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               Michigan State University

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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: Bart Truyen <batruyen@etro.vub.ac.be>
Subject: Open positions: ETRO-IRIS Dep. of Vrije Universiteit Brussel
Date: Fri, 08 Dec 2000

Post-Doctoral Research Associate Numerical Analysis (ref. 231000/1)

Outstanding applicants are sought in the areas of numerical analysis,
scientific computing, inverse problems, geophysics or signal
processing. The successful candidate will be expected to conduct
research on the numerical aspects of geophysical inversion involving
Ground Penetrating Radar (GPR) and Electrical Impedance Tomography
(also known as resistance imaging). The application domain is that of
imaging shallowly buried objects, and in particular the identification
and localization of anti-personnel mines. Research is funded through
the Concerted Research Action "Numerical issues in tomographic shallow
subsurface imaging - With application to landmine detection-)," the
Bilateral Research Project "On the exploration of Electrical Impedance
Tomography as a novel method for subsurface detection of shallowly
buried objects - With application to humanitarian land mine
detection," and the National Science Foundation project "Stabilized
deconvolution methods for inverse problems - With application to
linear (Magnetic Resonance imaging) and nonlinear (Ground Penetrating
Radar imaging) image reconstruction." Additional information about
these projects can be found in the accompanying web pages, see
http://www.etro.vub.ac.be/Research/IRIS/Research/ANA-IP/ANA-
IP_welcome_page.
asp. Working in close collaboration with other team members engaged in
measurement aspects, the successful candidate will participate in
research on the numerical issues associated with (non-linear)
ill-posed inverse problems. Strong emphasis will be placed on advanced
least-squares problem formulations, regularization techniques,
multilevel methods, and optimization.

The initial appointment will be for two years and is renewable with
another 3 years.

Candidates must have completed all the requirements for the doctoral
degree by no later than January 1, 2001. Acquaintance with the subject

of geophysical imaging, and Electrical Impedance Tomography in particular, is a clear asset but is not regarded as an absolute prerequisite. Preference will be given to those candidates who best meet the research needs of the group.

Successful applicants will find at the Department of Electronics and Information Processing ETRO, a stimulating environment conducive to professional growth. The ANA-IP research group maintains active collaborative relationships with other research groups in the domain of signal processing, numerical mathematics and inverse problems, both nationally and internationally.

Inquiries may be addressed to Bart Truyen, Group Leader Applied Numerical Algorithms & Inverse Problems (ANA-IP), Department of Electronics and Information Processing (ETRO), Vrije Universiteit Brussel - VUB, Pleinlaan 2, B-1050, Brussels, Belgium, batruyen@etro.vub.ac.be, http://www.etro.vub.ac.be. The Vrije Universiteit Brussel - VUB is an equal opportunity/affirmative action employer.

Ph.D. Research Grant Numerical Analysis (ref. 231000/1bis)

Applications are invited for a research position in the areas of numerical analysis, scientific computing, inverse problems, geophysics or signal processing. The successful candidate will be expected to conduct research on the numerical aspects of geophysical inversion involving Ground Penetrating Radar (GPR) and Electrical Impedance Tomography (also known as resistance imaging). The application domain is that of imaging shallowly buried objects, and in particular the identification and localization of anti-personnel mines. Research is funded through the Concerted Research Action "Numerical issues in tomographic shallow subsurface imaging - With application to landmine detection-)," the Bilateral Research Project "On the exploration of Electrical Impedance Tomography as a novel method for subsurface detection of shallowly buried objects - With application to humanitarian land mine detection," and the National Science Foundation project "Stabilized deconvolution methods for inverse problems - With application to linear (Magnetic Resonance imaging) and nonlinear (Ground Penetrating Radar imaging) image reconstruction." Additional information about these projects can be found in the accompanying web pages pages, see http://www.etro.vub.ac.be/Research/IRIS/Research/ANA-IP/ANA-IP_welcome_page.
asp. Working in close collaboration with other team members engaged in measurement aspects, the successful candidate will participate in research on the numerical issues associated with (non-linear) ill-posed inverse problems. Strong emphasis will be placed on advanced least-squares problem formulations, regularization techniques, multilevel methods, and optimization.

Appointments will be for 4 years in the first instance, with a two-year probationary period.

Candidates for must have completed a M.Eng., M.Sc. or equivalent degree in electrical engineering, applied mathematics or physics. Special consideration will be given to candidates with a demonstrated experience in the domain of signal processing and E.M., or a closely related subject in the field of tomographic imaging. The research position will entail the preparation of a Ph.D. degree in

Engineering or Applied Sciences (possibly in collaboration with the originating research institute). Preference will be given to those candidates who best meet the research needs of the group.

Successful applicants will find at the Department of Electronics and Information Processing ETRO, a stimulating environment conducive to professional growth. The ANA-IP research group maintains active collaborative relationships with other research groups in the domain of signal processing, numerical mathematics and inverse problems, both nationally and internationally.

Inquiries may be addressed to Bart Truyen, Group Leader Applied Numerical Algorithms & Inverse Problems (ANA-IP), Department of Electronics and Information Processing (ETRO), Vrije Universiteit Brussel - VUB, Pleinlaan 2, B-1050, Brussels, Belgium, batruyen@etro.vub.ac.be, http://www.etro.vub.ac.be. The Vrije Universiteit Brussel - VUB is an equal opportunity/affirmative action employer.

Post-Doctoral Research Associate Non-linear Optimization (ref. 231000/2)

Outstanding applicants are sought in the areas of optimization, approximation theory. or numerical analysis, however, individuals with experience in closely-related fields are also encouraged to apply. The successful candidate will be expected to participate in research on the application of Radial Basis Functions to the problem of finding solutions to implicitly described nonlinear optimization problems, such arising from the discretisation of ill-posed problems. The application domain is that of geophysical inversion involving Ground Penetrating Radar (GPR) and Electrical Impedance Tomography (also known as resistance imaging). Research is funded through the Concerted Research Action "Numerical issues in tomographic shallow subsurface imaging - With application to landmine detection-)," the Bilateral Research Project "On the exploration of Electrical Impedance Tomography as a novel method for subsurface detection of shallowly buried objects - With application to humanitarian land mine detection," and the National Science Foundation project "Stabilized deconvolution methods for inverse problems - With application to linear (Magnetic Resonance imaging) and nonlinear (Ground Penetrating Radar imaging) image reconstruction." Additional information about these projects can be found in the accompanying web pages, see http://www.etro.vub.ac.be/Research/IRIS/Research/ANA-IP/ANA-IP_welcome_page.
asp. Successful candidates are expected to work closely with other researchers engaged in numerical analysis.

The initial appointment will be for two years and is renewable with another 3 years.

Candidates must have completed all the requirements for the doctoral degree by no later than January 1, 2001. Preference will be given to those candidates who best meet the research needs of the group.

Successful applicants will find at the Department of Electronics and Information Processing ETRO, a stimulating environment conducive to professional growth. The ANA-IP research group maintains active collaborative relationships with other research groups in the domain of signal processing, numerical mathematics and inverse problems, both nationally and internationally.

Inquiries may be addressed to Bart Truyen, Group Leader Applied Numerical Algorithms & Inverse Problems (ANA-IP), Department of Electronics and Information Processing (ETRO), Vrije Universiteit Brussel - VUB, Pleinlaan 2, B-1050, Brussels, Belgium, batruyen@etro.vub.ac.be, http://www.etro.vub.ac.be. The Vrije Universiteit Brussel - VUB is an equal opportunity/affirmative action employer.

Post-Doctoral Research Position on Multi-Spectral/Multi-Temporal IR Image Analysis (ref. 231000/4)

A Post Doctoral vacancy exists for a fixed term appointment, for a period of 24 months, to work in the Department of Electronics and Information Processing (ETRO) at the Vrije Universiteit Brussel - University of Brussels - as part of EU projects in the field of Humanitarian Land Mine Detection. The objective of the research is designing and using remotely sensed observations in detecting Anti Personnel (AP) Mines and Minefields. The current emphasis is focussed on improving understanding of visible, infrared and multispectral measurements as an estimate of minefield properties including, background soil and litter, AP mines. Subtasks include improvements to field instrumentation and measurements, and the exploitation of additional value of measuring multispectral and infrared emissions to address problems based on the spectral and thermal characteristics of soil, vegetation and man-made objects.

The position first requires experience in the use Multispectral and InfraRed imaging. The objective of this position will be to develop relationships between the multispectral IR properties of Anti Personnel (AP) Mines and their environment with emphasis on the detection and recognition of AP mines.

Candidates must have background knowledge of environmental remote sensing, image analyses and mathematical modeling. Candidates must have demonstrated ability to (i) initiate and conduct independent research in discipline related to the field of multispectral and thermal imaging and (ii) to publish their research results in peer reviewed journals. Skills in mathematical, statistical and computer sciences to perform qualitative and quantitative research are required. Knowledge of scientific and technology aspects of electro-optical imaging systems and remote sensing including, calibration and image analysis. Candidates must have a Ph.D. for example in Physical Sciences or Signal and Image Processing or a related discipline are appropriate for the position.

Related Websites of interest: More information on our R&D in the field of Humanitarian Land Mine Detection. can be found in http://www.etro.vub.ac.be Successful applicants will find at the Department of Electronics and Information Processing ETRO, a stimulating environment conducive to professional growth. The research group maintains active collaborative relationships with other research groups in the domain of signal processing, numerical mathematics and inverse problems, both nationally and internationally.

Applications, including a C.V., list of publications and the names of two referees may be addressed to Prof. Hichem Sahli, Group Leader Mine Detection (DEMINE), ETRO Department, Vrije Universiteit Brussel - VUB, Pleinlaan 2, B-1050, Brussels, Belgium. Tel: ++32 (0)2 629 29 16,

Fax: ++ 32 (0)2 629 28 83 e-mail: hsahli@etro.vub.ac.be

Submitted by:
Bart Truyen
Group leader Applied Numerical Analysis & Inverse Problems (ANA-IP)
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Faculty of Applied Sciences
ETRO Department - IRIS Research Group
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World Wide Web pages :
ETRO/VUB Pages : http://www.etro.vub.ac.be/

From: Bill Broadley <bill@math.ucdavis.edu>
Subject: Applied Mathematics at UC Davis
Date: Wed, 6 Dec 2000

APPLIED MATHEMATICS AT UC DAVIS

The Graduate Group in Applied Mathematics (GGAM) at the University of
California, Davis, invites applications from undergraduate students
interested in pursuing graduate studies (M.S and Ph.D degrees) in a
strong and vibrant program. We offer teaching and research
assistantships and fellowships to outstanding candidates. The group
consists of approximately sixty faculty members that carry out
research in many areas of the mathematical, physical, biological,
chemical and engineering sciences. The research interests of the
members of the GGAM and their students include mathematical biology,
computational neuroscience, atmospheric sciences, continuum mechanics,
computational fluid dynamics, hydrology, optimization and control,
theoretical chemistry, computer and engineering sciences, mathematical
physics, signal and image processing, statistics, combinatorial and
geometric algorithms. In addition to having faculty members who are
internationally- renowned experts in applied and computational
mathematics, the GGAM includes faculty who are leading experts in the
sciences and engineering. Many of our students hold internships at
private and government research laboratories. In addition to an
exciting research environment, the University of California and the
town of Davis provide a comfortable small town atmosphere within an
easy drive of the rich recreational and cultural facilities of San
Francisco, Sacramento, and the Lake Tahoe region.

The Graduate Group in Applied Mathematics at UC Davis accepts online
graduate applications. To apply or to receive more details about the
graduate program, please visit

http://www.math.ucdavis.edu/ggam/ or write to

     Graduate Coordinator
     Graduate Group Applied Mathematics
     Department of Mathematics
     One Shields Avenue
     University of California, Davis
     Davis, CA 95616-8633

Please note: The GGAM requires that all applicants take the GRE to be
considered for admission. The GRE's should be taken in October or

December. The TOEFL (Test of English as a Foreign Language) score is required for all foreign applicants whose native language is not English or who have not studied at institutions where English is the language of instruction. The deadline for fellowship applications is January 15th.

From: Georgios Stavroulakis <g.stavroulakis@tu-bs.de>
To: ipnet-digest@math.msu.edu
Subject: New Book: Inverse and Crack Identification
Date: Tue, 12 Dec 2000

New Book Announcement

Inverse and Crack Identification Problems in Engineering Mechanics
by Georgios E. Stavroulakis

Institute of Applied Mechanics, Dept. of Civil Engineering,
Carolo Wilhelmina Technical University, Braunschweig, Germany

Habilitationsschrift.   FB Bauingenieurwesen der TU Braunschweig.
Die ``venia legendi'' fuer das Fachgebiet  ``Mechanik'' wurde am
29. Juni 2000 erworben.

Habilitation Thesis. Civil Engineering Dept., TU
Braunschweig. The ``venia legendi'' for the scientific area of
``Mechanics'' was given on 29th of June 2000.

Short description.

Inverse and crack identification problems are of paramount importance
for health monitoring and quality control purposes arising in critical
applications in civil, aeronautical, nuclear, and general mechanical
engineering. Mathematical modeling and the numerical study of these
problems require high competence in computational mechanics and
applied optimization. This is the first monograph which provides the
reader with all the necessary information. Delicate computational
mechanics modeling, including nonsmooth unilateral contact effects, is
done using boundary element techniques, which have a certain advantage
for the construction of parametrized mechanical models. Both
elastostatic and harmonic or transient dynamic problems are
considered. The inverse problems are formulated as output error
minimization problems and they are theoretically studied as a bilevel
optimization problem, also known as a mathematical problem with
equilibrium constraints. Beyond classical numerical optimization,
soft computing tools (neural networks and genetic algorithms) and
filter algorithms are used for the numerical solution.

The book provides all the required material for the mathematical and
numerical modeling of crack identification testing procedures in
statics and dynamics and includes several thoroughly discussed
applications, for example, the impact-echo nondestructive evaluation
technique.

Audience.

The book will be of interest to structural and mechanical engineers
involved in nondestructive testing and quality control projects as
well as to research engineers and applied mathematicians who study and
solve related inverse problems. People working on applied optimization

and soft computing will find interesting problems to apply to their methods and all necessary material to continue research in this field.

Contents.

Preface.
I. Introduction. Problem Description.
1. Direct and inverse problems.
II. Theoretical and Computational Tools.
2. Computational mechanics.
3. Computational and structural optimization.
4. Selected soft computing tools.
III. Applications to inverse problems.
5. Static problems.
6. Steady-state dynamics.
7. Transient dynamics.

