Nonlinear Waves in Optics and Periodic Structures
Waves in Fluids, the Atmosphere and Oceans
Coherent Structures in Biology
Semiclassical Asymptotics and Multisoliton Turbulence
Nonlinear Waves in Bose-Einstein Condensation
Stability of Solitary Waves

PLENARY SPEAKERS
David Cai, Courant Institute, New York University
Riemann-Hilbert Methods and Integrable Systems
Percy Deift, Courant Institute, New York University
Christopher Jones, University of North Carolina
Andrew J. Majda, Courant Institute, New York University
Vladimir E. Zakharov, Landau Institute for Theoretical Physics, Moscow, Russia and the University of Arizona

For additional information visit http://www.siam.org/meetings/nw04/

From: Professor Theodore Simos <tsimos@mail.ariadne-t.gr>
Subject: European Society of Computational Methods in Sciences and Engineering (ESCMSE)
Date: Fri, 09 Jul 2004

Dear Colleagues

With this letter we inform you about the new European Society of Computational Methods in Sciences and Engineering (ESCMSE) - www.uop.gr/escmse/.

Aims and Scope

European Society of Computational Methods in Sciences and Engineering (ESCMSE) is a non-profit organization.

The aims and scopes of ESCMSE is the construction, the development and the analysis of computational, numerical and mathematical methods and the application of the developed methods in sciences and engineering. The activities of ESCMSE are on the subject of computational, numerical and mathematical methods in sciences and engineering.

In order to achieve the above aims and scopes the ESCMSE has obtained

the following activities:

Research cooperation between scientists in the above subject.

Founding, development and organization of national and international conferences, workshops, seminars, schools, symposiums on the above subject.

Development of special issues of scientific journals on the above subject.

Other activities on the dissemination of the results of the research on the above subject.

Activities on the participation and possible representation of Greece and European Union on the events and activities of international scientific organizations of the same or similar subject.

Collection of reference material relative with the aims and scope of ESCMSE.

Based on the above activities ESCMSE has already developed an international scientific journal named: Applied Numerical Analysis and Computational Mathematics (ANACM) . The development of the above journal was done in cooperation with the international leading publishing company of Wiley-VCH .

ANACM is the official journal of ESCMSE. Each member of ESCMSE will receive free of charge the volumes of ANACM.

ESCMSE regognises also two other journals:

Journal of Computational Methods in Sciences and Engineering (JCMSE) - IOS Press and

A new developed journal: Computing Letters (CoLe) - VSP/Brill.

ESCMSE has an official Conference: International Conference of Numerical Analysis and Applied Mathematics (ICNAAM) - www.uop.gr/~icnaam/ and also recognises the: International Conference of Computational Methods in Sciences and Engineering (ICCMSE) - www.uop.gr/~iccmse/

Call for Membership

We invite you to become part of this exciting new international project and participate in the promotion and exchange of ideas in your field.

Categories of Membership

European Society of Computational Methods in Sciences and Engineering (ESCMSE)

Initially the categories of membership will be:

Full Member (MESCMSE): PhD graduates (or equivalent) in computational or numerical or mathematical methods with applications in sciences and engineering, or others who have contributed to the advancement of computational or numerical or mathematical methods with applications in sciences and engineering through research or education. Full Members may use the title MESCMSE.

Associate Member (AMESCMSE): Educators, or others, such as distinguished amateur scientists, who have demonstrated dedication to the advancement of computational or numerical or mathematical methods with applications in sciences and engineering may be elected as Associate Members. Associate Members may use the title AMESCMSE.

Student Member (SMESCMSE): Undergraduate or graduate students working towards a degree in computational or numerical or mathematical methods with applications in sciences and engineering or a related subject may be elected as Student Members as long as they remain students. The Student Members may use the title SMESCMSE

Corporate Member: Any registered company, institution, association or other organization may apply to become a Corporate Member of the Society.

Remarks:

1. After three years of full membership of the European Society of Computational Methods in Sciences and Engineering, members can request promotion to Fellow of the European Society of Computational Methods in Sciences and Engineering. The election is based on international peer-review. After the election of the initial Fellows of the European Society of Computational Methods in Sciences and Engineering, another requirement for the election to the Category of Fellow will be the nomination of the applicant by at least two (2) Fellows of the European Society of Computational Methods in Sciences and Engineering.

2. All grades of members other than Students are entitled to vote in Society ballots.

3. All grades of membership other than Student Members receive the official journal of the ESCMSE Applied Numerical Analysis and Computational Mathematics (ANACM) as part of their membership. Student Members may purchase a subscription to ANACM at a reduced rate.

If you want to apply for a membership in ESCMSE, please send an e-mail to: escmse@uop.gr with the subject: Application for a Membership in ESCMSE. After this e-mail you will received the Application Form and guidelines about fees and submission of the completed application form and CV.

Sincerely yours

Professor T.E. Simos
President of the European Society of Computational Methods
in Sciences and Engineering (ESCMSE)
E-mail: tsimos@mail.ariadne-t.gr

Conferences:

International Conference of Computational Methods in Sciences and Engineering (ICCMSE 2004), Attica, Greece, November 19-23, 2004
Information: www.uop.gr/~iccmse/

International Conference of Numerical Analysis and Applied Mathematics 2004 (ICNAAM 2004), Chalkis, Greece, 10-14 September 2004,
Information: www.uop.gr/~icnaam/

From: "Birsen Yazici" <yazici@ecse.rpi.edu>
Subject: Post-doc position
Date: Fri, 18 Jun 2004

As part of a DoD funded project in biomedical optics, we seek applications for a post-doctoral research associate position at Rensselear Polytechnic Institute, Department of Electrical, Computer and Systems Engineering. Interested applicants please send your resume and references to Dr. Birsen Yazici at yazici@ecse.rpi.edu.

Qualification: Ph.D. Degree in Electrical and Computer Engineering, Mathematics or related disciplines. Expertise in numerical solutions of partial differential equations, finite element methods, interest in inverse problems and biomedical applications, good computing/programming and communication skills. Position is for 2 years. Start date July-August 2004 (flexible).

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From: Ida Tassens [ida.tassens@esat.kuleuven.ac.be]
Subject: Events of the Doctorate Honoris Causa by K.U.Leuven to Prof. L. Ljung
Date: Monday, June 21, 2004

Invitation to the events at the occasion of
the Doctorate Honoris Causa
awarded by the Katholieke Universiteit Leuven to
Prof. Dr. Lennart Ljung, Linkoping University, Sweden
on Tuesday October 12 and Wednesday October 13, 2004
in Leuven. Belgium

The Academic Council of the Katholieke Universiteit Leuven has decided to confer the honor of 'Doctor Honoris Causa' upon Prof. Dr. Lennart Ljung for his many contributions to mathematical modeling of dynamical systems, including system identification algorithms and software for linear and nonlinear systems and for his high impact on the field, both in academia as in industrial environments.

At the same occasion, two more Honorary Degrees will be awarded, one to Manuel de Sola-Morales and one to P. Ole Fanger.

The Honorary Degree will be awarded in a special ceremony on Wednesday, October 13, at 16.00 h in the central Promotion Hall of the K.U.Leuven (Naamsestraat 22, 3000 Leuven, Belgium), with Prof. Dr. Bart De Moor pronouncing the formal 'laudatio' in honor of Prof. Ljung.

For this occasion, a two day workshop will be organized, where we will launch K.U. Leuven - SCORES (Systems, Control and Optimization

in Research, Education and Services), an interdepartmental initiative of the K.U. Leuven, to integrate all research and teaching activities in systems, control and optimization. This workshop is also co-organized by the Belgian Interuniversity Attraction Pole 'Dynamical Systems and Control' and the Flemish Research Community ICCoS.

The workshop starts on Tuesday, October 12, 2004, 09.00 h and ends on Wednesday, October 13, 2004, 15.00 h, after which all attendees are invited to attend the Honorary Degree Ceremony.

Full details on the location, the program, the internal and the invited speakers, can be found at
http://www.kuleuven.ac.be/scores/12-13oct2004.html.

There will be talks by representatives from local member teams of SCORES, spin-off and other companies and invited guest speakers (including Prof. Dr. Brian Anderson, Prof. Dr. Albert Benveniste, Prof. Dr. Paul Van den Hof and other guests to be confirmed).

We would like to invite you to these two days of events. Registration can be done at
http://www.kuleuven.ac.be/scores/
You can also send an email to ida.tassens@esat.kuleuven.ac.be, so that we can add your name to our mailing list in order to keep you up-to-date on further details.

Please forward this invitation to your colleagues and co-workers.
Bart De Moor (bart.demoor@esat.kuleuven.ac.be)
Joris De Schutter (joris.deschutter@mech.kuleuven.ac.be)
Jan Swevers (jan.swevers@mech.kuleuven.ac.be)
Joos Vandewalle (joos.vandewalle@esat.kuleuven.ac.be)
Jan Van Impe (jan.vanimpe@cit.kuleuven.ac.be)
Geert Deconinck (geert.deconinck@esat.kuleuven.ac.be)

From: "Elizabeth Martin" <liz.martin@iop.org>
Subject: Contents for Inverse Problems, vol. 20, issue 4, Aug. 2004
Date: Mon, 19 Jul 2004

Inverse Problems August 2004 Volume 20, Issue 4
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Numerical identification of linear cracks in 2D elastodynamics using the instantaneous reciprocity gap H D Bui, A Constantinescu and H Maigre

Global uniqueness of a multidimensional inverse problem for a nonlinear parabolic equation by a Carleman estimate M V Klibanov

Global logarithmic stability in inverse hyperbolic problem by arbitrary boundary observation M Bellassoued

On the reconstruction of diffusions from first-exit time distributions G Bal and T Chou

The unique determination of neuronal currents in the brain via magnetoencephalography A S Fokas, Y Kurylev and V Marinakis

Differentiability properties of the L^1-tracking functional and application to the Robin inverse problem
S Chaabane, J Ferchichi and K Kunisch

Efficient computation of lead field bases and influence matrix for the FEM-based EEG and MEG inverse problem
C H Wolters, L Grasedyck and W Hackbusch

Identification of anisotropic anomalous region in inverse problems
K Kwon

Fast numerical inversion of the attenuated Radon transform with full and partial measurements G Bal and P Moireau

Connection formulae for asymptotics of solutions of the degenerate third Painlev\'e equation: I A V Kitaev and A H Vartanian

Corrosion detection in conducting boundaries G Inglese and F Mariani

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Three-dimensional vector microwave tomography: theory and computational experiments
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The relaxed CQ algorithm solving the split feasibility problem
Q Yang

Inverse scattering on the line for a generalized nonlinear Schr\"odinger equation T Aktosun, V G Papanicolaou and V Zisis

A large class of inversion formulae for the 2D Radon transform of functions of compact support R Clackdoyle and F Noo

Gramm-type Pfaffian solutions to three differential-difference coupled systems C-X Li, X-B Hu and J-X Zhao

Inverse scattering in inhomogeneous background media:
II. Multi-frequency case and SVD formulation
M L Dennison and A J Devaney

Electrical impedance tomography and Mittag-Leffler's function
M Ikehata and S Siltanen

Inverse scattering with fixed energy for dilation-analytic potentials
A Vasy and X-P Wang

CORRIEGNDUM
Construction of the half-line potential from the Jost function
T Aktosun

All articles are free for 30 days after publication on the web. This issue is available at: http://stacks.iop.org/0266-5611/20/i=4

Submitted by: Elizabeth Martin, Senior Production Editor
Inverse Problems, Institute of Physics Publishing
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Fax: +44 (0)117 929 4318 WWW: http://www.iop.org

From: Romas Baronas <romas.baronas@maf.vu.lt>
Subject: Table of Contents, Nonlinear Analysis: Modelling and Control
Date: Fri, 25 Jun 2004

Nonlinear Analysis: Modelling and Control 2004 Volume 9, Number 2
Table of Contents

Nonlinear Analysis: Modelling and Control, an official journal of the Lithuanian Association of Nonlinear Analysts (LANA), welcomes contributions from the international community.

For a paper submission, please refer to
http://www.mif.vu.lt/lana/nonlin

A free on-line edition is available at:
http://www.mif.vu.lt/lana/nonlin/issues.htm#iss92

Dr. Romas Baronas,
secretary of "Nonlinear Analysis: Modelling and Control".
E-mail: romas.baronas@maf.vu.lt
http://www.mif.vu.lt/lana/nonlin
------- end -------

IPNet Digest Volume 11, Number 07 September 12, 2004

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

Today's Topics:
SIAM Conference on Control and Its Applications
SIAM Conference on Math./Computational Issues in Geosciences
SIAM Conference on Applications of Dynamical Systems
New Book on Inverse Problems
Table of Contents: Inverse Problems
Table of Contents: Inverse Problems in Science and Engineering
Table of Contents: Linear Algebra and Its Applications

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

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

From: Kirsten Wilden <wilden@siam.org>
Subject: SIAM Conference on Control and Its Applications
Date: Fri, 10 Sep 2004

Subject: Sixth SIAM Conference on Control and Its Applications
CFP Deadlines

Conference: Sixth SIAM Conference on Control and Its Applications,
being held jointly with the 2005 SIAM Annual Meeting

Location: Hilton New Orleans Riverside Hotel, New Orleans, Louisiana

Dates: July 11-14, 2005

Invited Plenary Speaker:
Mrdjan Jankovic, Ford Research and Advanced Engineering
(Joint Plenary Speaker with the 2005 SIAM Annual Meeting)

Additional Invited Plenary Speakers will be listed on web site when
available.

Invited Topical Speaker
Matthias Heinkenschloss, Rice University
(Joint Topical Speaker with the 2005 SIAM Annual Meeting)

The Call for Presentations for this conference is available at:
http://www.siam.org/meetings/ct05/

Deadlines

Minisymposium proposals: December 10, 2004

Abstracts for all contributed and minisymposium presentations:
January 7, 2005

For additional information, contact SIAM Conference Department at
meetings@siam.org.