WWW-page and online order.
http://www.wkap.nl/book.htm/0-7923-6690-5

Submitted by:
Priv.-Doz. Dr.-Ing. Georgios E. Stavroulakis
Institute for Applied Mechanics   * Tel   ++ 49 531 391 7107
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D-38106 Braunschweig, Germany * URL http://www.tu-bs.de/~i5042301
Email: g.stavroulakis@tu-bs.de,   gestavr@cc.uoi.gr

From: "Janet Thomas" <janet.thomas@iop.org>
Subject: Contents list for Inverse Problems vol 17, issue 1
Date: Mon, 29 Jan 2001

Inverse Problems   Volume 17, Issue 1
             Table of Contents

Total size estimation and identification of multiple anomalies in the inverse conductivity problem   O Kwon and J K Seo

On the numerical inversion of the Laplace transform for nuclear magnetic resonance relaxometry
P Barone, A Ramponi and G Sebastiani

Modelling and estimating uncertainty in parameter estimation
H T Banks and K L Bihari

Inversion of the attenuated Radon transform   F Natterer

A Bayesian approach to crack detection in electrically conducting media   K E Andersen, S P Brooks and M B Hansen

Identifying the volatility of underlying assets from option prices
L-S Jiang and Y-S Tao

Some preconditioners for harmonic spherical spline problems
G Moreaux

Cormack-type inversion of exponential Radon transform
A Puro

CORRIGENDUM
Design strategies for electromagnetic geophysical surveys
H Maurer, D E Boerner and A Curtis

Inverse Problems in Engineering   2000   Vol. 8, No. 6
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Input Forces Estimation of a Cantilever Beam
C.-K.Ma and D.-C.Lin

A Three-Dimensional Inverse Method Using Navier- Stokes Equations for Turbomachinery Blading
Z. Wang, R. Cai, H. Chen and X. Jia

Numerical and Experimental Simulation for Heat Flux and Cutting Temperature Estimation Using Three-Dimensional Inverse Heat Conduction Technique
F. R. S. Lima, A. R. Machado, G. Guimaraes and S. Guths

An Iterative BEM for the Cauchy Steady State Heat Conduction Problem
in an Anisotropic Medium with Unknown Thermal Conductivity Tensor
N. S. Mera, L. Elliott, D. B. Ingham and D. Lesnic

Mathematics of Control, Signals, and Systems   2000   Vol. 13, No. 4
                Table of Contents

On partial order characterizations of information structures
D. Teneketzis and M.S. Andersland

Time-varying and adaptive discrete-time low-gain control of
infinite-dimensional linear systems with input nonlinearities
H. Logemann and E.P. Ryan

Robust properties of risk-sensitive control
P. Dupuis, M.R. James, and I. Petersen

Continuous-time blind channel deconvolution using Laguerre shifts
A. Hansson and B. Wahlberg

Optimal average case estimation in Hilbert norms
B. Kacewicz

INFORMATION
Information on MCSS including tables of contents is
available at its home pages:
www.cwi.nl/~schuppen/mcss/mcss.html
www.math.rutgers.edu/~sontag/mcss.html

Address for submissions:
J.H. van Schuppen (Co-Editor MCSS)
CWI
P.O.Box 94079
1090 GB Amsterdam
The Netherlands

Bradley Dickinson, Eduardo Sontag, Jan van Schuppen (Editors)

Submitted by:
Corry Magrijn (Secretary) for Jan H. van Schuppen (Co-Editor)
------- end -------

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

Today's Topics:
     2001 Inverse Problems in Engineering Symposium
        Summer School in Applied Mathematics
        SIAM Conference on Geometric Design & Computing
        Opportunities for Graduate Students

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: "Keith A. Woodbury" <woodbury@me.ua.edu>
Subject: 2001 Inverse Problems in Engineering Symposium
Date: Fri, 9 Feb 2001

Inverse Problems in Engineering Symposium 2001

June 14-16, 2001
Texas A&M University

CALL FOR ABSTRACTS

You are invited to submit abstracts for presentation at the Inverse
Problems in Engineering Symposium. A peer review process will be used
to evaluate each abstract, and accepted contributions will be
presented in informal 20-minute talks. Presenters also will have the
opportunity to post their complete paper on the conference web site
and may submit their papers for a special issue of Inverse Problems in
Engineering, subject to the journal's standard review process.

All topics related to inverse problems will be considered. Topics from
previous meetings include:

  ·   Imaging applications in medicine and engineering
  ·   Characterizing groundwater and petroleum resources
  ·   Applications to heat transfer and engineering mechanics
  ·   Process control model identification
  ·   Mathematical and statistical considerations
  ·   Numerical and computational advances

HOW TO SUBMIT

Submit abstracts no later than March 1, 2001. Please limit your
abstract to 250-500 words, use a typeface that is easily read and
leave a one-inch margin on all sides. If there is more than one
author, underline the name of the person making the presentation. All
abstracts should be prepared as Word or pdf files and submitted
electronically. Further information:http://inverse2001.tamu.edu

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From: Enrique Zuazua <zuazua@eucmax.sim.ucm.es>

Subject: Summer School in Laredo
Date: Wed, 14 Feb 2001

Dear Colleague:

I am sending you the announcement of a Summer School we are organizing
in Laredo (Spain) in the first week of September 2001.

Please, pass this information to the colleagues that might be
interested in it.

Thank you in advance.

Best regards,
Enrique

Universidad de Cantabria-Ayuntamiento de Laredo

3-7 September, 2001

PROSPECTIVE SCHOOL IN APPLIED MATHEMATICS

Director: Enrique ZUAZUA

Eduardo Casas,
Universidad de Cantabria, Spain
Optimal Control of Partial Differential Equations

Vicent Caselles,
Universidad Pompeu-Fabra, Spain
Mathematical models in image processing

I\~nigo J. Losada, Universidad de Cantabria, Spain
Mathematical modelling in the propagation of waves in the ocean

Norbert J. Mauser, University of Wien, Austria
Quantum Kinetic Theory with Applications

Juan Luis V\'azquez, Universidad Aut\'onoma de Madrid, Spain
Fluid Mechanics and the equations of filtration

Enrique Zuazua, Universidad Complutense, Spain.
Large time behavior and homogenization of evolution equations

This School wil be held in Laredo, in the north coast of Spain, 80 kms
west of
Bilbao, in the frame of the Summer Courses of the University of
Cantabria.

It is mainly oriented to young researchers in Applied Mathematics. But
the School may also be of interest for senior researchers.

A panoramic of some challenging topics in Applied Mathematics will be
presented. Theoretical aspects will be covered as well as modelling
issues and topics related with numerical simulation.

The courses we have chosen cover the propagation of waves in the
ocean, an introductory course in Fluid Mechanics and the equations of

filtration, Quantum Kinetic Theory, the Optimal Control of Partial
Differential Equations, image processing and the homogenization of
evolution partial differential equations.

All courses will end up with a discussion of the state of the art and the
open
problems in the corresponding field.

For more information concerning the programme, inscription,
fellowships, etc.:

Enrique Zuazua
Departamento de Matem\'atica Aplicada
Universidad Complutense
28040 Madrid
Tel.: (34) 91 394 45 30 /44 49
Fax: (34) 394 46 07
e-mail: zuazua@eucmax.sim.ucm.es

PROGRAMME
Monday, September 3

9:00 Opening
9:30-11:30 J. L. V\'AZQUEZ
12:00-14:00 V. CASELLES

Tuesday, September 4

9:30-11:30 J. L. V\'AZQUEZ
12:00-13:00 V. CASELLES
13:00-14:00 I. LOSADA

Wednesday, September 5

9:30-11:30 I. LOSADA
12:00-14:00 E. ZUAZUA

Thursday, September 6

9:30-10:30 E. CASAS
10:30-11:30 E. ZUAZUA
12:00-14:00 N. MAUSER

Friday, September 7

9:30-11:30 E. CASAS
11:45-13:45 N. MAUSER
13:45 Closing ceremony.

From: cyoung@siam.org
Subject: SIAM Conference on Geometric Design & Computing
Date: Wed, 28 Feb 2001

     Conference Name: SIAM Conference on Geometric Design and Computing
     Location: Sacramento, CA, USA
     Dates: November 5-8, 2001

     Call for Papers

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      To submit go to:
      http://www.siam.org/meetings/gd01/

      Submission Deadlines:
      MiniSymposium Proposals - 04/16/01
      Abstracts in Lecture or Poster format - 05/15/01

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

      ----------------------------
From: Margaret Cheney <chenem@rpi.edu>
Subject: Call for Students
Date: Fri, 02 Feb 2001

      Dear Colleagues,

      If you know of any undergraduates who are interested in pursuing
      a graduate degree in applied mathematics, I would be grateful if
      you would encourage them to apply to Rensselaer (if they haven't
      already).  We have many new opportunities for graduate students,
      including a new NSF VIGRE award, and we are actively looking for
      outstanding new graduate students.  Please feel free to pass this
      email message along to any interested undergraduates.  They may
      find information about our department, including application
      information, on the web at

      http://eaton.math.rpi.edu/Graduate/index.graduate.html

      The deadline for admission for Fall 2001 is February 1 but this
      date is not firm.  If a student applies before February 15, we
      will be able to give their application every consideration for
      financial aid.  Also for your top students we will be happy to
      give them a waiver of the application fee.  Just have them
      contact our Graduate Student Coordinator, Dawnmarie Robens, at
      robensd@rpi.edu and she will arrange the details.

      Thanks and best wishes, Margaret Cheney
------- end -------
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Today's Editor: Patricia K. Lamm
                Michigan State University

Today's Topics:
        IPNet Back Online
     Symposium: Inverse Problems in Engineering
        Workshop: Inverse Problems in Applications
        Workshop: Inverse Problems and Imaging
        Conference: Inverse Problems in Hong Kong
        Workshop: Scientific Computing, including Image Processing
        New Books on Optimization, Nonconvex Systems
        Free Access to Inverse Problems Journal
     Table of Contents: Inverse Problems
     Table of Contents: Inverse Problems in Engineering
     Table of Contents: Mathematics of Control, Signals, and Systems
     Table of Contents: Electronic Transactions on Numerical Analysis
     Table of Contents: Linear Algebra and Its Applications

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        Mail to ipnet-digest@math.msu.edu

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

From: ipnet-digest@math.msu.edu
Subject: IPNet Back Online
Date: Mon, 07 May 2001

The IPNet host server was hacked last month, and reinstallation of
software caused the IPNet to be down for several weeks. This meant
that new subscribers could not join and that mailing of the IPNet
Digest was greatly delayed. Although the IPNet is back online and
appears to be fully functional, our sincere apologies go to those
contributors with news items that may now be out-of-date (these items
have been edited below where necessary) and to all IPNet subscribers.

-Ed.

From: Chemical Engineering - TAMU <events@ChE2.tamu.edu>
Subject: Inverse Problems in Engineering Symposium
Date: Thu, 08 Mar 2001

Reminder:
        2001 Inverse Problems in Engineering Symposium
        at Texas A&M University
        June 14-16, 2001.

Please see the Symposium web page   http://inverse2001.tamu.edu
for information. I do hope you will participate in our symposium!

Best regards,
Ted Watson

Professor A. Ted Watson

Department of Chemical Engineering
Texas A&M University
College Station, TX 77843-3122

Office: (979) 845-3484
Fax: (979) 845-6446
e-mail: atw@tamu.edu
http://www-chen.tamu.edu/EIL/
http://www-chen.tamu.edu/chen/faculty/watson/

From: Volker Schulz <schulzv@wias-berlin.de>
To: ipnet-digest@math.msu.edu
Date: Fri, 16 Mar 2001

First Announcement

Workshop on "INVERSE PROBLEMS IN APPLICATIONS"

Weierstrass Institute for Applied Analysis and
Stochastics (WIAS), Berlin, Germany

September, 10 - 12, 2001

Organizers
Heinz Engl (University of Linz, Austria)
Peter Maass (University of Bremen, Germany)
Volker Schulz (WIAS Berlin, Germany)

Scope:

Inverse problems play a major role in all aspects of mathematical
modeling and optimization of physical, technical and biological
systems. Although rather elegant theory is involved in the analysis of
inverse problem, there are also many interesting problems in real
world applications. This workshop is particularly devoted to specific
challenges that practical applications pose to the inverse modeler and
to numerical solution approaches which make it possible to deal with
these challenges.

The following speakers will present invited lectures:

    A.F. Grunbaum (Lawrence Berkeley, USA)
    O. Scherzer (Univ. Bayreuth, Germany)
    V. Dicken (Univ. Bremen, Germany)
    B. Kaltenbacher (Univ. Linz, Austria)
    J. Schloeder (IWR Heidelberg, Germany)

It is intentionally planned as a satellite conference to
the first SIAM-EMS conference in Berlin (http://www.zib.de/amcw01/).

In order to alleviate the organizational effort we encourage people
intending to participate and to present a contributed talk to fill
in the registration form at

        http://www.wias-berlin.de/ws-inv

as soon as possible.

The final registration deadline is June 30, 2001. The registration fee is DM 70 and is to be payed on-site. For further questions contact Anke Giese (giese@wias-berlin.de).

From: Gunther Uhlmann <gunther@math.washington.edu>
Subject: Workshop on Inverse Problems and Imaging
Date: Mon, 2 Apr 2001

The PIMS-MITACS Workshop on "Inverse Problems and Imaging" will be held June 9-10, 2001 at the Pacific Institute of Mathematical Sciences (PIMS) site at the University of British Columbia, Vancouver, Canada. This is also the Third Inverse Problems Seminar of the Pacific Northwest. The meeting is supported by MITACS, NSF and PIMS.

The URL for the workshop is: http://www.pims.math.ca/industrial/2001/ipi/

Please contact Michael Lamoureux (mikel@math.ucalgary.edu) or Gunther Uhlmann (gunther@math.washington.edu) for any additional information.

From: Jane Hui <MAIP@cityu.edu.hk>
Subject: Conference on Inverse Problems in Hong Kong
Date: Wed, 02 May 2001

First Announcement and Call for Papers

        International Conference on Inverse Problems -
                Recent Development in Theories and Numerics (Inverse2002)
        City University of Hong Kong, Hong Kong
        January 9-12, 2002

ANNOUNCEMENT:

On behalf of the Organizing Committee, I would like to invite you to attend the above conference Inverse2002 to be held at the City University of Hong Kong during January 9-12, 2002. Up-to-date information on the Inverse2002 can be found from the webpage:

http://personal.cityu.edu.hk/~maychon/conference/inverse2002/inverse2002.htm

The purpose of this conference is to establish a first and strong collaboration link among the universities of Asia-Pacific and worldwide leading researchers in inverse problems. The conference will address both theoretical (mathematics), applied (engineering) and development aspects on inverse problems.

Your participation at the conference will be much appreciated. You may pre-register and submit an abstract in your field of expertise through the above webpage. Papers accepted for presentation at the Conference will be published in special issues of international journals after normal refereed processes.

I am also enclosing a list of conference sessions, invited speakers and members of committees for your reference. [Please see the above webpage for members of committees.   -Ed]

Looking forwards to meeting you in Hong Kong.