From: Kirsten Wilden <wilden@siam.org>
Subject: SIAM Conference on Mathematical and Computational Issues in the Geosciences - CFP Deadlines
Date: Thu, 19 Aug 2004

Subject: SIAM Conference on Mathematical and Computational Issues in the Geosciences - CFP Deadlines

Conference: SIAM Conference on Mathematical and Computational Issues in the Geosciences

Location: Palais des Papes, The International Conference Center, Avignon, France

Dates: June 7-10, 2005

Invited Plenary Speakers:
Clint Dawson, The University of Texas, Austin
Geir Evensen, Norsk Hydro, Oil & Energy Research Centre, Bergen, Norway
J.M. Huyghe, Eindhoven University of Technology, The Netherlands
J=E9r=F4me Jaffr=E9, INRIA-Rocquencourt, France
Bruno Sportisse, Centre d'Enseignement et de Recherche en Environnement Atmosphe'rique, CEREA, Joint Laboratory Ecole Nationale des Ponts et Chausse'es/Electricite' de France R&D, INRIA Project CLIME, France
Anne Marie Treguier, Centre National de la Recherche Scientifique, France
Gabriel Wittum, University of Heidelberg, Germany

The Call for Presentations for this conference is available at:
http://www.siam.org/meetings/gs05/

Deadlines

Minisymposium proposals: November 12, 2004

Abstracts for all contributed and minisymposium presentations: December 13, 2004

For additional information, contact SIAM Conference Department at meetings@siam.org.

From: cyoung@siam.org
Subject: SIAM Conference on Applications of Dynamical Systems
Date: Fri, 13 Aug 2004

Conference: SIAM Conference on Applications of Dynamical Systems

Location: Snowbird Ski and Summer Resort Snowbird, Utah

Dates: May 22-26, 2005

The Call for Presentations is now available at:
http://www.siam.org/meetings/ds05/

Submission Deadlines:

Minisymposium proposals: October 20, 2004

Abstracts for all contributed and minisymposium presentations:

November 24, 2004

For additional information, contact SIAM Conference Department at meetings@siam.org.

From: ammari@cmapx.polytechnique.fr
Subject: New book on inverse problems
Date: Sun, 5 Sep 2004

Reconstruction of Small Inhomogeneities from Boundary Measurements

Habib Ammari and Hyeonbae Kang

Series: Lecture Notes in Mathematics, Vol. 1846
2004, IX, 238 p., Softcover ISBN: 3-540-22483-1

About this book

This is the first book to provide a systematic exposition of promising techniques for the reconstruction of small inhomogeneities from boundary measurements. In particular, theoretical results and numerical procedures for the inverse problems for the conductivity equation, the Lam{\'e} system, as well as the Helmholtz equation are discussed in a readable and informative manner. The general approach developed in this book is based on layer potential techniques and modern asymptotic analysis of partial differential equations. The book is particularly suitable for graduate students in mathematics.

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Introduction.- Part I: Detection of Small Conductivity Inclusions.- 2. Transmission Problem.- 3. Generalized Polarization Tensors.- 4. Derivation
of the Full Asymptotic Formula.- 5. Detection of Inclusions.- Part II: Detection of Small Elastic Inclusions.- 6. Transmission Problem for Elastostatics.- 7. Elastic Moment Tensor.- 8. Derivation of Small Asymptotic Expansions.- 9. Detections of Inclusions.- Part III: Detection of Small Electromagnetic Inclusions.- 10. Well-Posedness.- 11. Representation of Solutions.- 12. Derivation of Asymptotic Formulae.- 13. Reconstruction Algorithms.- Appendices.- References.- Index.

Submitted by: Habib Ammari
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---

From: "Elizabeth Martin" <liz.martin@iop.org>
Subject: Contents list for Inverse Problems
Date: Fri, 03 Sep 2004

Inverse Problems October 2004 Volume 20, Issue 5

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PAPERS

On the one-dimensional Gelfand and Borg--Levinson spectral problems for discontinuous coefficients M Sini

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Convergence rates of convex variational regularization M Burger and S Osher

Half-inverse spectral problems for Sturm--Liouville operators with singular potentials R O Hryniv and Y V Mykytyuk

Estimation in a problem of fractional integration L Cavalier

Inversion of the 3D exponential parallel-beam transform and the Radon transform with angle-dependent attenuation L A Kunyansky

Geodesic flow on the Bott--Virasoro group and deformed Hunter--Saxton equation P Guha

The inverse scattering problem with impedance boundary in a half-space G Karamyan

Inverse boundary value problems in domains with several obstacles G Eskin

A singular function analysis of the wideband beam pattern design problem G D de Villiers

Can one use total variation prior for edge-preserving Bayesian inversion? M Lassas and S Siltanen

Inverse statistical estimation via order statistics: a resolution of the ill-posed inverse problem of PERT scheduling W F Pickard

Pad\'e approximation of Laplace transforms of some special functions in terms of Painlev\'e equations Y Nakamura and N Ohira

An n-dimensional Ambarzumian type theorem for Dirac operators M Kiss

Reconstruction of inclusions for the inverse boundary value problem with mixed type boundary condition and source term Y Daido and G Nakamura

Numerical methods for volume preserving image registration E Haber and J Modersitzki

Lateral overdetermination of the FitzHugh--Nagumo system S Cox and A Wagner

A further note on a theorem of Ingham and simultaneous observability in critical time V Komornik and P Loreti

Thermoacoustic computed tomography with large planar receivers M Haltmeier, O Scherzer, P Burgholzer and G Paltauf

An inexact Cayley transform method for inverse eigenvalue problems
Z-J Bai, R H Chan and B Morini

Imaging that exploits multipath scattering from point scatterers
M Cheney and R J Bonneau

All articles are free for 30 days after publication on the web. This issue is available at: http://stacks.iop.org/0266-5611/20/i=5

Submitted by: Elizabeth Martin, Senior Production Editor, Inverse Problems
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Fax: +44 (0)117 929 4318 WWW: http://www.iop.org

From: "jamesverebeck" <jamesverebeck@comcast.net>
Subject: Inverse Problems in Science and Engineering
Date: Sat, 28 Aug 2004

Inverse Problems in Science and Engineering October 2004 Volume 12
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A. P. DE OLIVEIRA and H. R. B. ORLANDE

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O. M. ALIFANOV, A. V. NENAROKOMOV, S. A. BUDNIK, V. V. Michailov and V. M. Ydin

Submitted by: Jim Beck
e-mail: jamesverebeck@comcast.net, or beck@egr.msu.edu
or jvb@beckeng.com

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA contents
Date: Thu, 12 Aug 2004

Linear Algebra and its Applications 15 September 2004 Vol. 389

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On the even permutation polytope
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On Krein's formula in indefinite metric spaces
Sergey Belyi and Eduard Tsekanovskii

On polynomial approximation of the inverse of an operator
Avraham Feintuch

An extended compact profile iterative method criterion for sparse H-matrices
A. Hadjidimos

Congruences of a square matrix and its transpose
Roger A. Horn and Vladimir V. Sergeichuk

Perturbation analysis of generalized inverses of linear operators in Banach spaces Qianglian Huang and Jipu Ma

Some properties on Schur complements of H-matrices and diagonally dominant matrices Jianzhou Liu and Yunqing Huang

http://www.sciencedirect.com/science/issue/5653-2004-996109999-513971

These articles and over 100 articles in press (with many links to cited articles) are now posted on the LAA site on ScienceDirect http://www.sciencedirect.com . The website contains every paper published in LAA since its inception in 1968.