Yours sincerely, Benny HON, Y.C.
Co-Chair for the Inverse Conference 2002
Department of Mathematics
City University of Hong Kong
email: Benny.Hon@cityu.edu.hk
http://www.cityu.edu.hk/ma/staff/ychon.html
(Office) 852 - 2788 8675
(Fax) 852 - 2788 8561

List of Sessions:

    Main Scopes/Applicable Disciplines

        Financial Problems
        Image Processing Problems
        Inverse Problems Related to the Industries
        Medical Problems
        Nodal Problems
        Optimization Problems
        Parameter Identification and Control
        Sampling Problems
        Spectral Problems

The following recent theoretical developments and numerical approaches in
related to the above scopes are emphasized:

    Theoretical Development and Numerical Approaches

        Well-Posedness
        Uniqueness
        Stability
        Reconstruction Scheme
        Numerical Methods

Plenary Speakers/Invited Speakers:

    Invited Plenary Speakers on keynote talks:

        G. Bao (Michigan University, USA)
        J. Cheng (Fudan University, China)
        V. Isakov (Wichita State University, KS, USA)
        P. C. Sabatier (Univ. des Sciences et Tech. du Languedoc, France
)

    Invited Speakers on introductory talks:

        D. Anikonov (Institute of Applied Mathematics, Vladivostok)
        H. Engl (Johannes Kepler Universitat Linz, Austria)
        J. Frankel (Tennessee University, USA)
        D. Fujiwara (Kyoto University, Japan)
        A. Kirsch (Fridericiana Karlsruhe University, Germany)
        J. S. Pang (The Johns Hopkins University, USA)
        J. K. Seo (Yonsei University, Korea)
        K. Tanuma (Osaka Kyoiku University, Japan)

        D. D. Trong (HoChiMing City University, Vietnam)
        J. Z. Zhang (City University of Hong Kong, HKSAR)

Call for Papers:

Titles and abstracts of contribution papers must be received by
31 August 2001.   The abstracts should be typed in LaTeX, not to
exceed one A4 page, and sent to the Secretary (see address below) by
e-mail.

        Address: Ms Jane Hui
                        Secretary
                        Department of Mathematics
                        City University of Hong Kong
                        83 Tat Chee Avenue
                        Kowloon Tong
                        Hong Kong
        Tel: (852) 2788 7140
        Fax: (852) 2788 8561
        E-mail: maip@cityu.edu.hk

From: "Laurence T. Yang" <lyang@stfx.ca>
Subject: Workshop on Scientific Computing, including Image Processing
Date: Thu, 01 Mar 2001

CALL FOR PAPERS

The 3rd Workshop on High Performance Scientific and Engineering
Computing with Applications (HPSECA-01)

Valencia, Spain, September 03-07, 2001

in conjunction with
2001 INTERNATIONAL CONFERENCE ON PARALLEL PROCESSING (ICPP-2001)

Scope and Interests:

Parallel and distributed scientific and engineering computing has
become a key technology which will play an important part in
determining, or at least shaping, future research and development
activities in many academic and industrial branches. This special
workshop is to bring together computer scientists, applied
mathematicians and researchers to present, discuss and exchange idea,
results, work in progress and experience of research in the area of
parallel and distributed computing for problems in science and
engineering applications.

Among the main topics (but not limited to) are:

    * development of advanced parallel and distributed methods,
    * parallel and distributed computing techniques and codes,
    * practical experiences using various supercomputers with software
      such as MPI, PVM, and High Performance Fortran, OpenMP, etc.
    * applications to numerical fluid mechanics and material sciences,
    * applications to signal and image processing, dynamic systems,
      semiconductor technology, and electronic circuits and system
      design etc.

Submission Information:

   Authors should send one copy of paper in either PS or PDF format at
   most 15 pages to the workshop organizers (lyang@stfx.ca or
   pan@cs.gsu.edu) via electronic mail or three copies via postal
   mail. Contributions will be reviewed by at least three reviewers
   from both Program Committee and external reviewers for relevance
   and technical contents on basis of papers. Accepted papers with at
   most 8 pages will be published by IEEE Computer Society Press as
   proceedings of the ICPP 2001 workshops. A special issue of
   International Journal of Supercomputer Applications and High
   Performance Computing is scheduled.

Further information about the conference proceedings and registration
fee can be found by web sites:

   http://www.stfx.ca/people/lyang/activities/icpp01-hpseca.html
   http://www.cis.ohio-state.edu/~panda/icpp01/workshops.html

Important Deadlines:

Paper submission Due   (April 1, 2001)
Notification of Acceptance (May 1, 2001)
Final camera-ready paper   June 1, 2001

Workshop Organizers:

Prof. Laurence T. Yang (chair)
Department of Computer Science
PO Box 5000, St. Francis Xavier University
Antigonish, B2G 2W5, Nova Scotia, Canada
lyang@stfx.ca

Prof. Yi Pan (Co-Chair)
Department of Computer Science,
Georgia State University, Atlanta, GA 30303, USA
Email: pan@cs.gsu.edu

Technical Committee: (see conference page)

From: David Gao <gao@calvin.math.vt.edu>
Subject: New Books on Optimization, Nonconvex Systems
Date: Mon, 05 Mar 2001

New books on optimization, nonconvex systems:

1. Duality Principles in Nonconvex Systems:
   Theory, Methods and Applications

   by David Yang Gao
   Dept. of Mathematics
   Virginia Polytechnic and State University
   Blacksburg, USA

   NONCONVEX OPTIMIZATION AND ITS APPLICATIONS Volume 39

Short description:

Motivated by practical problems in engineering and physics, drawing on

a wide range of applied mathematical disciplines, this book is the
first to provide, within a unified framework, a self-contained
comprehensive mathematical theory of duality for general non-convex,
non-smooth systems, with emphasis on methods and applications in
engineering mechanics. Topics covered include the classical (minimax)
mono-duality of convex static equilibria, the beautiful bi-duality in
dynamical systems, the interesting tri-duality in non-convex problems
and the complicated multi-duality in general canonical systems. A
potentially powerful sequential canonical dual transformation method
for solving fully nonlinear problems is developed heuristically and
illustrated by use of many interesting examples as well as extensive
applications in a wide variety of nonlinear systems, including
differential equations, variational problems and inequalities,
constrained global optimization, multi-well phase transitions,
non-smooth post-bifurcation, large deformation mechanics, structural
limit analysis, differential geometry and non-convex dynamical
systems.

With exceptionally coherent and lucid exposition, the work fills a big
gap between the mathematical and engineering sciences. It shows how to
use formal language and duality methods to model natural phenomena, to
construct intrinsic frameworks in different fields and to provide
ideas, concepts and powerful methods for solving non-convex,
non-smooth problems arising naturally in engineering and science. Much
of the book contains material that is new, both in its manner of
presentation and in its research development. A self-contained
appendix provides some necessary background from elementary functional
analysis.

Audience: The book will be a valuable resource for students and
researchers in applied mathematics, physics, mechanics and
engineering. The whole volume or selected chapters can also be
recommended as a text for both senior undergraduate and graduate
courses in applied mathematics, mechanics, general engineering science
and other areas in which the notions of optimization and variational
methods are employed.

For more details and for table of contents see:
http://www.wkap.nl/book.htm/0-7923-6145-8
http://www.math.vt.edu/people/gao/books.html

2. Nonsmooth/Nonconvex Mechanics:
   Modeling, Analysis and Numerical Methods.

A Volume dedicated to the memory of Professor P.D. Panagiotopoulos

Edited by:
D.Y. Gao, R.W. Ogden, and G.E. Stavroulakis

Kluwer Academic Publishers,
Nonconvex Optimization and Its Applications Vol. 50
Hardbound, ISBN 0-7923-6786-3, February 2001, 516 pp.

Short description:

Nonsmooth and nonconvex models arise in several important applications
of mechanics and engineering. The interest in this field is growing
from both mathematicians and engineers. The study of numerous

industrial applications, including contact phenomena in statics and
dynamics or delamination effects in composites, require the
consideration of nonsmoothness and nonconvexity.

The mathematical topics discussed in this book include variational and
hemivariational inequalities, duality, complementarity, variational
principles, sensitivity analysis, eigenvalue and resonance problems,
and minimax problems. Applications are considered in the following
areas among others: nonsmooth statics and dynamics, stability of
quasi- static evolution processes, friction problems, adhesive contact
and debonding, inverse problems, pseudoelastic modeling of phase
transitions, chaotic behavior in nonlinear beams, and nonholonomic
mechanical systems.

This volume contains 22 chapters written by various leading
researchers and presents a cohesive and authoritative overview of
recent results and applications in the area of nonsmooth and nonconvex
mechanics.

For more details and for table of contents see:

http://www.wkap.nl/book.htm/0-7923-6786-3
http://www.math.vt.edu/people/gao/books.html

From: "Elaine Longden-Chapman" <elaine.chapman@iop.org>
Subject: Free Access to Inverse Problems Journal
Date: Wed, 14 Mar 2001

Free access to the latest issue of Inverse Problems for non-subscribers

If you haven't already taken this opportunity since it was announced
in January, visit the Journal Web site at www.iop.org/Journals/ip or
www.iop.org/free2001/ to find out more and to register for free access
to the latest issue of Inverse Problems as well as to the latest issue
of another 28 of IOPP's journals.

Following an incredible response to our recent Free Access promotion,
Institute of Physics Publishing is pleased to announce another new
initiative -- designed to benefit the international scientific
community further still. From today until further notice,
non-subscribers can enjoy free electronic access to the latest issues
of 29 of our journals.

As a learned society not-for-profit publisher, Institute of Physics
Publishing is committed to promoting physics and to serving physicists
world-wide. This latest initiative supports our prime objective and
Royal Charter to disseminate information in this field. We are keen to
raise the visibility of our authors' work through the programme and we
are confident that it will be positively received by all involved in
physics.

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Electronic Journals service. Please note that a username and password
are required to gain access. Readers that do not already have a
username and password for our Electronic Journals service can create
them, (go to http://www.iop.org/EJ/S/2/IOPP/passwd). Lost Password
Assistance is also available for those that have registered their
details in the past but have now forgotten their passwords.

The free issues in question (`Latest Complete Issue') are easily
identifiable -- they are marked as `Free'. Issues are only available
to non-subscribers once they are complete. Accelerated Publication
remains a benefit exclusive to subscribers. Only they are able to
access `accelerated articles', i.e. those that appear online as soon
as they are accepted and ready for publication (`Next Issue
(partial)').

Our subscribers continue to enjoy other important benefits of
course. They receive the printed copies of our journals as well as
full access to our Electronic Journals service, including an extensive
online archive of back issues plus full reference linking
functionality.

[For more journal information, including details on pricing and how to
order, see the IOP website.   -Ed.]

From: "Janet Thomas" <janet.thomas@iop.org>
Subject: Contents list for Inverse Problems vol 17, issue 2
Date: Wed, 21 Mar 2001

Inverse Problems   2001   Volume 17 Issue 2
              Table of Contents

PAPERS

Integrable perturbations of the harmonic oscillator and Poisson
pencils   K Marciniak and S Rauch-Wojciechowski

m-functions and inverse generalized eigenvalue problem
K Ghanbari

Analysis of the scattering map of a linearized inverse medium problem
for electromagnetic waves   H Ammari and G Bao

Synthesis of limited-bandwidth minimum-phase filters   J Skaar

Inverse matrix evaluation for linear systems   M Tadi and Wei Cai

Backus--Gilbert algorithm for the Cauchy problem of the Laplace
equation   Y C Hon and T Wei

Stability for the inverse potential problem by finite measurements on
the boundary   J Cheng and G Nakamura

Fast realization algorithms for determining regularization parameters
in linear inverse problems   Y Wang and T Xiao

A new SPECT reconstruction algorithm based on the Novikov explicit
inversion formula   L A Kunyansky

Modified $(n-1,1)$th Gelfand--Dickey hierarchies and Toda-type systems
A K Svinin

New integrable differential-difference systems: Lax pairs, bilinear
forms and soliton solutions   X-B Hu and H-W Tam

A nonlinear multigrid for imaging electrical conductivity and
permittivity at low frequency   L Borcea

ERRATA
The inverse nodal problem on the smoothness of the potential function
C K Law, C-L Shen and C-F Yang

Phase recovery with nondecaying potentials   T Aktosun and P E Sacks

----
From: james beck <jamesverebeck@home.com>
Subject: Contents, Inverse Problems in Engineering
Date: Sun, 29 Apr 2001

Inverse Problems in Engineering   2001   Vol. 9, No. 1
               Table of Contents

From: Secretary Support - Magrijn <magrijn.secsup@tip.nl>
Subject: Contents, Mathematics of Control, Signals, and Systems
Date: Fri, 27 Apr 2001

Mathematics of Control, Signals, and Systems   2001 Vol. 14, No. 1
               Table of Contents

INFORMATION

Information on MCSS including tables of contents is
available at its home pages:
www.cwi.nl/~schuppen/mcss/mcss.html
www.math.rutgers.edu/~sontag/mcss.html

Address for submissions:
J.H. van Schuppen (Co-Editor MCSS)
CWI
P.O.Box 94079
1090 GB Amsterdam
The Netherlands

Bradley Dickinson, Eduardo Sontag, Jan van Schuppen (Editors)

Contributed by Jan H. van Schuppen
(J.H.van.Schuppen@cwi.nl)

From: Lothar Reichel <reichel@mcs.kent.edu>
Subject: Contents, Electronic Transactions on Numerical Analysis (ETNA)
Date: Sun, 29 Apr 2001

Electronic Transactions on Numerical Analysis 2000   Vol. 11
               Table of Contents

Neumann-Neumann methods for vector field problems   A. Toselli

Perturbation analysis for eigenstructure assignment of linear
multi-input systems   M. A. Cawood and C. L. Cox

A multigrid method for saddle point problems arising from mortar
finite element discretizations   B. I. Wohlmuth

High-order finite difference schemes and Toeplitz based
preconditioners for elliptic problems
S. Serra Capizzano and C. Tablino Possio

Cholesky-like factorizations of skew-symmetric matrices
P. Benner, R. Byers, H. Fassbender, V. Mehrmann, and D. Watkins

Numerical analysis of the radiosity equation using the collocation
method   K. Atkinson, D. D.-K. Chien and J. Seol

Approximation of hypergeometric functions with matricial argument
through their development in series of zonal polynomials
R. Gutie'rrez J. Rodriguez, and A. J. Sa'ez

Continuous Theta-methods for the stochastic pantograph equation
`C. T. H. Baker and E. Buckwar

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

Publication of volume 12 of ETNA is in progress. Presently the following
papers are available:

Numerical experiments with algebraic multilevel preconditioners
G. Meurant

Numerical condition of polynomials in different forms   H. Zhang

On parallel two-stage methods for Hermitian positive definite matrices
with applications to preconditioning
M. J. Castel, V. Migallo'n, and J. Penade's

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On the orbit of invariant subspaces of linear operators in
finite-dimensional spaces (new proof of a Halmos's result)   A. Faouzi

Automorphisms of the Lie algebra of strictly upper triangular matrices
over certain commutative rings   Y. Cao

NOTES:
ContentsDirect, which is automatically generated, lists the first author
of each paper and the corresponding author (if different).

Visit the journal at http://www.elsevier.nl/locate/jnlnr/07738

Submitted by:
Hans Schneider   hans@math.wisc.edu.
Department of Mathematics   608-262-1402 (Work)
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Madison WI 53706 USA   http://www.math.wisc.edu/~hans (URL)
------- end -------

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

Today's Topics:
      Minicourse on Inverse Problems in Trieste
      Minisymposium on Inverse Problems at SECTAM XXI
         PhD Studentship in Acoustic Inverse Source Problem
      Table of Contents: Inverse Problems
      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: Giovanni Alessandrini <alessang@univ.trieste.it>
Subject: Minicourse on Inverse Problems in Trieste
Date: Thu, 17 May 2001

Minicourse on Inverse Problems

Trieste, September 24-28

As part of the project Problemi Inversi of the Gruppo di Analisi
Matematica, Probabilità e Applicazioni (GNAMPA) of
the Istituto Nazionale di Alta Matematica Francesco Severi (INDAM), a
Minicourse on Inverse Problems will be held at the
Dipartimento di Scienze Matematiche, Università degli Studi di Trieste,
Italy in the week 24-28 september 2001.

The minicourse shall consist of two cycles of lectures:

Prof. Luis Escauriaza (Bilbao), Unique continuation for parabolic
equations, with variable coefficients or constant coefficients and
unbounded lower order coefficients.

Prof. Gen Nakamura (Hokkaido), Application of asymptotic analysis to
inverse problems.

Additional one-hour talks by other invited speakers will be scheduled
later on.

These minicourse will be specially devoted to young researchers for
the specialization in up-to-date topics in Inverse Problems.
Prospective participants are invited to communicate their intention to
the organizer.

A limited number of travel grants for young researchers is available.
Priority will be given to applicants who cannot find other funding
sources. Those who are interested are invited to send a letter of
application and vita to the organizer at the following address. The
deadline for application is June 30, 2001.

The Organizer:

Prof. Giovanni Alessandrini
mailto:alessang@univ.trieste.it
Dipartimento di Scienze Matematiche, Università di Trieste, 34100
Trieste, Italy
http://www.dsm.univ.trieste.it/~alessang/
PHONE: 39 040 6762628   FAX: 39 040 676 2636

From: Alain Kassab <kassab@mail.ucf.edu>
Subject: Minisymposium on Inverse Problems at SECTAM XXI
Date: Fri, 18 May 2001

Announcing a Minisymposium on Inverse Problems to be held during the
21st Southeastern Conference on Theoretical and Applied Mechanics
(SECTAM XXI) which will be held at the University of Central Florida,
Orlando, May 19-21, 2002 on the 40th anniversary of this series of
meetings. The mini-symposium organizers are Prof. John Cannon and
Prof. Alain Kassab.

Papers and presentations are solicited from throughout the broad range
of theoretical and applied mechanics. The conference will consist of
keynote, distinguished, invited and contributed papers. There will be
a bound proceedings volume and an active student competition. A number
of topical minisymposia and special sessions have been announced,
consisting of invited and contributed papers.

One page abstracts are due on July 1, 2001 - send to A.J. Kassab
(kassab@mail.ucf.edu.) Please check the website
www.mmae.engr.ucf.edu/sectam for details such as important dates,
keynote speakers, abstract and manuscript format, minisymposia topics
and organizers, registration, and conference hotel rates. For
additional information contact D.W. Nicholson (nicholsn@mail.ucf.edu).

Submitted by:
Alain J. Kassab, Ph.D.
Professor and MMAE Graduate Program Coordinator
Mechanical, Materials, and Aerospace Engineering
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Orlando, Florida 32816-2450
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Email: kassab@mail.ucf.edu

From: Bill Lionheart <Bill.Lionheart@umist.ac.uk>
Subject: PhD Studentship in acoustic inverse source problem
Date: Tue, 15 May 2001

     PhD Studentship in acoustic inverse source problem

We have funding for a PhD student to work on acoustic inverse source
problem.

The applicant should have have a good first degree in Mathematics or
Theoretical Physics and have an interest in linear inverse problems
associated with p.d.e.s and integral equations. He or she should be
conversant with basic functional analysis and numerical analysis and
should be able

to program in Matlab or C.

Please email me for further details.

Dr W.R.B. Lionheart,
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Tel +44- 161-200-8978 Fax +44-161-200 3669
Bill.Lionheart@umist.ac.uk
http://www.ma.umist.ac.uk/bl

Inverse Problems   June 2001   Volume 17, Issue 3
                Table of Contents
PAPERS

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA contents
Date: Wed, 30 May 2001

Linear Algebra and its Applications   July 2001 Volume 331, Issue 1-3
                 Table of Contents

G. Kubicki, J. Lehel, M.x. Morayne

On Pappus' configuration in non-commutative projective geometry
G. Donati

Visit the journal at http://www.elsevier.nl/locate/jnlnr/07738

Submitted by:
Hans Schneider   hans@math.wisc.edu.
Department of Mathematics   608-262-1402 (Work)
Van Vleck Hall   608-271-7252 (Home)
480 Lincoln Drive   608-263-8891 (Work FAX)
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Madison WI 53706 USA   http://www.math.wisc.edu/~hans (URL)
------- end -------

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

Today's Topics:
        Colloquium in honor of Frank Natterer
        4ICIPE: General Announcement and Call for Papers
     New Book on Parallel Algorithms in Feasibility and Optimization
        Positions: Mathematics Department, University of Haifa, Israel
     Table of Contents: Mathematics of Control, Signals, and Systems

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: "Frank Wuebbeling" <wuebbel@math.uni-muenster.de>
Subject: Colloquium in honor of Frank Natterer
Date: Fri, 15 Jun 2001

Colloquium on Inverse Problems, University of Muenster

A Mini-Colloquium on inverse Problems will be held in Muenster,
Germany, on July 6, 2001, celebrating the 60th birthday of Prof. Frank
Natterer, former editor of Inverse Problems.

Speakers are Prof. Alfred Louis, Saarbrücken, and Prof. Todd Quinto,
Tufts.

For more information, see the Homepage of the Math department of Muenster
at
http://www.uni-muenster.de/math/inst/num

Dr. Frank Wuebbeling (wuebbel@math.uni-muenster.de)
Institut für Numerische und instrumentelle Mathematik
Universität Münster
Einsteinstraße 62
48151 Münster

From: 4icipe <icipe@lttc.coppe.ufrj.br>
Subject: 4ICIPE: General Announcement and Call for Papers
Date: Thu, 21 Jun 2001

Dear Colleague:

I have the pleasure to send to you a copy of the Call for Papers for
the 4th International Conference on Inverse Problems in Engineering:
Theory and Practice (4icipe).

Please consider the 4icipe to present your scientific contributions
and notice that papers presented in the conference can also be
submitted for possible publication in the journal Inverse Problems in
Engineering. I am looking forward to seeing you in Brazil for the
conference and please feel free to contact me about any subject

regarding the 4icipe.

With the very warmest regards,

Helcio R. B. Orlande
Chairman for the 4icipe

    ****

General Announcement And Call for Papers
Abstracts due: September 21, 2001

4th INTERNATIONAL CONFERENCE ON INVERSE PROBLEMS IN ENGINEERING: THEORY
AND
PRACTICE

May 26-31, 2002
Angra dos Reis, Brazil

http://www.lttc.coppe.ufrj.br/4icipe/
e-mail: icipe@lttc.coppe.ufrj.br

CONFERENCE SYNOPSIS
The 4th International Conference on Inverse Problems in Engineering:
Theory and Practice belongs to a successful series of United
Engineering Foundation conferences held in a three-year
cycle. Previous conferences took place in Palm Coast, Florida (1993),
Le Croisic, France (1996) and Port Ludlow, Washington (1999). The
conference has its roots on the informal seminars organized by
Prof. J. V. Beck at Michigan State University, which were initiated in
1987.

CONFERENCE SCOPE
The main objective of the conference is to bring together researchers
from different world regions, dealing with different inverse problem
applications and with its theoretical aspects, for the presentation of
their most recent research results and for the technical discussion of
their findings. Despite traditionally having the heat transfer
community as the leading organizing group, such conference reaches a
much broader scope; its hallmarks are the multidisciplinary nature and
the innumerous opportunities for technical interactions among the
participants.

The conference will emphasize a broad range of deterministic,
statistical, mathematical, computational and experimental approaches,
which can be applied to the solution of inverse problems and to the
design of experiments. The topics listed below give a general
guideline for possible contributions:

        Acoustics   Vibrations and structural dynamics
        Electromagnetism   Nuclear transport
        Geophysics   Inverse design and optimization
        Imaging   Design of experiments
        Heat and mass transfer   Property estimation
        Fluid mechanics   Signal and noise processing
        Solid mechanics   Benchmark results
        Tomography and inverse scattering Novel inverse methodologies
        Porous media   Theoretical and mathematical aspects

Contributions dealing with practical applications of inverse problems

are encouraged, such as in petrochemistry, aeronautics, astronautics, medicine, groundwater flow, materials processing, remote sensing, non-destructive evaluation, etc.

SUBMISSION, SELECTION, PUBLICATION AND PRESENTATION OF CONTRIBUTED PAPERS

Original papers are invited on the above general topics. Authors should submit a one-page abstract by September 21, 2001, through the United Engineering Foundation web-site (http://www.engfnd.org/2ai.html). If you have any difficulties to submit the abstract electronically, please send it by express-mail to the conference chair. Authors whose abstracts are accepted will be sent the Author's Kit, which will include detailed instructions for the preparation of their manuscripts.

The papers submitted will be evaluated by two competent reviewers in the area. Only the accepted papers that are effectively presented in the conference will appear in the proceedings. The proceedings will be published as a bound volume and sent to the conference participants through airmail within four months after the conference is finished. A book of abstracts and a CD-ROM containing all accepted papers will be available for the participants during registration. Authors may consider their papers for further review and possible publication in the journal Inverse Problems in Engineering (http://www.gbhap.com/journals/210/210-top.htm). When submitting the full papers to the conference, the authors should indicate if they want to submit the papers to the Inverse Problems in Engineering journal as well. In this case, the review process will be more stringent and a third evaluation of the paper will be requested.

The conference will be organized in the traditional United Engineering Foundation format. Daily oral and poster sessions will be held in the mornings and evenings. Afternoons will be free for recreation and technical interactions among the participants. Tutorial sessions will be scheduled and keynote lecturers from different research fields will be invited.

IMPORTANT DATES
Abstracts due: September 21, 2001
Notification of abstract evaluation: October 26, 2001
Full papers due for review: January 11, 2002
Notification of paper evaluations:March 01, 2002
Final papers due: May 17, 2002

ORGANIZING COMMITTEE
Chair: H. R. B. Orlande (Brazil).
Co-chairs: F. M. Ramos (Brazil), A. F. Emery (USA), M. Raynaud (France) and
 S. Kubo (Japan).

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Roberty
(Brazil), N. McCormick (USA), P. Husbands (UK), T. Burczynski (Poland),
A.
T. Watson (USA), W. S. Kim (South Korea), Y. Jarny (France).

ATTENDANCE AT THE CONFERENCE
In order to make possible the technical interactions among all
participants, the attendance at this conference will be limited and by
invitation only. If you wish an invitation to attend, please complete
and return the attached application form or submit an application
electronically through the United Engineering Foundation web site
(http://www.engfnd.org/2ai.html).

CO-SPONSORS
UFRJ (Federal University of Rio de Janeiro), ABCM (Brazilian Society
of Mechanical Sciences), SBMAC (Brazilian Society of Applied and
Computational Mathematics), Gordon & Breach, CNPq, CAPES and FAPERJ.

ENGINEERING FOUNDATION CONFERENCES
United Engineering Foundation Conferences were established in 1962 to
provide an opportunity for the exploration of problems and issues of
concern to engineers from many disciplines. The format of the
Conference provides morning and evening sessions in which major
presentations are made. Time is available during the afternoons for ad
hoc meetings and informal discussions and is designed to enhance
rapport among participants and prompt dialogue on the developments of
the meeting. We believe the Conferences have been instrumental in
generating ideas and disseminating information to a greater extent
than is possible through more conventional forums. All participants
are expected to contribute actively to the discussions.

UNITED ENGINEERING FOUNDATION FELLOWSHIPS FOR NEW PROFESSIONALS
The United Engineering Foundation sponsors a Conference Fellowship
program. Applicants are limited to those currently active in
engineering or related professions with a direct interest in the
conference topic. They must be within ten years of their B.Sc. degree
at the time their applications are submitted. The stipend is
sufficient to cover the conference registration fee and on-site room
and board. Transportation expenses are not included. Application
information may be obtained from the UEF Web site (www.engfnd.org) or
by fax from the Foundation (1-212-591-7441) and must be submitted by
February 26, 2002.

VENUE
The location for the conference will be Hotel Portobello Resort &

Safari (http://www.hotelportobello.com.br) in Angra dos Reis. The resort is located between the mountains of Serra do Mar and the bay of Angra dos Reis, providing a unique and safe atmosphere for the conference participants. All apartments of this five-star hotel face a private beach. Schooners and motorboats are available in the resort for tours to countless islands that dot the bay. Swimming pools, tennis courts, windsurf, kayaks, jet-skis, horseback rides and trekking are also available. In a farm inside the resort you can come across exuberant Brazilian fauna and flora in the tropical rain forest.

The conference site is located about 100 kilometers (70 miles) from the Rio de Janeiro International Airport, in the south coast of the state of Rio de Janeiro. For the conference participants, the destination shall be the Rio de Janeiro International Airport. It is served by major airline carriers, with everyday flights from many cities in North America, Europe and Asia. Most international flights arrive in Rio de Janeiro in the morning. Transportation will be provided by the organization from the Rio de Janeiro International Airport to the conference site on Sunday morning (May 26) in air-conditioned buses or vans, with bilingual guides. Also, transportation from the conference site to the Rio de Janeiro International Airport will be provided for the conference participants and guests on the last day of the conference (May 31).

Pre- and post-conference tours for the city of Rio de Janeiro or other Brazilian cities are available. For more details on tours and on air transportation discounted tickets, please contact the official travel agent for the conference, KSK Tours (http://www.ksk.com.br).

Brazil requests visas for several countries, including the United States. Please, check with the Brazilian Embassy in your country if you need a visa to be admitted to Brazil, at least three months before the conference.

CONFERENCE FEES
The conference fees are all inclusive. They include registration, accommodations, meals, taxes and gratuities, from dinner on Sunday through lunch on Friday. The tentative fees in US dollars are:

Participant (single occupancy)   U$ 1425.00
Participant (double occupancy, sharing room with another participant or with a guest)   U$ 1185.00
Special participant (double occupancy, sharing room with another participant)   U$ 810.00
Guest (sharing room with a participant) U$ 560.00

South American participants affiliated to ABCM (Brazilian Society of Mechanical Sciences) or SBMAC (Brazilian Society of Applied and Computational Mathematics), as well as graduate students, qualify as a Special Participant. For participants not staying in the hotel, a special fee of U$ 300.00 will be charged (meals not included).