Abstracts and links are freely availbale to all. Full papers are availbale to people in institutions that subscribe to LAA or ScienceDirect.

Submitted by:
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------- end -------

IPNet Digest Volume 11, Number 08 October 1, 2004

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.mth.msu.edu/ipnet

From: Ron Kimmel <ronk@sccm.stanford.edu>
Subject: Conference in Germany on PDE Methods in Computer Vision
Date: Tue, 21 Sep 2004

Submission site is now open:

The Fifth International Conference on
Scale-Space and PDE Methods in Computer Vision
Schloesschen Schoenburg
Hofgeismar, Germany, April 7-9, 2005

CALL FOR PAPERS

Scale-space techniques and methods based on partial differential equations (PDEs) have become widely used tools in image processing and computer vision. They include a variety of methods such as linear scale-spaces, nonlinear diffusion filtering, geometric flows, adaptive scalable kernels, level set methods, variational techniques, and continuous- scale morphology.

This conference deals with all aspects of these techniques, including
- theoretical foundations
(axiomatic foundations, well-posedness, differential-geometric aspects,
relations to other multiscale paradigms, biological relevance),
- discrete and numerical aspects
(discrete theories, efficient numerical methods),
- applications in image processing and computer vision
(image restoration, shape analysis, grouping, segmentation, motion, stereo, registration)
- applications in other fields
(biomedical applications, industrial inspection, security).

It is the fifth conference in a series of successful biannual meetings held in Utrecht, Corfu, Vancouver and Skye. It will take place in a little castle (Schloesschen Schoenburg) in a scenic place near the small town of Hofgeismar, Germany. The conference is sponsored by the

German Pattern Recognition Society (DAGM).

It is planned to publish the proceedings in the Springer Lecture Notes in Computer Science Series. Selected papers will appear in a special issue of the International Journal of Computer Vision. Prospective authors are encouraged to submit manuscripts of not more than 12 pages in Springer LNCS format by October 1, 2004.

IMPORTANT DATES

Abstract submission deadline: October 1, 2004 (Friday)
Submission deadline: October 7, 2004 (Thursday)
Notification of authors: November 22, 2004
Reduced conference fee deadline: December 6, 2004
Camera-ready papers: December 15, 2004
Conference: April 7-9, 2005:

GENERAL CO-CHAIRS:

Ron Kimmel	(Technion, Haifa, Israel)
Nir Sochen	(Tel-Aviv University, Israel)
Joachim Weickert	(Saarland University, Germany)

INVITED SPEAKERS

Peter Basser	(NIH, Bethesda, USA)
Achi Brandt	(Weizmann, Rehovot, Israel)
Michael Unser	(EPFL, Lausanne, Switzerland)

For more details, see http://www.scalespace.org/
[Originally submitted to NA-Net -Ed.]

From: Kirsten Wilden <wilden@siam.org>
Subject: SIAM Conference on Control and Its Applications
Date: Wed, 29 Sep 2004 08:42:51 -0400

Conference Name: Sixth SIAM Conference on Control and Its Applications, being held jointly with the 2005 SIAM Annual Meeting

Location: Hilton New Orleans Riverside Hotel, New Orleans, Louisiana

Dates: July 11-14, 2005

Invited Plenary Speakers
Marie Csete, Emory University
Mrdjan Jankovic, Ford Research and Advanced Engineering
(Joint Plenary Speaker with the 2005 SIAM Annual Meeting)
Naomi Leonard, Princeton University
William Levine, University of Maryland, College Park
William McEneaney, University of California, San Diego
Igor Mezic, University of California, Santa Barbara
Thaleia Zariphopoulou, University of Texas, Austin

Invited Topical Speaker
Matthias Heinkenschloss, Rice University
(Joint Topical Speaker with the 2005 SIAM Annual Meeting)

The Call for Presentations for this conference is available at:
http://www.siam.org/meetings/ct05/

Deadlines

Minisymposium proposals: December 10, 2004

Abstracts for all contributed and minisymposium presentations:
January 7, 2005

For additional information, contact SIAM Conference Department at
meetings@siam.org.

From: "IGWMC" <igwmc@mines.edu>
Subject: ModelCARE 2005 Papers
Date: Thu, 30 Sep 2004

This is to remind you that the deadline for abstract submission for
ModelCARE2005 is coming up soon.

ModelCARE2005 is the follow up of the successful ModelCARE2002
conference in Prague, and is entitled:

"Calibration and Reliability in Groundwater Modelling, From
Uncertainty to Decision Making"

The conference will be held in The Hague (Scheveningen), the
Netherlands, June 6-9, 2005

Abstracts are due by October 15, 2004

For more information and ABSTRACT SUBMISSION, please see the
conference web site at http://modelcare2005.nitg.tno.nl
Please feel free to forward this message to your colleagues.

We look forward to seeing you there!
Eileen Poeter

From: "Graham Gladwell" <graham@gladwell.com>
Subject: Second Edition of Inverse Problems in Vibration
Date: Tue, 28 Sep 2004

Inverse Problems in Vibration, Second Edition,
By Graham M.L.Gladwell, University of Waterloo, Ontario, Canada
Book Series: Solid Mechanics and its Applications 119

In the first, 1986, edition of this book, inverse problems in
vibration were interpreted strictly: problems concerning the
reconstruction of a unique, undamped vibrating system, of a specified
type, from specified vibratory behaviour, particularly specified
natural frequencies and/or natural mode shapes. In this new edition
the scope of the book has been widened to include topics such as
isospectral systems- families of systems which all exhibit some
specified behaviour; applications of the concept of Toda flow; new,
non-classical approaches to inverse Sturm-Liouville problems;
qualitative properties of the modes of some finite element models;
damage identification.

With its emphasis on analysis, on qualitative results, rather than on
computation, the book will appeal to researchers in vibration theory,

matrix analysis, differential and integral equations, non-destructive testing, modal analysis, vibration isolation, etc.

Hard Cover 2004, 458 pp. ISBN 1-4020-2670-6 GBP 73.00, US$116.00

Pre- publication Offer GBP 52.00, US$83.00 Valid until Dec 14 2004

In the Americas Order from Springer, Order Dept., P.O.Box 2485, Secaucus, NJ 07096-2485, USA 1-201-348-4505, toll Free 1-800-SPRINGER (1-800-777-4643), orders@springer-ny.com , www.springeronline.com

Elsewhere: order Dept, P.O.Box 322, 3300 AH Dordrecht, The Netherlands 31-78-657-6474, Toll Free 31-78-657-6050 orderdept@wkap.nl , www.wkap.nl

Submitted by: Graham Gladwell

From: Xue-Cheng Tai <xue-cheng.tai@uib.no>
Subject: PhD/Postdoc positions in reservoir mechanics, level set methods
Date: Mon, 13 Sep 2004

Research fellowships at the Center for Integrated Petroleum Research (CIPR), University of Bergen, Norway -- 2 PhD and 1 postdoc positions.

At the faculty of Mathematics and Natural Sciences, University of Bergen there are three vacant research fellowships in reservoir mechanics. The fellows will work on the project: "Efficient reservoir characterization and production optimization using the augmented Lagrangian and level set methods".