For further information, please contact:

Engineering Foundation Conferences
3 Park Avenue, 27th floor
New York, NY 10016, USA
engfnd@aol.com

or

Helcio R. B. Orlande, Conference Chair
Department of Mechanical Engineering, POLI/COPPE
Federal University of Rio de Janeiro, UFRJ
Cx. Postal: 68503, Cid. Universit=E1ria
Rio de Janeiro, RJ, 21945-970, Brazil
helcio@serv.com.ufrj.br

From: Yair Censor <yair@math2.haifa.ac.il>
Subject: New Book Announcement.
Date: Sun, 10 Jun 2001

We are pleased to announce the appearance of this new book

"INHERENTLY PARALLEL ALGORITHMS IN FEASIBILITY AND OPTIMIZATION
AND THEIR APPLICATIONS"

D. Butnariu, Y. Censor, and S. Reich (Editors),
Elsevier Science Publishers, Amsterdam, The Netherlands, 2001.

For further details, including table of contents and bibliographic and
ordering information, please go to:
http://www.elsevier.nl/locate/inca/622148

An excerpt from the book description on Elsevier's Internet site:

"..... Thus, the editors of this volume, with the support of the Israeli
Academy for Sciences and Humanities, took the initiative of organizing a
Workshop intended to bring together the leading scientists in the
field. The current volume is the Proceedings of the Workshop representing
the discussions, debates and communications that took place. Having all
that information collected in a single book will provide mathematicians
and engineers interested in the theoretical and practical aspects of the
inherently parallel algorithms for feasibility and optimization with a
tool for determining when, where and which algorithms in this class are
fit for solving specific problems.........".

From: Yair Censor <yair@math2.haifa.ac.il>
Subject: Tenure-Track Positions in the Department of Mathematics at the
         University of Haifa, Israel.
Date: Mon, 9 Jul 2001

The Department of Mathematics at the University of Haifa, Israel,
announces two different openings for tenure-track positions beginning
in October 2002:

POSITION 1

Candidates for this position must hold a Ph.D. in either mathematics
or computer science and, preferably, also a master degree in the other
field among these two. Candidates are expected to have an excellent
record in research and teaching.

The position will require the continuation of high level research
work, in the candidate's preferred field and teaching of computer
science courses and/or courses on applications of mathematics to

high-tech industries in our bachelor programs: "Mathematics with Computer Studies" and "Mathematics and its Applications to High Technologies", and in a master program of "Mathematics with Computer Sciences". Thus, the candidates must have a proven record of teaching such courses, and a reasonable command of the Hebrew language.

Remark: the University of Haifa has an independent Department of Computer Science which is not part of the above mentioned programs and has no connection to this announcement.

POSITION 2

Candidates for this position must hold a Ph.D. in mathematics, and are expected to have an excellent record in research and teaching.

The position will require the continuation of high level research work, in the candidate's preferred field, and teaching of courses in mathematics. The department has B.A., M.A. and Ph.D. programs in pure mathematics, mathematics with computer studies, and mathematics with high-tech applications. The candidates are expected to have a reasonable command of the Hebrew language.

To apply, please send a letter of application, which addresses your suitability for the respective position, a complete CV and a list of publications. In addition, please have three letters of recommendation sent directly to us. All materials should be sent to

  Chairman,
  Department of Mathematics
  University of Haifa
  Mt. Carmel, Haifa 31905, ISRAEL.

Deadline for applications: February 15, 2002. Later applications will be considered only if still possible at that time.

More information about the department can be found
at: http://math.haifa.ac.il

From: Secretary Support - Magrijn <magrijn.secsup@tip.nl>
Subject: Journal MCSS
Date: Thu, 21 Jun 2001

Mathematics of Control, Signals, and Systems   2001   Volume 14, No. 2
              Table of Contents

Robust limits of risk sensitive nonlinear filters
W.H. Fleming and W.M. McEneaney

Uniting local and global controllers with robustness to vanishing noise
C. Prieur

Controllability for discrete systems with a finite control set
Y. Chitour and B. Piccoli

Singular linear behaviors and their AR-representations
V. Lomadze

INFORMATION
Information on MCSS including tables of contents is available at its
home pages:

        www.cwi.nl/~schuppen/mcss/mcss.html
        www.math.rutgers.edu/~sontag/mcss.html

Address for submissions by email or regular mail:

        J.H. van Schuppen (Co-Editor MCSS)
        CWI
        P.O.Box 94079
        1090 GB Amsterdam
        The Netherlands
        Email mcss@cwi.nl

        Eduardo Sontag and Jan van Schuppen (Editors)

Contributed by Jan H. van Schuppen (mcss@cwi.nl)
------- end -------

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

Today's Topics:
      Conference on Inverse Problems: Modeling and Simulation
      NSF-CBMS Regional Conference on Inverse Problems
         SIAM Conferences: Imaging Science and Life Sciences
         SIAM Conference on Optimization
         SIAM Conference on Geometric Design & Computing
      ECMI Research Fellowships 2001
         Abstract: Regularized numerical inversion of Laplace transform
         Special Issue on Electrical Impedance Imaging
      Table of Contents: Inverse Problems
      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: Fadil Santosa <santosa@ima.umn.edu>
Subject: Conference on Inverse Problems: Modeling and Simulation
Date: Wed, 15 Aug 2001

            The First International Conference
         Inverse Problems: Modeling and Simulation
            July 14-21, 2002, Fethiye, Turkey

The International Conference Inverse Problems: Modeling and Simulation
will be held during July 14-21, 2002, in the historic city of Fethiye
on the Mediterranean Sea, in Turkey.

The main aim of the Conference is to promote unity through diversity
and to encourage worldwide interest in the theory and applications of
inverse problems. Our forum is going to bring together about 300
leading scientists from many different countries and many speciality
applications.

The proposed International Conference will be under the auspices of
such international journals as Inverse Problems, Inverse Problems in
Engineering, Inverse and Ill-Posed Problems, and Computational Methods
in Applied Mathematics. The Conference will be very wide and attract
leading American, Asian, and European scientists.

Please see webpage:
   http://www.ccr.jussieu.fr/tarantola/Files/Professional/Fethiye/
for further information.

Submitted by Fadil Santosa, University of Minnesota.

From: "R. Knobel" <knobel@panam.edu>
Subject: NSF-CBMS Conference on Inverse Problems
Date: Fri, 10 Aug 2001

NSF-CBMS Regional Conference
on
Using Spectral Data to Solve Inverse Problems

December 14-18, 2001
The University of Texas - Pan American
Edinburg, Texas USA

http://www.math.panam.edu/cbms

PRINCIPAL LECTURE SERIES

Professor Joyce McLaughlin, Ford Foundation Professor of
Mathematics at Rensselaer Polytechnic Institute, will provide 10
one-hour lectures on "Using Spectral Data to Solve Inverse Problems."

These lectures will be a self-contained and comprehensive
exposition on the use of natural frequencies and selected mode shape
measurements to determine material properties of objects. These
lectures will not only present the newest methods for solving these
problems, but also give both mathematical and experimental insight
into how the data depends on the material properties to be
recovered. Emphasis will be on two-dimensional problems, with a brief
introduction and insight given for one-dimensional problems.

ADDITIONAL LECTURES

Five additional invited speakers will provide supplemental
lectures addressing related inverse problems in mathematics, science,
and engineering.

LOCATION

The University of Texas-Pan American is located in Edinburg,
Texas, in the subtropical Rio Grande Valley of South Texas. UTPA is
just 20 minutes from Mexico, and approximately 75 miles from the Gulf
of Mexico and the resort area of South Padre Island. The area is
heavily influenced, both culturally and economically, by its proximity
to the U.S.-Mexico border.

REGISTRATION

Participants may register by web at
http://www.math.panam.edu/cbms, or by mail, e-mail, or fax using the
contact information given below. There is no registration fee.

TRAVEL SUPPORT

The National Science Foundation is providing some support for
domestic travel and local expenses. Requests may be sent to the
contact information given below and should include rank/position,
institution, a brief description of research interests, and the
anticipated amount of support needed. Inclusion of a short statement
from the advisors of those graduate students seeking funding is
recommended. Requests for support are now being accepted, but should
be made no later than Oct. 30. Late applicants will be considered as

space and funds permit.

TRANSPORTATION

   Edinburg is located approximately 230 miles southeast of San
Antonio on US Route 281 and 150 miles southwest of Corpus Christi.
   The McAllen International Airport is approximately 15 miles south
of Edinburg and is serviced by regularly scheduled flights from
Houston (Continental) and Dallas (American). Car rentals, taxis, and
shuttles to selected hotels are available from the airport.
   The Rio Grande Valley International Airport is located in
Harlingen 40 miles east of Edinburg and is serviced by Continental,
American, Southwest, and Sun Country Airlines.

LOCAL ACCOMODATIONS

   Information on nearby lodging and restaurants will be made
available on the conference web site http://www.math.panam.edu/cbms.

CONTACT INFORMATION

   For more information about the conference, to register, or to
request travel support, contact

Submitted by: Roger Knobel
Department of Mathematics
The University of Texas - Pan American
Edinburg, TX 78539-2999
Phone: (956) 381-3452
Fax: (956) 384-5091
E-mail: knobel@panam.edu

From: ross@siam.org
Subject: SIAM IS01/LS01 conferences registration open
Date: Thu, 02 Aug 2001

    Register Now!

    The SIAM Conferences on Imaging Science (IS01) and Conference on the
    Life Sciences (LS01) are still taking preregistrations at:

    http://www.siam.org/meetings/is01/

        and

    http://www.siam.org/meetings/ls01/

    Deadline for Preregistration is August 10, 2001

    The Imaging Science conference will be held from September 22-24,
2001
    and the Life Sciences conference will be held from September 24-26,
    2001. Both conferences will take place at the Boston Park Plaza
    Hotel, Boston, MA.

    For other SIAM Conferences, please visit:

    http://www.siam.org/meetings/calender.htm

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      Darrell Ross
      SIAM, Conference Program Manager


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From: ross@siam.org
Subject: SIAM Conference on Optimization
Date: Tue, 07 Aug 2001 14:57:15 -0400


      Conference Name:   SIAM Conference on Optimization

      Location: Westin Harbour Castle Hotel, Toronto, Canada

      Dates: May 20-22, 2002

      The Call for Presentations for this conference is now available at:
      http://www.siam.org/meetings/op02/

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

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From: cyoung@siam.org
Subject: SIAM Conference on Geometric Design & Computing
Date: Mon, 23 Jul 2001


      Conference Name:   SIAM Conference on Geometric Design and Computing

      Location:          Sacramento, CA, USA
                         Holiday Inn Capital Plaza Hotel

      Dates:             November 5-8, 2001


      Program, hotel and registration information is now available at:

      http://www.siam.org/meetings/gd01/

      Key Deadlines:

      Speaker AV Requirements:   10/10/01
      Hotel Reservations:        10/10/01
      Pre-registration:          10/10/01

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

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From: "Prof. Heinz W. Engl" <engl@indmath.uni-linz.ac.at>
Subject: ECMI RESEARCH FELLOWSHIPS 2001
Date: Thu, 9 Aug 2001

              ECMI RESEARCH FELLOWSHIPS 2001

 TMR Network: Differential Equations in Industry and Commerce

Vacancies are available for both postdoctoral and predoctoral
postgraduate researchers to work in the EC network 'Differential
Equations in Industry and Commerce'.  This network, which is part of
the 'Training and Mobility in Research' (TMR) scheme, is organized by
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the European Consortium for Mathematics in Industry (ECMI) and details
can be found on www.maths.ox.ac.uk/ociam /TMR/.

The Research Fellows appointed to this network will work on
industrially motivated problems involving differential equations.
They will receive training in mathematical and computational
techniques and will also spend time collaborating directly with
industry. They will be encouraged to collaborate with researchers in
the other centres of the network and to attend relevant conferences
within Europe particularly those organized by MACSInet
(www.macsinet.org/).

The Research Fellowships are open to Nationals of a Member State or
Associated State* of the European Union who have the equivalent of at
least a masters degree in a mathematical science and will be under the
age of 35 at the time of appointment. The fellowships may NOT be held
in the country of which the fellow has nationality. Salary is in
local currency on the appropriate local scale and social security,
working facilities and travel allowances will be the responsibility of
the host centre, following EC guidelines and approval by the network.

One year positions are available at Eindhoven, Linz, Kaisterslautern,
Strathclyde. Short-term positions may also be available at Oxford and
Milan.

DEADLINE FOR APPLICATIONS: AUG 30TH 2001

To apply, send your CV and a brief statement indicating any relevant
industrial experience to Dr Hilary Ockendon, quoting reference
BK/01/014.
Centre for Industrial and Applied Mathematics
Mathematical Institute
24-29 St Giles
Oxford
OX1 3LB

fax: 01865 270515

email: ockendon@maths.ox.ac.uk

 *The Associated States eligible on this contract are Iceland,
  Liechtenstein, Norway, and Israel.

Submitted by:
Prof.Dr.Heinz W. Engl   E-Mail: engl@indmath.uni-linz.ac.at
Institut fuer Industriemathematik secretary: nikolaus@indmath.uni-
linz.ac.at
Johannes-Kepler-Universitaet   Phone:+43-(0)732-2468...,ext.9219 or
8693,
Altenbergerstrasse 69   secretary: ext.9220
A-4040 Linz   Fax:ext. 8855
Oesterreich / Austria   home phone: +43-(0)732-245518
          World Wide Web: http://www.indmath.uni-linz.ac.at/

From: Vladimir Kryzhniy <kryzhniy@usa.net>
Subject: Regularized algorithm of numerical inversion of Laplace
transform
Date: 27 Jul 2001

Dear IPNet,
I am sending attached information which I hope may be interested.

Regards,
Vladimir Kryzhniy
e-mail: kryzhniy@usa.net
Home phone: 763-537-7274

       Regularized Algorithm of Numerical Inversion of Laplace Transform
                            Vladimir Kryzhniy

   It is well known that numerical algorithm of Laplace Inversion has
to be a regularized algorithm, based on Tikhonov's regularization.
   As a result of research regularized solution of Laplace Transform
Inversion was found. It can be written as a convolution integral.
This received formula is valid if Laplace Transform satisfies some
conditions, which are not too strong, because we always can use
properties of Laplace Transform.
   The criterion of regularization parameter search was adapted to Laplace
Inversion. This criterion can also be used for error estimation.
The output accuracy is definitely enough for algorithm's implementation
in the
engineer problem solving. Any output accuracy can be reached by using
corresponding input accuracy. The program works really fast; one output
function value is calculated in seconds.
   This algorithm could be taken as a start point for finding
exponential signal expansion into partial fraction. Such problems are
characteristic for many Physical systems relaxing from exited into a
normal
state, in particular for systems exited with the help of Nuclear Magnetic
Resonance. Similar problems arise in Optics and a lot of other fields. I
have
some additional ideas about Laplace Transform Numerical Inversion
algorithm
usage in exponential signal expansion into partial fraction.
   If you have either questions or suggestion please let me know via
e-mail: kryzhniy@usa.net

From: Jennifer Mueller <mueller@math.colostate.edu>
Subject: Special Issue on Electrical Impedance Imaging
Date: Mon, 6 Aug 2001

We would like to call to your attention that the IEEE Transactions on
Medical
Imaging will be publishing a special issue on Electrical Impedance
Imaging. Topics to be included cover nearly all aspects of the
discipline. A Call for Papers can be found in recent issues of the
journal or on-line at

http://www.ieee-tmi.org/ieee/call_for_EII_papers.html

More information about this journal can be found at

http://www.ieee-tmi.org/

The impact of this journal has recently been studied and reported in an
editorial published on the first page of the December 2000 issue (IEEE
Trans. MI 19(12):1157-1159).   The Institute for Scientific Information

recently ranked TMI first among 200 journals in the electrical and
electronic engineering field, based on its impact factor and citation
half-life.

The deadline for submissions is September 1, 2001, with publication
expected in June 2002.

Sincerely,
Jennifer Mueller, David Isaacson, and Jonathan Newell

From: "Janet Thomas" <janet.thomas@iop.org>
Subject: Contents list for Inverse Problems vol 17, issue 4
Date: Mon, 23 Jul 2001

Inverse Problems   August 2001   Volume 17, Issue 4
              Table of Contents

SPECIAL ISSUE TO CELEBRATE PIERRE SABATIER'S 65TH BIRTHDAY

On the regularizing properties of a full multigrid method for
ill-posed problems   B Kaltenbacher

Estimation of discontinuous parameters of elliptic partial
differential equations by regularization for surface representations
S Kindermann and A Neubauer

Prolate spheroidal wavefunctions, quadrature and interpolation
H Xiao, V Rokhlin and N Yarvin

Numerical solution of a Cauchy problem for the Laplace equation
F Berntsson and L Elden

EVOLUTION EQUATIONS

Short-wave dynamics in the Euler equations   M A Manna and A Neveu

Short-wave instabilities in the Benjamin--Bona--Mahoney--Peregrine
equation: theory and numerics   S M Gama, R A Kraenkel and M A Manna

Periodic solutions of a many-rotator problem in the plane
F Calogero and J-P Francoise

Liouville equation under perturbation   L A Kalyakin

A reformulation of the `dressing method' for the Sawada--Kotera
equation   A Parker

Soliton-like dynamics of filtrons of cyclic automata   P Siwak

Integrable evolution equations in time-dependent domains
A S Fokas and B Pelloni

Towards an inverse scattering theory for non-decaying potentials of
the heat equation   M Boiti, F Pempinelli, A K Pogrebkov and B Prinari

Virtual solitons and the asymptotics of second harmonic generation
D J Kaup and H Steudel

Nearly integrable nonlinear equations on the half line describing the
resonant interaction of radiation with matter
E V Doktorov and V S Shchesnovich

Rational solutions of the KP equation through symmetry reductions:
coherent structures and other solutions
E Medina and M J Marin

N-wave interactions related to simple Lie algebras.
Z_2-reductions and soliton solutions
V S Gerdjikov, G G Grahovski, R I Ivanov and N A Kostov

Algebraic geometrical solutions for certain evolution equations and
Hamiltonian flows on nonlinear subvarieties of generalized Jacobians
M S Alber and Y N Fedorov

A nonisospectral problem in $(2+1)$ dimensions derived from KP
P G Estevez

A study of the construction of equations in ($2+1$) dimensions
K Toda and S-J Yu

Differential constraints for the Kaup--Broer system as a reduction of
the 1D Toda lattice   A K Svinin

Classical Darboux transformations and the KP hierarchy
F Lambert, I Loris and J Springael

APPLIED INVERSE PROBLEMS

Inverse scattering for shape and impedance   R Kress and W Rundell

Shape reconstruction of buried obstacles by controlled evolution of a
level set: from a min--max formulation to numerical experimentation
C Ramananjaona, M Lambert, D Lesselier and J-P Zolesio

Obstacle localization in an homogeneous half-space   N I Grinberg

Determination of point wave sources by boundary measurements
A El Badia and T Ha-Duong

On shape optimization of optical waveguides using inverse problem
techniques   T Felici and H W Engl

Generalized Gaussian quadrature applied to an inverse problem in
antenna theory   G D de Villiers, F B T Marchaud and E R Pike

Simultaneous reconstruction of the initial temperature and heat
radiative coefficient   M Yamamoto and J Zou

Inverse homogenization for evaluation of effective properties of a
mixture   E Cherkaev

CONCLUSION

Should we study sophisticated inverse problems?
P C Sabatier

Submitted by: Janet Thomas
Electronic Journals Producer
Institute of Physics Publishing
Dirac House, Temple Back,
Bristol BS1 6BE, UK
Tel: +44 (0)117 930 1081
Fax: +44 (0)117 929 4318
E-mail: janet.thomas@iop.org=20
WWW: http://www.iop.org=20

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA contents
Date: Sun, 19 Aug 2001

Linear Algebra and its Applications   Sept. 2001 Vol. 335, Issue 1-3
              Table of Contents

Matrix algebras in optimal preconditioning   C. Di Fiore, P. Zellini

The c-numerical range of tridiagonal matrices
M.-T. Chien, H. Nakazato

The factorability of symmetric matrices and some implications for statistical linear models   S.P. Smith

On similarity invariants of matrix commutators
S. Furtado, E.A. Martins, F.C. Silva

A matrix formulation of Gruss inequality   P.F. Renaud

Rank equalities for idempotent and involutary matrices
Y. Tian, G.P.H. Styan

Quasi-filiform lie algebras of maximum length
J.R. Gomez, A. Jimenez-Merchan, J. Reyes

Comparison of perturbation bounds for the stationary distribution of a Markov chain   G.E. Cho, C.D. Meyer

Equilibrated anti-Monge matrices   M. Fiedler

Characteristic polynomials and controlability of partially prescribed matrices   G. Cravo, J.A. Dias da Silva, F.C. Silva

Obtuse cones and Gram matrices with nonnegative inverse
A. Cegielski

A characterization of the drazin inverse   L. Zhang

DGMRES: A GMRES-type algorithm for Drazin-inverse solution of singular non-symmetric linear systems   A. Sidi

Please note: The access restrictions on articles/abstracts vary. Many journals have free access to abstracts, but in general access to full text PDFs is restricted to subscribers.

Visit the journal at http://www.elsevier.nl/locate/jnlnr/07738

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

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

Today's Topics:
     Deadline Extension: 4th Int'l Conf. Inverse Problems in Eng.
       Conference: Inverse Problems, Control and Shape Optimization
     Special Year: 2001-02 NA Year at the Fields Institute
     Positions: Medical Imaging Faculty
     Table of Contents: Inverse Problems
     Table of Contents: Inverse Problems in Engineering
     Table of Contents: Mathematics of Control, Signals, and Systems
     Table of Contents: Electronic Trans. on Numerical Analysis
     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: 4icipe <icipe@lttc.coppe.ufrj.br>
Subject: Deadline extension for the 4icipe
Date: Fri, 14 Sep 2001

Dear Colleague:

The deadline for submission of abstracts for the 4th International
Conference on Inverse Problems in Engineering: Theory and Practice
(4icipe) was extended to OCTOBER 05, 2001. You can find the text of
the announcement for the conference below. Please consider the 4icipe
to present your scientific contributions and notice that papers
presented in the conference can also be submitted for possible
publication in the journal Inverse Problems in Engineering. I am
looking forward to seeing you in Brazil for the conference and please
feel free to contact me about any subject regarding the 4icipe.

With the very warmest regards,

Helcio R. B. Orlande
Chairman for the 4icipe

General Announcement
And Call for Papers
Abstracts due: October 05, 2001

4th INTERNATIONAL CONFERENCE ON INVERSE PROBLEMS IN ENGINEERING:
THEORY AND PRACTICE

May 26-31, 2002
Angra dos Reis, Brazil

http://www.lttc.coppe.ufrj.br/4icipe/
e-mail: icipe@lttc.coppe.ufrj.br

CONFERENCE SYNOPSIS
The 4th International Conference on Inverse Problems in Engineering:
Theory and Practice belongs to a successful series of United
Engineering Foundation conferences held in a three-year
cycle. Previous conferences took place in Palm Coast, Florida (1993),
Le Croisic, France (1996) and Port Ludlow, Washington (1999). The
conference has its roots on the informal seminars organized by
Prof. J. V. Beck at Michigan State University, which were initiated in
1987.

CONFERENCE SCOPE
The main objective of the conference is to bring together researchers
from different world regions, dealing with different inverse problem
applications and with its theoretical aspects, for the presentation of
their most recent research results and for the technical discussion of
their findings. Despite traditionally having the heat transfer
community as the leading organizing group, such conference reaches a
much broader scope; its hallmarks are the multidisciplinary nature and
the innumerous opportunities for technical interactions among the
participants.

The conference will emphasize a broad range of deterministic,
statistical, mathematical, computational and experimental approaches,
which can be applied to the solution of inverse problems and to the
design of experiments. The topics listed below give a general
guideline for possible contributions:

    Acoustics   Vibrations and structural dynamics
    Electromagnetism Nuclear transport
    Geophysics   Inverse design and optimization
    Imaging   Design of experiments
    Heat and mass transfer   Property estimation
    Fluid mechanics   Signal and noise processing
    Solid mechanics   Benchmark results
    Tomography and inverse scattering   Novel inverse methodologies
    Porous media   Theoretical and mathematical aspects

Contributions dealing with practical applications of inverse problems
are encouraged, such as in petrochemistry, aeronautics, astronautics,
medicine, groundwater flow, materials processing, remote sensing,
non-destructive evaluation, etc.

SUBMISSION, SELECTION, PUBLICATION AND PRESENTATION OF CONTRIBUTED
PAPERS
Original papers are invited on the above general topics. Authors
should submit a one-page abstract by October 05, 2001, through the
United Engineering Foundation web-site
(http://www.engfnd.org/2ai.html). If you have any difficulties to
submit the abstract electronically, please send it by express-mail to
the conference chair. Authors whose abstracts are accepted will be
sent the Author's Kit, which will include detailed instructions for
the preparation of their manuscripts.

The papers submitted will be evaluated by two competent reviewers in
the area. Only the accepted papers that are effectively presented in
the conference will appear in the proceedings. The proceedings will be
published as a bound volume and sent to the conference participants
through airmail within four months after the conference is finished. A
book of abstracts and a CD-ROM containing all accepted papers will be
available for the participants during registration. Authors may

consider their papers for further review and possible publication in the journal Inverse Problems in Engineering (http://www.gbhap.com/journals/210/210-top.htm). When submitting the full papers to the conference, the authors should indicate if they want to submit the papers to the Inverse Problems in Engineering journal as well. In this case, the review process will be more stringent and a third evaluation of the paper will be requested.

The conference will be organized in the traditional United Engineering Foundation format. Daily oral and poster sessions will be held in the mornings and evenings. Afternoons will be free for recreation and technical interactions among the participants. Tutorial sessions will be scheduled and keynote lecturers from different research fields will be invited.

IMPORTANT DATES
Abstracts due: October 05, 2001
Notification of abstract evaluation: November 02, 2001
Full papers due for review: January 11, 2002
Notification of paper evaluations:March 01, 2002
Final papers due:May 17, 2002=20

ORGANIZING COMMITTEE
Chair: H. R. B. Orlande (Brazil).
Co-chairs: F. M. Ramos (Brazil), A. F. Emery (USA), M. Raynaud (France) and S. Kubo (Japan).

F. Landis (ex officio), K. A. Woodbury (USA), J-E. Nordtvedt (Norway), P. P. B. de Oliveira (Brazil), G. Guimar=E3es (Brazil) and N. J. Ruperti Jr. (Brazil).

SCIENTIFIC COMMITTEE
Honorary Members: J. V. Beck (USA), O. M. Alifanov (Russia) and M. N. Ozisik (USA).

A. Yagola (Russia), A. El Badia (France), A. J. Kassab (USA), A. Nenarokomov (Russia), A. Denisov (Russia), A. J. Silva Neto (Brazil), B. Blackwell (USA), C. J. S. Alves (Portugal), C. H. Huang (Taiwan), C. LeNiliot (France), D. Maillet (France), D. Lesnic (UK), D. Petit (France), D. Delaunay (France), D. Murio (USA), E. Massoni (France), E. A. Artioukhine (France), G. Chavent (France), G. S. Dulikravich (USA), H. F. C. Velho (Brazil), H. Busby (USA), H. D. Bui (France), H. Engl (Austria), H. Sobieczky (Germany), H. Reinhardt (Germany), I. Egorov (Russia), J. C. Batsale (France), J. Howell (USA), K. Onishi (Japan), K. Dowding (USA), L. Barichello (Brazil), L. C. Santos (Brazil), M. Bertero (Italy), M. Bonnet (France), M. Tanaka (Japan), N. Z. Sun (USA), N. Zabaras (USA), N. Roberty (Brazil), N. McCormick (USA), P. Husbands (UK), T. Burczynski (Poland), A. T. Watson (USA), W. S. Kim (South Korea), Y. Jarny (France).

ATTENDANCE AT THE CONFERENCE
In order to make possible the technical interactions among all participants, the attendance at this conference will be limited and by invitation only. If you wish an invitation to attend, please complete and return the attached application form or submit an application electronically through the United Engineering Foundation web site (http://www.engfnd.org/2ai.html).

CO-SPONSORS

UFRJ (Federal University of Rio de Janeiro), ABCM (Brazilian Society of Mechanical Sciences), SBMAC (Brazilian Society of Applied and Computational Mathematics), Gordon & Breach, CNPq, CAPES and FAPERJ.

ENGINEERING FOUNDATION CONFERENCES
United Engineering Foundation Conferences were established in 1962 to provide an opportunity for the exploration of problems and issues of concern to engineers from many disciplines. The format of the Conference provides morning and evening sessions in which major presentations are made. Time is available during the afternoons for ad hoc meetings and informal discussions and is designed to enhance rapport among participants and prompt dialogue on the developments of the meeting. We believe the Conferences have been instrumental in generating ideas and disseminating information to a greater extent than is possible through more conventional forums. All participants are expected to contribute actively to the discussions.

UNITED ENGINEERING FOUNDATION FELLOWSHIPS FOR NEW PROFESSIONALS
The United Engineering Foundation sponsors a Conference Fellowship program. Applicants are limited to those currently active in engineering or related professions with a direct interest in the conference topic. They must be within ten years of their B.Sc. degree at the time their applications are submitted. The stipend is sufficient to cover the conference registration fee and on-site room and board. Transportation expenses are not included. Application information may be obtained from the UEF Web site (www.engfnd.org) or by fax from the Foundation (1-212-591-7441) and must be submitted by February 26, 2002.