The objectives of this project are:
Develop new and more efficient numerical methodology for reservoir characterization and production optimization.
This will be achieved by extending the augmented Lagrangian approach for constrained optimization to flow equations describing multiphase flow in reservoirs and apply this approach to

1. Identify reservoir properties (permeability and porosity) in every grid cell in the model conditioned to prior geological knowledge and dynamic data (production data and 4D seismic data).

2. Incorporate level set techniques for identifying geologic facies (regions with equal or approximately equal properties) from dynamic data.

3. Increase areal sweep by optimal allocation of available water handling capacity between individual wells or well segments (smart wells).

4. Further improvement of the optimization algorithms by incorporating and testing multiscale, multigrid and domain decomposition techniques.

For more information contact Professor Sigurd Ivar Aanonsen, sigurd.aanonsen@cipr.uib.no, or Professor Xue-Cheng Tai, tai@mi.uib.no. Application deadline: September 27th 2004. For more details, see web pages:
http://melding.uib.no/doc/Ledige_stillinger/1094212849.html and
http://melding.uib.no/doc/Ledige_stillinger/1094212567.html.

Submitted by:
Dr Xue-Cheng Tai Professor of Mathematics http://www.mi.uib.no/~tai
Depart of Math, Univ of Bergen, Johannes Brunsgate 12,Bergen,N-5008,
Norway. Fax:47-55589672, Phone: 47-55584868(CIPR), 55582819(MI).

[Note: Professor Tai indicates that applications may be submitted
for a short while after the September 27th deadline. -Ed.]

From: Yves Lucet <ylucet@ouc.bc.ca>
Subject: Faculty Position in Image Processing, Univ. of British Columbia
Date: Fri, 24 Sep 2004

Several new positions are now being published for the University of
British Columbia new Okanagan campus. The full list of positions is at
http://www.okanagan.ubc.ca/faculty_staff/prospective/recruitment/index.ht
ml

There is one position in optimization and image processing. Read the
description at
http://www.okanagan.ubc.ca/faculty_staff/prospective/recruitment/h3_optim
ization.html

These positions are part of the creation of the new campus, which
results from the separation of the Okanagan University College into two
new institutions: UBC Okanagan and the new Okanagan College. See the web
page for details on how to apply.

I will gladly answer any question related to the optimization and image
processing position.

Yves Lucet,
Assistant Professor, Computer Science Department,
Okanagan University College, North Kelowna Campus
(250) 762-5445 ext 7534 Office SCI 112
[Originally submitted to NA-Net -Ed.]

From: Bruce Long <bruce@asu.edu>
Subject: Faculty Position in Computational Biomathematics, Imaging
Date: Thu, 23 Sep 2004

ARIZONA STATE UNIVERSITY
COMPUTATIONAL BIOMATHEMATICIAN

The Department of Mathematics and Statistics (http://math.asu.edu) at
Arizona
State University invites applications for a tenure-track position at the
assistant professor rank in computational biomathematics commencing Fall
2005.
All candidates must have an earned doctoral degree in mathematics,
computer
science, or a closely related area by August 16, 2005, and have
demonstrated
potential for excellence in teaching and research. Candidates must have
research strengths and experience in applying scientific
computing/computational
mathematics to biological disciplines, for example, molecular or
structural

biology, nanomedicine, genetics, disease studies, or imaging. Preference will
be given to candidates who have relevant post-doctoral experience. The individual selected for this position will be expected to establish an extramurally funded research program.

The successful candidate will join thriving groups in computational mathematics
and mathematical biology. The applicant will be expected to be an active participant in the graduate program in Mathematics, in particular in the Computational Biosciences program (http://www.asu.edu/compbiosci) on the ASU campus. Departmental facilities include networked clusters of high-end
workstations, several graphics computers, and access to the University's central computing facilities.

Arizona State University, a Research 1 institution, is rapidly developing a
national and international profile in computational biosciences and biotechnology, in addition to the cross-disciplinary Computational Biosciences
program. ASU recently founded the Biodesign Institute (http://www.biodesign.org)
and has close ties to the expanding genomics community of local Phoenix, including the Translational Genomics Institute (TGen) and the International
Genomics Consortium.

Applicants must send i) a curriculum vitae, ii) a personal statement addressing
their research agenda, iii) a statement of teaching philosophy, iv) an AMS
cover sheet (http://www.ams.org/coversheet/), and v) must arrange for three
letters of recommendation to be sent to:

Computational Biomathematics Search Committee
Department of Mathematics and Statistics
Arizona State University
PO Box 871804
Tempe, AZ 85287-1804

Review of the applications will begin on December 1, 2004; if not filled, weekly thereafter or until the search is closed. AA/EOE
[Originally submitted to NA-Net -Ed.]

From: Romas Baronas <romas.baronas@maf.vu.lt>
Subject: Table of Contents, Nonlinear Analysis: Modelling and Control
Date: Wed, 29 Sep 2004

Nonlinear Analysis: Modelling and Control 2004 Volume 9, Number 3
Table of Contents

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

Computational Modelling of a Sensor Based on an Array of Enzyme Microreactors R. Baronas, F. Ivanauskas, J. Kulys, M. Sapagovas

The Optimization Process of Elimination Sediment from the Pipe by Impact Load V. Dorosevas, V. Volkovas

Article title: Voronoi Analysis of a Soccer Game S. Kim

Macrokinetic Model of Catalase Electrode with Biphasic Enzyme Inhibition K. Kriauciunas, J. Kulys

Finite Difference Solution Methods for a System of the Nonlinear Schrodinger Equations A. Kurtinaitis, F. Ivanauskas

Space-Time Recovery of Arbitrarily Shaped Wave-Packets by Means of Three Dimensional Imaging Technique
A. Matijosius, R. Piskarskas, E. Gaizauskas, A. Dubietis, P. Di Trapani

Information Transmission Concept Based Model of Wave Propagation in Discrete Excitable Media S. Raudys

Nonlinear Analysis: Modelling and Control, an official journal of the Lithuanian Association of Nonlinear Analysts (LANA), welcomes contributions from the international community.

For a paper submission, please refer to
http://www.lana.lt/journal

Dr. Romas Baronas, Journal Secretary,
Nonlinear Analysis: Modelling and Control
------- end -------

IPNet Digest Volume 11, Number 09 November 1, 2004

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.mth.msu.edu/ipnet

From: Simon ARRIDGE <S.Arridge@cs.ucl.ac.uk>
Subject: Applied Inverse Problems 2005
Date: Wed, 27 Oct 2004

APPLIED INVERSE PROBLEMS 2005
Royal Agricultural College, Cirencester, United Kingdom
26-30 June 2005

Second Announcement and Call for Participation

Conference Website: http://www.cs.ucl.ac.uk/aip2005/

Participation is invited for the third in the series of Applied Inverse Problems conferences to be held at Royal Agricultural College, Cirencester, United Kingdom 26-30 June 2005. The conference will consist of plenary speakers, minisymposia, and poster sessions.

Contributed presentations are solicited in the form of posters, which will be published in the conference abstracts.

[This item has been edited because it included Word/pdf documents. Please see the above website for complete information. -Ed.]

From: Denis Maillet <Denis.Maillet@ensem.inpl-nancy.fr>
Subject: Final announcement - Eurotherm Winter School: Thermal Measurements and Inverse techniques
Date: Wed, 20 Oct 2004

The French Heat Transfer Society organizes a Winter School:

Thermal Measurements and Inverse techniques:
A tool for the Characterization of Multiphysical Phenomena

January 16 - 21, 2005 - Aussois (french Alps)

with the support of the Eurotherm Committee

You will find detailed information on the following website:
    http://iusti.polytech.univ-mrs.fr/metti2005

Deadline for registration: December 10, 2004

This school, which will be held in English, is open to attendees (PhD students, academics, R&D engineers) from different countries of the European Community but participants from other countries are also welcome.

Objectives
Techniques for solving inverse problems as well as their applications are currently rapidly developing in all the different domains of physical sciences and particularly in Heat Transfer. Applied mathematicians, statisticians and signal processing specialists generally develop these techniques. Experimentalists desiring to go beyond traditional data processing techniques for estimating the parameters of a model with the maximum accuracy feel often ill-prepared in front of inverse techniques. In order to avoid biases at different levels of this kind of involved task, it seems compulsory that specialists of measurement inversion techniques, modelling techniques and experimental techniques share a wide common culture and language. These exchanges are necessary to take into account the difficulties associated to all these fields. It is in this state of mind that this school is proposed.

The METTI Group (Thermal Measurements and Inverse Techniques), which is a division of the Societe Francaise de Thermique (SFT: French Heat Transfer Society), has already run two similar schools, in the Alps (Aussois) in 1995 and in the Pyrenees (Bolqu=E8re-Odeillo) in 1999. For this third edition the school is open to participants from the European Community with the support of the Eurotherm Committee.

List of courses, lecturers and main topics:
[This information has been deleted for reasons of article length. Please see website given above for more information. -Ed.]

Workshops
Workshops will be held in the Aussois Centre between 17:00 and 20:00 from Monday to Thursday. They will include an experimental and/or a numerical part. A list and a short description and available on the School website.

Submitted by: Prof. Denis Maillet
Institut National Polytechnique de Lorraine, Nancy
recherche (research) : LEMTA - 2, avenue de la For=EAt de Haye - 54504 Vandoeuvre cedex - France
Tel: (33) 03 83 59 56 06 (ou 07)
Fax: 03 83 59 55 51
e-mail: dmaillet@ensem.inpl-nancy.fr

From: IFIP TC7 2005 <ifip2005@polito.it>
Subject: Final call for papers, IFIP-TC7 conference
Date: Tue, 12 Oct 2004

Dear Collegue,

We would recall the deadline for submitting abstracts to the conference, which is November 1.

The list of the invited sessions and updated information on the conference
can be found at the address

http://www.polito.it/ifip2005

The list of the plenary talks and invited sessions is pasted below.

Best whishes, Luciano Pandolfi

PLENARY TALKS

Roger Fletcher
http://www.maths.dundee.ac.uk/~fletcher/

Anders Forsgren "Interior point methods for nonlinear optimization" (preliminary title) http://www.math.kth.se/~andersf/

Dan M. Frangopol "Multiobjective optimization of risk-based maintenance and life-cycle cost of civil infrastructure"
http://spot.colorado.edu/~frangopo/

William Hager http://www.math.ufl.edu/~hager/

Janos Mayer "On the numerical solution of stochastic optimization problems"
http://www.unizh.ch/ior/Pages/Deutsch/Mitglieder/Mayer/Mayer.php

Jorge Nocedal "Simulation Based Optimization"
http://www.ece.northwestern.edu/~nocedal

Alfio Quarteroni "Control and adaptivity in the numerical approximation of partial differential equations"
http://iacs.epfl.ch/cmcs/AQ/public.htm

H. Mete Soner "Stochastic optimal control in finance" (preliminary title) http://home.ku.edu.tr/~msoner

Gunther Uhlmann "Electrical Impedance Tomography and Travel Time Tomography" http://www.math.washington.edu/~gunther/

Riccardo Zecchina http://www.ictp.trieste.it/~zecchina/

SPECIAL SESSIONS

A.V. Balakrishnan is organizing a special session "On the Possio Equation
and its Central role in AeroElasticity"

J. Cagnol, M.C. Delfour, J. Sokolowski, D. Tiba, J.P. Zolesio are organizing a special session (six subsessions) on "shape analysis and optimization" (in the 100th annyversary of the thesis of D. Pompeiu). Details are here .

INVITED SESSIONS

"Analysis and optimization of systems modeled by Partial Differential Equations", G. Avalos, F. Bucci

"Case studies in stochastic optimization" M. Gasparini, E. Riccomagno

"Complementarity problems and variational inequalities", S. Scholtes

"Control under communication constraints", S. Zampieri

"Controllability and inverse problems for distributed parameter systems", V. Agoshkov, M. Polis, I.F. Sivergina

"Geometric methods in optimal control" U. Boscain, B. Piccoli

"Infinite horizon optimal control problems - Theory and applications" S. Pickenhain

"Inconsistency and uncertainty resolution in distributed information systems" , N.T. Nguyen, R. Katarzyniak, J. Sobecki, K.Juszczyszyn

"Inverse problems for PDE: identification of coefficients and domain. Theory and applications", S. Vessella

"Large scale nonlinear optimization", H. Scolnik

"Mathematical models for granular matter", P. Cardaliaguet, P. Cannarsa

"Modeling and computation in finance", A. Bagchi

"Modeling and optimization in liberalized markets", A. Kalliauer

"Multi-Objective Optimization in Structural and Mechanical Systems", H. Furuta

"Numerical Analysis of Optimization in PDEs", V. Maksimov, F. Troeltzsch

"Recent advances in semi-infinite optimization", M. A. L=F3pez

"Semi-infinite stochastic optimization" D. Dentcheva, A. Ruszczynski

"Singular perturbations of control systems", M. Bardi, O. Alvarez

"Stability in optimization and applications", D. Klatte, B. Kummer

"Stochastic Optimization Methods in Engineering and Finance", K. Marti, J. Mayer, P. Kall

"Stochastic simulation", A. Bagchi

"Stochastic Systems and Control", E. Priola, G. Tessitore, J. Zabczyk

"Well-posedness and stability in optimization and optimal control", A. Dontchev , T. Zolezzi

L. Pandolfi

22nd IFIP TC 7 Conference on
System Modeling and Optimization
Turin, Italy, July 18-22, 2005

http://www.polito.it/ifip2005

From: Kirsten Wilden <wilden@siam.org>
Subject: ACM-SIAM Symposium on Discrete Algorithms (SODA05)
Date: Tue, 05 Oct 2004

Subject: ACM-SIAM Symposium on Discrete Algorithms (SODA05)

Conference Name: ACM-SIAM Symposium on Discrete Algorithms (SODA05)

Conference Program Chair: Adam Buchsbaum, AT&T Labs- Research

Location: Vancouver, British Columbia, Canada

Dates: January 23-25, 2005

The preliminary program and pre-registration are now available at http://www.siam.org/meetings/da05/. The pre-registration deadline is Monday, December 20.