VENUE
The location for the conference will be Hotel Portobello Resort & Safari (http://www.hotelportobello.com.br) in Angra dos Reis. The resort is located between the mountains of Serra do Mar and the bay of Angra dos Reis, providing a unique and safe atmosphere for the conference participants. All apartments of this five-star hotel face a private beach. Schooners and motorboats are available in the resort for tours to countless islands that dot the bay. Swimming pools, tennis courts, windsurf, kayaks, jet-skis, horseback rides and trekking are also available. In a farm inside the resort you can come across exuberant Brazilian fauna and flora in the tropical rain forest.

The conference site is located about 100 kilometers (70 miles) from the Rio de Janeiro International Airport, in the south coast of the state of Rio de Janeiro. For the conference participants, the destination shall be the Rio de Janeiro International Airport. It is served by major airline carriers, with everyday flights from many cities in North America, Europe and Asia. Most international flights arrive in Rio de Janeiro in the morning. Transportation will be provided by the organization from the Rio de Janeiro International Airport to the conference site on Sunday morning (May 26) in air-conditioned buses or vans, with bilingual guides. Also, transportation from the conference site to the Rio de Janeiro International Airport will be provided for the conference participants and guests on the last day of the conference (May 31).

Pre- and post-conference tours for the city of Rio de Janeiro or other Brazilian cities are available. For more details on tours and on air transportation discounted tickets, please contact the official travel agent for the conference, KSK Tours (http://www.ksk.com.br).

Brazil requests visas for several countries, including the United States. Please, check with the Brazilian Embassy in your country if you need a visa to be admitted to Brazil, at least three months before the conference.

CONFERENCE FEES
The conference fees are all inclusive. They include registration, accommodations, meals, taxes and gratuities, from dinner on Sunday through lunch on Friday. The tentative fees in US dollars are:

Participant (single occupancy)   U$ 1425.00
Participant (double occupancy, sharing room with another participant
or with a guest)   U$ 1185.00
Special participant (double occupancy, sharing room with another
participant)   U$ 810.00
Guest (sharing room with a participant) U$ 560.00

South American participants affiliated to ABCM (Brazilian Society of Mechanical Sciences) or SBMAC (Brazilian Society of Applied and Computational Mathematics), as well as graduate students, qualify as a Special Participant. For participants not staying in the hotel, a special fee of U$ 300.00 will be charged (meals not included).

For further information, please contact:

Engineering Foundation Conferences
3 Park Avenue, 27th floor
New York, NY 10016, USA
engfnd@aol.com

or

Helcio R. B. Orlande, Conference Chair
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helcio@serv.com.ufrj.br

[For more information on submitting abstracts, please consult
     http://www.lttc.coppe.ufrj.br/4icipe/
-Ed.]

From: Mohamed Jaoua <mohamed.jaoua@enit.rnu.tn>
Subject: Second Conference on Inverse Problems, Control and Shape
  Optimization (PICOF'02), Carthage, Tunisia, April 2002
Date: Mon, 27 Aug 2001

Second Conference on Inverse Problems, Control and Shape Optimization
               (PICOF'02)
    Carthage, Tunisia, April 10-12, 2002

The solution of inverse problems, as well as those of control and shape optimization, is no longer a matter of high tech industrial applications only. Thanks to the development of computation capabilities, it has become of common use in applications such as non destructive testing, control of industrial processes, identification

of parameters, medical imaging, industrial design, etc. Scientists
interested in these topics are coming from mathematical, engineering
and scientific computation backgrounds, as well as from various
applications fields. Designing fast algorithms to solve such problems
is one of their major concerns.

The first International Conference on Inverse Problems, Control and
Shape Optimization (IPCSO'98) was held in Carthage (Tunisia) in April
1998. It was organized by ENIT, INRIA and UTC. More than 80
participants attended, including 30 invited speakers. Some of the
questions discussed during the conference have given place to the
release of a special section in the " Inverse Problems " journal
(Vol 15, No. 1, February 1999). Besides, the conference allowed the
local organizing team to establish new international links, some of
them having already given birth to steady cooperations.

This success has drawn the organizers to organize a second edition, to
be held in the same wonderful place, the "Palais de Be=EFt El Hikma"
that shelters the Tunisian Academy of Sciences, Letters and
Arts. PICOF'02 is expected to gather 150 participants, including
around 60 invited speakers.

Invited speakers

R. Aboula=EFch (Rabat), G. Allaire (Palaiseau), C. Alves (Lisboa), S.
Andrieux (Paris), A. Ben Abda (Tunis), J. Ben Abdallah (Tunis), H. Ben
Ameur (Bizerte), F. Ben Belgacem (Toulouse), M. Bergounioux
(Orl=E9ans), T. Bewley (San Diego), J. Blum (Nice), F. Bonnans
(Paris), M. Bonnet (Palaiseau), E. Bonnetier (Palaiseau), H.D. Bui
(Palaiseau), J. Burns (Blacksburg), S. Chaabane (Sfax), E. Casas
(Santander), G. Chavent (Paris), M. Choulli (Metz), B. Dehman (Tunis),
G. de Marsily (Paris), A. Demidov (Moscou), P. Destuynder (Paris),
R. Djellouli (Boulder), R. Dziri (Tunis), A. El Badia (Compi=E8gne),
H. El Fekih (Tunis), H. Engl (Linz), C. Fabre (Nice),
E. Fernandez-Cara (Sevilla), A. Habbal (Nice), T. Ha Duong
(Compi=E8gne), J. Haslinger (Prague), G. Inglese (Florence),
J. Jaffr=E9 (Paris), M. Jaoua (Tunis), A. Kirsch (Karlsruhe), R. Kress
(Goettingen), K. Kunisch (Graz), J. Leblond (Nice), M. Masmoudi
(Toulouse), R. Mos=E9 (Strasbourg), J.P. Puel (Versailles),
J.P. Raymond (Toulouse), P. Rouchon (Marseille), B. Rousselet (Nice),
W. Rundell (College Station, Tx), J.C. Sabatier (Montpellier),
O. Scherzer (Bayreuth), J. Sylvester (Washington), X.C. Tai (Bergen),
D. Tiba (Bucarest), F. Tr=F6ltzsch (Berlin), M. Tucsnak (Nancy),
G. Uhlmann (Washington), S. Vessela (Firenze), M. Ziane (Texas A&M),
H. Zidani (Orl=E9ans), J.P. Zol=E9sio (Nice), E. Zuazua (Madrid)

Organization:

Chair: T. Ha Duong (UTC), J. Jaffr=E9 (INRIA) and M. Jaoua (ENIT)

Organizing Committee: A.. Ben Abda, J. Ben Abdallah, H. Chaker,
G. Chavent, A. El Badia, H. El Fekih, N. Gmati, A. Saada

Webmaster: M. Debianchi (muriel.de_bianchi@inria.fr)

Conference secretary: M. Debianchi (muriel.de_bianchi@inria.fr),
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Address: PICOF'02, ENIT-LAMSIN, BP 37, 1002 Tunis Belv=E9d=E8re, Tunisie

Tel: 216-1-874700 ; Fax : 216-1-872729

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jerome.jaffre@inria.fr

Please see webpage:
            http://www.inria.fr/PICOF02
for further information.

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Laboratoire de Modelisation Mathematique et Numerique
dans les Sciences de l'Ingenieur
Secretariat : Anissa MARCO, lamsin@enit.rnu.tn

From: Ken Jackson <krj@cs.toronto.edu>
Subject: 2001-02 NA Year at the Fields Institute in Toronto
Date: Mon, 3 Sep 2001

                       Thematic Year on
               Numerical and Computational Challenges
                    in Science and Engineering
                    At the Fields Institute

                   August 2001 to August 2002

The Fields Institute in Toronto is sponsoring a Thematic Year on
"Numerical and Computational Challenges in Science and Engineering"
(NCCSE) from August 2001 to August 2002. The main point of this
announcement is to inform the scientific computing committee about
this event so that any people interested in participating can include
it in their plans for 2001-02.

More information about the Fields Institute in g
eneral and the NCCSE
Thematic Year in particular can be found at
        http://www.fields.utoronto.ca
and
        http://www.fields.utoronto.ca/numerical.html
respectively.

From: Mark Anastasio <anastasio@iit.edu>
Subject: Medical Imaging Faculty Positions Available
Date: Fri, 28 Sep 2001

Medical Imaging Faculty Positions Available:

The Pritzker Institute of Medical Engineering at the Illinois
Institute of Technology has tenure-track faculty positions in medical
imaging available at the Assistant, Associate or Full Professor
levels. The Pritzker Institute in cooperation with the faculty of The
University of Chicago has recently initiated a doctoral degree program
in Biomedical Engineering and will offer an undergraduate degree
program within a newly established Department of Biomedical
Engineering in fall 2002.

The new medical imaging faculty will be expected to initiate funded
research programs, and will be strongly encouraged to initiate
collaborative research projects with researchers at the University of
Chicago and Argonne National Laboratory.

Applicants should send CV, names of three references, and a summary of
their research plans to Faculty Search Committee, Pritzker Institute
of Medical Engineering, Illinois Institute of Technology, 10 West 32nd
Street, Chicago, IL 60616. Electronic transmission of documents with
attachments is also acceptable. (damico@iit.edu) IIT is an
affirmative action/equal opportunity employer

Submitted by: Mark A. Anastasio, Ph.D.
Assistant Professor of Biomedical Engineering
Pritzker Institute of Medical Engineering
Illinois Institute of Technology
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(F) 312-567-5707
Email: anastasio@iit.edu

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B Bunck, A Elcrat and T Hrycak

A one-dimensional inverse problem for a hyperbolic system with complex coefficients   Rakesh

On the convergence of a new Newton-type method in inverse scattering
R Potthast

Exponential instability in an inverse problem for the Schr\"odinger equation   N Mandache

Linear sampling methods for 2D inverse elastic wave scattering
T Arens

Identification of a discontinuous source in the heat equation
F Hettlich and W Rundell

Radar scattering centre localization by subspace fitting
B Borden

On the well-posedness of the inverse nodal problem
C K Law and J Tsay

Regularization of the ill-posed problem of extrapolation with the Malvar-Wilson wavelets   K Drouiche, D Kateb and C Noiret

Improving the singular evolutive extended Kalman filter for strongly nonlinear models for use in ocean data assimilation
S Carme, D T Pham and J Verron

ERRATUM

An implementation of the reconstruction algorithm of A Nachman for the 2D inverse conductivity problem
S Siltanen, J Mueller and D Isaacson

From: james beck <jamesverebeck@home.com>
Subject: Inverse Problems in Engineering
Date: Sat, 29 Sep 2001

Inverse Problems in Engineering   2001   Volume 9, Number 2

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From: Secretary Support - Magrijn <magrijn.secsup@tip.nl>
Subject: Journal MCSS
Date: Tue, 28 Aug 2001

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P. Zaris, J. Wood and E. Rogers

INFORMATION
Information on MCSS including tables of contents is
available at its home pages:
www.cwi.nl/~schuppen/mcss/mcss.html
www.math.rutgers.edu/~sontag/mcss.html

Address for submissions by email or regular mail:
J.H. van Schuppen (Editor-in-Chief MCSS)
CWI
P.O.Box 94079
1090 GB Amsterdam
The Netherlands
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Eduardo Sontag and Jan van Schuppen (Editors)

Contributed by Jan H. van Schuppen (mcss@cwi.nl)

From: Lothar Reichel <reichel@mcs.kent.edu>
Subject: Electronic Transactions on Numerical Analysis
Date: Thu, 13 Sep 2001

Table of Contents, Electronic Transactions on Numerical Analysis
(ETNA), vol. 12, 2000. ETNA is available at http://etna.mcs.kent.edu
and at several mirror sites, as well as on CDROM. Papers will be added
to the volume until the end of this year as soon as they are accepted
for publication. Presently the following papers have been published in
volume 12:

Numerical experiments with algebraic multilevel preconditioners
G. Meurant

Numerical condition of polynomials in different forms
H. Zhang

On parallel two-stage methods for Hermitian positive definite matrices
with applications to preconditioning
M. J. Castel, V. Migallo'n, and J. Penade's

Gersgorin-type eigenvalue inclusion theorems and their sharpness
R. S. Varga

Some nonstandard finite element estimates with applications to 3D
Poisson and Signorini Problems   F. B. Belgacem and S. C. Brenner

Piecewise linear wavelet collocation, approximation of the boundary
manifold, and quadrature   S. Ehrich and A. Rathfeld

Multi-symplectic Fourier pseudospectral method for the nonlinear
Schrodinger equation   J.-B. Chen and M.-Z. Qin

Chebyshev approximation via polynomial mappings and the convergence
behaviour of Krylov subspace methods   B. Fischer and F. Peherstorfer

Retooling the method of block conjugate gradients
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Boolean rank of Kronecker products   V.L. Watts

Linear Algebra and its Applications Nov. 1, 2001 Vol. 337, Issue 1-3
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Applications as well as 16 related journal titles from:
http://www.mathformath.com. Simply send a blank email to
mailto:join-mathformath-offer1@lyris.elsevier.nl . In return, you will
receive the instructions for FREE access until 31st October 2001.

Submitted by:
Hans Schneider   hans@math.wisc.edu.
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Madison WI 53706 USA   http://www.math.wisc.edu/~hans (URL)
------- end -------

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

Today's Topics:
     NSF-CBMS Conference: Inverse Problems
        SIAM Conferences: Imaging Science, Life Sciences
        Annual Meeting: SIAM 50th Anniversary Meeting
        International Conference: Nonsmooth/Nonconvex Mechanics
        Conference: Acoustics, Mechanics, Mathematical Analysis Topics
        Tenure-track Position: Applied Mathematics at UMBC
     Professional Organization: SIAM Outreach Membership
        Table of Contents: Inverse Problems in 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: "R. Knobel" <knobel@panam.edu>
Subject: NSF-CBMS Conference on Inverse Problems
Date: Sun, 21 Oct 2001

SECOND ANNOUNCEMENT

NSF-CBMS Regional Conference
                    on
Using Spectral Data to Solve Inverse Problems

December 14-18, 2001
The University of Texas - Pan American
Edinburg, Texas USA

http://www.math.panam.edu/cbms

PRINCIPAL LECTURE SERIES

Professor Joyce McLaughlin, Ford Foundation Professor of Mathematics
at Rensselaer Polytechnic Institute, will provide 10 one-hour lectures
on "Using Spectral Data to Solve Inverse Problems."

These lectures will be a self-contained and comprehensive exposition
on the use of natural frequencies and selected mode shape measurements
to determine material properties of objects. These lectures will not
only present the newest methods for solving these problems, but also
give both mathematical and experimental insight into how the data
depends on the material properties to be recovered. Emphasis will be
on two-dimensional problems, with a brief introduction and insight
given for one-dimensional problems.

ADDITIONAL LECTURES

A limited program of invited speakers will provide supplemental
lectures addressing related inverse problems in mathematics, science,

and engineering.