For additional information, contact the SIAM Conference Department at meetings@siam.org.

From: Jennifer Mueller <mueller@math.colostate.edu>
Subject: positions at Colorado State University
Date: Fri, 1 Oct 2004

The Department of Mathematics at Colorado State University invites applications for multiple (up to four) tenure/tenure-track faculty positions at the Assistant Professor rank or above. The department is seeking candidates in partial differential equations, numerical analysis and scientific computation, though exceptional candidates in other areas of mathematics may be considered. The successful applicant will be expected to complement existing faculty research. Colorado State University is a partner in the Colorado grid computing initiative.

All candidates must have an earned doctorate in mathematics or a closely related area at the time of appointment, and demonstrate a strong professional background preparing them for teaching and research in Mathematics. The earliest starting date for these positions is August 15, 2005.

The Department has over 300 undergraduate majors and 65 graduate students, with 24 tenure-track faculty. Colorado State University has an enrollment of 25,000 students and is located in Fort Collins, Colorado. More information may be obtained from the Department's Web page at http://www.math.colostate.edu <http://www.math.colostate.edu/>.

Applicants should submit a complete curriculum vita, summary of future research plans, evidence of effective teaching, and at least three letters of recommendation. All materials should be sent to:

Faculty Hiring Committee
Department of Mathematics
Colorado State University
Fort Collins, CO 80523
Electronic submissions are welcome and should be sent to

search@math.colostate.edu

Applications received by December 1, 2004 will receive full consideration, but screening will continue until the positions are filled. All files will be open for review by all faculty of the Department of Mathematics. A job description can be found at http://www.math.colostate.edu/info/jobdesc.html. Colorado State University is an EEO/AA employer (Equal Opportunity Office, 101 Student Services).

Submitted by:
Jennifer Mueller
Department of Mathematics
101 Weber Building
Colorado State University
Fort Collins, CO 80523-1874

Office: 970.491.7417
FAX: 970.491.2161
mueller@math.colostate.edu
www.math.colostate.edu/~mueller

From: Jesse Barlow <barlow@cse.psu.edu>
Subject: Special issue: SIAM Journal Matrix Analysis and Applications
Date: Thu, 07 Oct 2004

Call for Papers
Special Issue of the SIAM Journal no Matrix Analysis and Applications
Accurate Solution of Eigenvalue Problems

In the last 15 years, there have been a number of advances in the accurate solution of eigenvalue problems. Well-known advances include fast and more accurate methods for solving the symmetric tridiagonal eigenproblem, more accurate methods for computing the singular value decomposition, and further understanding of the conditioning theory of the non-symmetric eigenvalue problem.

To recognize these advances and to encourage further advances, we plan a special issue of SIAM Journal on Matrix Analysis and Applications on Accurate Solution of Eigenvalue Problems.

This special issue is in coordination with the International Workshop on Accurate Solution of Eigenvalue Problems V held in Hagen, Germany, June 28--July 1, 2004. The participants in the workshop are strongly encouraged to submit papers to the Special Issue. Submissions from non--participants, consistent with the themes of the workshop, are welcome.

The editors for this special issue will be

Jesse L. Barlow, Department of Computer Science and Engineering, The Pennsylvania State University, University Park, PA 16802--6822

Ilse C.F. Ipsen, Department of Mathematics, North Carolina State University, Raleigh, NC 27695--8205

Beresford N. Parlett, Department of Mathematics, University of California at Berkeley, Berkeley, CA 94720

Kresimir Veselic', Fernuniversit\"{a}t Hagen, Lehrgebeit Math. Physik, Postfach 940, 5800 Hagen, Germany

Manuscripts submitted to this Special Issue will be refereed according

to standard procedures for the SIAM Journal on Matrix Analysis and Applications. The deadline for submissions will be April 1, 2005.

All interested should submit a cover letter and manuscript in PDF format via SIMAX's online submission site at
http://simax.siam.org>http://simax.siam.org .

See Author Instructions on the site if you have not yet submitted a paper through this web-based system. Note the block labeled Special Section (just under the keywords block on your submission screen) and select "Special Issue on Accurate Solution of Eigenvalue Problems" from the dropdown box. Also be sure to note in the Manuscript Comment text box at the bottom of this page that your work is intended for this Special Issue.

If any questions, contact Mitch Chernoff, Publications Manager, SIAM, at chernoff@siam.org.

From: "jamesverebeck" <jamesverebeck@comcast.net>
Subject: IPISE
Date: Tue, 26 Oct 2004

Inverse Problems in Science and Engineering Dec. 2004 Vol. 12, No. 6
Table of Contents

Estimations of a 2D convection heat transfer coefficient during a metallurgical "Jominy end-quench" test: comparison between two methods and experimental validation
P.LE MASSON, T. LOULOU and E. ARTIOUKHINE

Identifiability of heat-exchange parameters
M. ROMANOVSKI

Using a neural network to determine fitness in genetic design
J. ZHANG and S. FARRITOR

A wavelet multiscale method for the inverse problems of a two-dimensional wave equation H.S. FU and B. HAN
------- end -------

IPNet Digest Volume 11, Number 10 December 1, 2004

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.mth.msu.edu/ipnet

From: "Klibanov, Michael" <mklibanv@email.uncc.edu>
Subject: 5th International ISAAC Congress, 2005, Catania, Sicily
Date: Thu, 11 Nov 2004 13:52:17 -0500

Michael Klibanov and Masahiro Yamamoto are organizing a session called "Inverse problems, theory and numerical methods" on the 5th International ISAAC Congress July 25-30, 2005 in Catania, Sicily (Italy). The purpose of this message is to invite you to participate. The local organizer is University of Catania. See http://mathisaac.org <http://mathisaac.org/> for more details about ISAAC and this congress. Actually, Catania is a quite attractive place for tourists, see http://www.tripadvisor.com <http://www.tripadvisor.com/>

Organizers are proposing an excellent entertainment program. Besides of this, I am sure that the mathematical part of the meeting will be also quite interesting one. Proceedings will be published. If you decide to participate, please do not forget to pay your registration fee by April 30, 2005 (see details at the above WEB site).

Please inform me (copy to Masahiro myama@ms.u-tokyo.ac.jp) about your decision soon. If the answer is "yes", please send your abstract before May 31 at three addresses:
http://atlas-conferences.com/cgi-bin/abstract/submit/capg-01,
mklibanv@email.uncc.edu and myama@ms.u-tokyo.ac.jp

We truly hope to see you in Catania!

Best regards, Michael Klibanov and Masahiro Yamamoto

From: "Prof. Alexander G.Ramm" <ramm@math.ksu.edu>
Subject: New book on Inverse Problems
Date: Mon, 15 Nov 2004

The book by
Alexander G.Ramm, "Inverse problems", Springer, New York,
2005, 462 pages,
isbn 0-387-23195-1 and E-ISBN-0-387-23218-4
has appeared.

The book consists of 11 chapters, the bibliography, the index and the preface.

In Chapter 1 the statements of many inverse problems are given.

In Chapter 2 the theory of ill-posed problems is briefly sketched. The emphasis in this Chapter is on the dynamical systems method (DSM), which was not presented in the earlier published books on ill-posed problems. The DSM allows one to solve a wide variety of ill-posed problems, both linear and nonlinear.

Chapter 3, which is large, deals with one-dimensional inverse scattering and spectral problems. here the reader finds many novel results and a new approach to classical inverse problems, such as inverse scattering problem on the half-axis and inverse spectral problem. Several new inverse problems are investigated. The basic tool in this Chapter is Property C for ODE, that is, completeness of the set of products of solutions to homogeneous ODE. M.G. Krein's inversion method is presented with detailed proofs apparently for the first time. Consistency of this method is proved. Inverse problems with "incomplete data" are studied. The theory of ground-penetrating radars is developed. An inverse problem of ocean acoustics is formulated and solved. Some new inverse problems for the heat and wave equations are formulated and solved.

Chapter 4 deals with the inverse obstacle scattering problem under weak assumptions on the smoothness of the obstacle. Stability estimates for the solution of inverse obstacle scattering problem are obtained. Analysis of the published numerical methods for solving this problem is given.

Chapter 5 deals with the inverse potential scattering problem with fixed-energy data. The cases of exact and noisy data are studied. The author's inversion method is presented, its error estimates are obtained, and its comparison with the method based on the usage of the Dirichlet-to-Neumann map is given. The presentation is based on Property C for PDE, the notion introduced by the author and applied to a study of many inverse problems. necessary and sufficient condition is given for the scatterer to be spherically symmetric. Error estimates for the Born inversion are derived. Inverse spectral problem is considered.

In Chapter 6 examples of non-uniqueness of the solution to three-dimensional inverse problem of geophysics are given, and some uniqueness theorems are proved for inverse problems for parabolic and hyperbolic equations.

In Chapter 7 a very brief discussion of some inverse source problems is given.

In Chapter 8 a non-over-determined three-dimensional inverse spectral problem is studied.

In Chapter 9 the inversion theory for low-frequency data is developed. Many specific inverse problems of geophysics are considered.

In Chapter 10 the author's theory of wave scattering by small (in comparison with the wavelength) bodies of arbitrary shapes is summarized. Many-body scattering problem is considered. Inverse

problems of finding small subsurface inhomogeneities from the scattering data, measured on the surface, is studied. Inverse problem of radio-measurements is formulated and solved analytically.

Chapter 11 deals with Pompeiu problem.

The book can be ordered by email
orders-ny@springer-sbm.com and
by phone: 1-800-springer

Alexander G. Ramm

From: Hans Schneider <schneidh@for.mat.bham.ac.uk>
Subject: Special Issues in honour of Pauline van den Dreissche
Date: Fri, 5 Nov 2004

Special issue in honour of Pauline van den Driessche
SECOND ANNOUNCEMENT

Linear Algebra and Its Applications is pleased to announce a special issue in honour of Professor Pauline van den Driessche in recognition of her many important contributions to linear algebra and mathematical biology, and on the occasion of her 65th birthday.

The deadline for submission of papers has ben extended to 15 February 2005. Papers are solicited for the special issue within the scope of LAA, especially those that overlap with the research interests of Pauline van den Driessche. Papers for submission should be sent to any of the four special editors, and will be subject to normal refereeing procedures according to LAA standards:

Professor Steve Kirkland
Department of Mathematics
University of Regina
Regina, SK, Canada
S4S 0A2
e-mail: kirkland@math.uregina.ca

Professor Judith McDonald
Mathematics Department
Box 643113
Washington State University
Pullman, WA, USA
99164-3113
e-mail: jmcdonald@math.wsu.edu

Professor Dale Olesky
Department of Computer Science
University of Victoria
Victoria, BC, Canada
V8W 3P6
e-mail: dolesky@cs.uvic.ca

Professor Michael Tsatsomeros
Mathematics Department
Box 643113
Washington State University
Pullman, WA, USA
99164-3113

e-mail: tsat@math.wsu.edu

Submitted by: Hans Schneider
Mathematics Department, Van Vleck Hall, University of Wisconsin
480 Lincoln Drive, Madison, WI 53706-1313 USA
Office Phone: 608-262-1402
Math Dept Phone: 608-263-3054 Email: hans@math.wisc,edu
Math Dept Fax: 608-263-8891 http://www.math.wisc.edu/~hans

From: Liz Martin <liz.Martin@iop.org>
Subject: Contents list for Inverse Problems
Date: Tue, 9 Nov 2004

Inverse Problems December 2004 Volume 20, Issue 6

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All articles are free for 30 days after publication on the web. This issue
is available at: http://stacks.iop.org/0266-5611/20/i=6

Special Section on Electromagnetic Characterization of Buried Obstacles

3D near-to-surface conductivity reconstruction by inversion of VETEM data using the distorted Born iterative method
G L Wang, W C Chew, T J Cui, A A Aydiner, D L Wright and D V Smith

Inverse scattering with sparse Bayesian vector regression
Y Yu, B Krishnapuram and L Carin

Rapid three-dimensional inversion of multi-transmitter electromagnetic data using the spectral Lanczos decomposition method
M S Zhdanov and A Chernyavskiy

PAPERS

Wavelet modelling of the spherical inverse source problem with application to geomagnetism C Mayer

emodulation of RHESSI count rates by an unbiased linear Bayes estimator K Arzner

Non-negativity and iterative methods for ill-posed problems
D Calvetti, G Landi, L Reichel and F Sgallari

Reflecting uncertainty in inverse problems: a Bayesian solution using L\'evy processes R L Wolpert and K Ickstadt

Consistency and rates of convergence of nonlinear Tikhonov regularization with random noise N Bissantz, T Hohage and A Munk

Continuous future polynomial regularization of 1-smoothing Volterra problems A C Cinzori

On the scattering method for the ${\overline{\partial}}$-equation and reconstruction of convection coefficients A Tamasan

A new method in inverse scattering based on the topological derivative
G R Feijoo

Uniqueness results for an inverse periodic transmission problem
J Elschner and M Yamamoto

Identification of simple poles via boundary measurements and an application of EIT H Kang and H Lee

An alternative point of view on the equations of the inverse problem of dynamics M-C Anisiu

Automatic multi-mode Lamb wave arrival time extraction for improved tomographic reconstruction J Hou, K R Leonard and M K Hinders

Submitted by: Elizabeth Martin, Senior Production Editor
Inverse Problems, Institute of Physics Publishing, Dirac House, Temple Back, Bristol BS1 6BE UK
Tel: +44 (0)117 929 7481 E-mail: liz.martin@iop.org
Fax: +44 (0)117 929 4318 WWW: http://www.iop.org

From: Romas Baronas <romas.baronas@maf.vu.lt>
Subject: Table of Contents, Nonlinear Analysis: Modelling and Control
Date: Thu, 25 Nov 2004

Nonlinear Analysis: Modelling and Control 2004 Volume 9, Number 4

Table of Contents

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

Nonlinear Analysis: Modelling and Control, an official journal of the Lithuanian Association of Nonlinear Analysts (LANA), welcomes contributions from the international community.

For a paper submission, please refer to
http://www.lana.lt/journal

Dr. Romas Baronas, Journal Secretary,
Nonlinear Analysis: Modelling and Control,
e-mail: romas.baronas@maf.vu.lt
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