LOCATION

The University of Texas-Pan American is located in Edinburg, Texas, in the subtropical Rio Grande Valley of South Texas. UTPA is just 20 minutes from Mexico, and approximately 75 miles from the Gulf of Mexico and the resort area of South Padre Island. The area is heavily influenced, both culturally and economically, by its proximity to the U.S.-Mexico border.

REGISTRATION

Participants may register by web at http://www.math.panam.edu/cbms, or by mail, e-mail, or fax using the contact information given below. There is no registration fee.

TRAVEL SUPPORT

The National Science Foundation is providing some support for domestic travel and local expenses. Requests may be sent to the contact information given below and should include rank/position, institution, a brief description of research interests, and the anticipated amount of support needed. Inclusion of a short statement from the advisors of those graduate students seeking funding is recommended. Requests for support are now being accepted and will continue to be considered as space and funds permit.

TRANSPORTATION

Edinburg is located approximately 230 miles southeast of San Antonio, Texas on US Route 281 and 150 miles southwest of Corpus Christi.

The McAllen International Airport is approximately 15 miles south of Edinburg and is serviced by regularly scheduled flights from Houston (Continental) and Dallas (American). Car rentals, taxis, and shuttles to selected hotels are available from the airport.

The Rio Grande Valley International Airport is located in Harlingen 40 miles east of Edinburg and is serviced by Continental, American, Southwest, and Sun Country Airlines.

LOCAL ACCOMODATIONS

Information on nearby lodging and restaurants is made available on the conference web site http://www.math.panam.edu/cbms.

CONTACT INFORMATION

For more information about the conference, registration, or to request travel support, contact

Roger Knobel
Department of Mathematics
The University of Texas - Pan American
Edinburg, TX 78539-2999
Phone: (956) 381-3452
Fax: (956) 384-5091
E-mail: knobel@panam.edu

```
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From: ross@siam.org
Subject: SIAM Conferences: Imaging Science, Life Sciences
Date: Wed, 10 Oct 2001

     SIAM's Conference on the Imaging Science and the Conference on the
     Life Sciences are currently taking Preregistrations!

     Preregister and Save!

     To qualify for the preregistration fee, return the
     Preregistration Form
     ( https://www.siam.org/meetings/is02ls02/regform.htm ) with
     payment to reach the SIAM office by Monday, February 4, 2002.

     Any registration received at the SIAM office after Monday,
     February 4, 2002 will be subject to the full registration fee. We
     urge you to preregister and save the $60.00 difference.

     For further registration, information, and program details on
     these two conferences please visit their respective web pages at:

     http://www.siam.org/meetings/is02/

     and

     http://www.siam.org/meetings/ls02/

     Darrell Ross
     SIAM, Conference Program Manager

----------------------------
From: cyoung@siam.org
Subject: 2002 SIAM 50th Anniversary and Annual Meeting
Date: Thu, 25 Oct 2001

     Conference Name:   2002 SIAM 50th Anniversary and Annual Meeting

     Location:          Philadelphia Marriott Hotel, Philadelphia, PA

     Dates:             July 8-12, 2002

     Call for Papers

     To submit go to:
     http://www.siam.org/meetings/SIAM50

     Submission Deadlines:
     MiniSymposium Proposals - 01/16/02
     Abstracts in Lecture or Poster format - 02/13/02

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

----------------------------
From: "Georgios E. Stavroulakis" <gestavr@cc.uoi.gr>
Subject: International Conference on Nonsmooth/Nonconvex Mechanics
Date: Mon, 1 Oct 2001

International Conference on Nonsmooth/Nonconvex Mechanics
```

With applications in Engineering
In Memoriam of Professor P.D. Panagiotopoulos
Thessaloniki, 5 - 6 July, 2002

http://www.civil.auth.gr/ic2002

Conference Secretatiat: c/o Professor C.C. Baniotopoulos
Institute of Steel Structures
Department of Civil Engineering
Aristotle University
GR-54006 Thessaloniki, Greece
Phone: ++30 310 995753
Fax: ++30 310 995642
E-mail: ic2002pdp@civil.auth.gr

Submitted by:
Georgios E. Stavroulakis, Dr.-Ing. habil.
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Privatdozent, T.U. Braunschweig, Germany
gestavr@cc.uoi.gr   g.stavroulakis@tu-bs.de
http://www.math.uoi.gr/~gestavr
http://www.tu-bs.de/~i5042301
Tel: 0030-651-98268, FAX: 0030-651-98201

From: Armand Wirgin <wirgin@lma.cnrs-mrs.fr>
Subject: Conference: Acoustics, Mechanics, Topics of Mathematical
Analysis
Date: Fri, 19 Oct 2001

Dear Colleagues,

This is to notify you that the website of the conference entitled

   Acoustics, Mechanics, and the Related Topics of Mathematical Analysis
   (AMRTMA)

is now open at the address:

   http://omicron.cnrs-mrs.fr/AMRTMA/

All persons interested in participating in this conference are urged
to fill out the registration form on the last page of the website. The
earlier you do this the greater are your chances of being lodged at
the Villa Clythia (where the conference is held). Otherwise, you will
have to seek lodgings in a hotel (at a higher price).

If you have not already sent me an abstract may I urge you to do so
before 15 Nov. 2001.

Sincerely,

A. Wirgin
LMA/CNRS
31 chemin Joseph Aiguier
13402 Marseille cedex 20
tel.: 33 4 91 16 40 50
fax: 33 4 91 22 08 75
e-mail: wirgin@lma.cnrs-mrs.fr

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```
From: "Thomas I. Seidman" <seidman@math.umbc.edu>
Subject: Tenure-track faculty position in Applied Math. at UMBC
Date: Mon, 1 Oct 2001

Tenure-track faculty position in Applied Mathematics at UMBC

     The Department of Mathematics and Statistics at UMBC
(University of Maryland, Baltimore County) has authorization
to recruit a tenure-track Assistant Professor in Applied Math.
Please see our web pages for further information about the
department and its present faculty; in particular, see
http://www.math.umbc.edu/Positions/positions-2001-2.shtml
for the official position announcement.

Submitted by:
Prof. Thomas I. Seidman   seidman@math.umbc.edu
UMBC, Dept. Math/Stat   http://www.math.umbc.edu/~seidman
Baltimore, MD 21250
(1-410)-455-2438 [FAX: -1066]

```
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```
From: montgomery@siam.org
Subject: SIAM Outreach Membership
Date: Wed, 10 Oct 2001

    SIAM discounts membership dues for individuals in developing
countries...

    In 1999, the SIAM Board of Trustees approved an affordable
membership option for individuals who live and work in developing
countries (as identified by the World Bank). This category of
membership, SIAM "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. For just $25 per year, eligible
individuals receive a slightly reduced set of benefits.

    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 the member
discount of 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 at
https://www.siam.org/membership/outreachmem.htm.

    The list of developing countries (as identified by the World Bank)
can be found at http://www.siam.org/membership/outreachlist.htm.

    SIAM
    Society for Industrial and Applied Mathematics
    3600 University City Science Center
    Philadelphia, PA 19104 USA
    215-382-9800
    fax 215-386-7999
    service@siam.org

www.siam.org

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T. Li and J. He

On the Numerical Solution of a Free Boundary Identification Problem
A. Ellabib and A. Nachaoui

A -model Solution for the Inverse Position Problem of Calibrated
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Optimal Experimental Designs for Linear Inverse Problems
J. Liu

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H. Nakazato, P. Psarrakos

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Denseness for norm attaining operator-valued functions
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inverse factors   M. Bollhofer

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C.R. Johnson, S. Furtado

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receive the instructions for FREE access until 31st October 2001.

Submitted by:
Hans Schneider   hans@math.wisc.edu.
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Van Vleck Hall   608-271-7252 (Home)
480 Lincoln Drive   608-263-8891 (Work FAX)
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Madison WI 53706 USA   http://www.math.wisc.edu/~hans (URL)
------- end -------

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

Today's Topics:
      NSF-CBMS Conference on Inverse Problems
      International Conference on Ill-Posed and Inverse Problems
      Workshop on Electrical Impedance Tomography
        SIAM Conference on Discrete Mathematics
        Workshops at the Fields Institute
      Postdoc in Electrical Impedance Imaging, Inverse Conductivity
      Table of Contents: Inverse Problems
      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: "Andrey L. Karchevsky" <karchevs@math.nsc.ru>
Subject: International Conference: Ill-Posed and Inverse Problems
Date: Thu, 1 Nov 2001

Dear colleagues,
I glad to inform you about International Conference on

        ILL-POSED and INVERSE PROBLEMS
   in honour of the 70-th anniversary of the birth
        of Prof. M.M. Lavrent'ev
          August 5-9, 2002
          Novosibirsk, Russia

          First Announcement

The Organizing Committee is pleased to announce that the
International Conference "ILL-POSED and INVERSE PROBLEMS"
will take place in Novosibirsk,Russia, from
Monday, August 5, through Friday, August 9, 2002.

Sobolev Institute of Mathematics, Novosibirsk State University,
and Krasnoyarsk State University convene the International Conference.

Chairman - Prof. V.G. Romanov
Vice-Chairman - Prof. S.I. Kabanikhin
Vice-Chairman - Prof. M.V. Fokin
Secretary - Dr. O.A. Klimenko, e-mail: klimenko@math.nsc.ru

Conference Themes: Ill-posed problems, inverse problems,
                   tomography and other imaging modalities.
                   Numerical analysis and applications.

International Program Committee
V.G. Romanov (Chairman), Sobolev Institute of Mathematics,
Novosibirsk, Russia
Yu.E. Anikonov, Sobolev Institute of Mathematics, Novosibirsk, Russia

M.I. Belishev,   Steklov Mathematical Institute, St. Petersburg
Division, St. Petersburg, Russia
Yu.Ya. Belov, Krasnoyarsk State University, Krasnoyarsk, Russia
A.L. Bukhgeim, Sobolev Institute of Mathematics, Novosibirsk, Russia
G. Chavent, University of Paris X, Paris, France
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A.M. Denisov, Moscow State University, Moscow, Russia
H.W. Engl, Industrial Mathematics Institute, Johannes Kepler
University, Linz, Austria
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Russia
Y. Iso, Kyoto University, Kyoto, Japan
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O.A. Klimenko (Secretary),   Sobolev Institute of Mathematics,
Novosibirsk, Russia
R. Kress, Institute of Numerical and Applied Mathematics, Goettingen,
Germany
M.M. Lavrent'ev (jr.), Sobolev Institute of Mathematics, Novosibirsk,
Russia
A.Lorenzi, Milan University, Milan, Italy
B.A. Mair, University of Florida, Gainesville, USA
G.I. Marchuk, Institute of Computational Mathematics, Moscow, Russia
Z. Nashed, University of Delaware, Newark, USA
V.V. Pickalov, Institute of Theoretical and Applied Mechanics,
Novosibirsk, Russia
P. Sabatier, Montpelier University, France
O. Scherzer, University of Bayreuth, Germany
S.I. Smagin, Computing Center, Khabarovsk, Russia
V.N. Strakhov, Institute of Physics of Earth's, Moscow, Russia
Y.M. Sultangazin, Institute of Space Investigations, Almaty, Kazakhstan
J. Sylvester, University of   Washington, Seattle, USA
G. Uhlmann, University of Washington, Seattle, USA
V.V. Vasin, Institute of Mathematics and Mechanics, Ekaterinburg, Russia
A.G. Yagola, Moscow State University, Moscow, Russia
Sh. Yarmukhamedov, Samarkand State University, Samarkand, Uzbekistan

[For an extensive list of members of the Local Program Committee and
the Organizing Committee, please refer to the conference website:
           www.math.nsc.ru/conference/mml/
-Ed.]

Mathematical Program
The program of the Conference will include plenary invited lectures, 30
minutes lectures on sessions and poster session.

Registration
Please, fill in the following preregistration form and send it to
Organizing Committee by e-mail: mml@math.nsc.ru
You may register on the Web site:
www.math.nsc.ru/conference/mml/forma.htm

Preregistration form
Surname (as in passport):
First name (as in passport):
Affiliation:
Position:
Preliminary title of the report:
E-mail:

Deadline of preregistration: Monday, December 31, 2001.

Abstracts
Abstracts will be reproduced and distributed in printed form to all
participants of Conference at the beginning of the Conference.
Abstracts should be submitted electronically to mml@math.nsc.ru
Submission is also possible by fax or by ordinary mail to
Dr. Olga Klimenko
Sobolev Institute of Mathematics
Academician Koptyug's Avenue, 4
Novosibirsk,
630090, Russia
Fax: +7-3832-33-25-98

Abstracts are due by May 31, 2002.

Please, print in English, using LaTex or AMS-Tex, 1 page
in the following format:

```
\documentclass[10pt,paper]{article}
\usepackage[cp866]{inputenc}% for Russian
\usepackage[russian]{babel}% for Russian
\usepackage{amssymb,amsmath}
\usepackage[mathscr]{eucal}
\topmargin=3D10mm
\oddsidemargin=3D25mm
\textheight=3D160mm
\textwidth=3D110mm
\pagestyle{empty}
\sloppy
\begin{document}
\begin{center}
{\bf ON RECONSTRUCTION OF THE TRANSPARENT SURFACES
FROM THEIR APPARENT CONTOURS}\\[3mm]
{\bf V.\,P.\,Golubyatnikov}\\[2mm]
{\it Novosibirsk, Sobolev Institute of Mathematics,\\
 E-mail: glbtn@math.nsc.ru}
\end{center}
\medskip
\noindent
   The problems of reconstruction of multidimensional objects from
information on their plane projections are considered in various
disciplines of pure and applied mathematics. Here we study the
uniqueness questions in the problem of reconstruction of the shape of
a smooth hypersurface from the shapes of its apparent contours. As it
was shown by F.\,Pointet [2] if the apparent contours $C(M_1,\omega)$,
$C(M_2,\omega)$ of smooth hypersurfaces $M_1$, $M_2 \subset
\mathbb{R}^{n+1}$ coincide for a sufficiently large set $W$ of
directions $\omega \in S^n$ then these hypersurfaces coincide
themselves. Using this theorem and the methods of [1] we obtain the
following results: \noindent {\bf Theorem 1.} {\sl Let $M_1$, $M_2
\subset \mathbb{R}^3$ be smooth closed compact surfaces such that for
any $\omega \in S^2$ the apparent contours $C(M_1,\omega)$ ,
$C(M_2,\omega)$ are equivalent with respect to some
orientation-preserving motion of the plane $P(\omega)$ and the convex
hulls $conv (C(M_1,\omega))$, $conv (C(M_2,\omega))$ of these contours
have no rotation symmetries, then
\begin{equation}
M_{1}=3DF(M_{2})
\label{e:1}
```

\end{equation}
where $F:\mathbb{R}^3\longrightarrow \mathbb{R}^3$ is either parallel
translation or central symmetry.}
\noindent {\bf Definition.} {\sl The figures are called SO-similar if
they are superimposed by a composition of an orientation preserving
motion and a homothety.}
\noindent {\bf Theorem 2.} {\sl Let M_1, $M_2 \subset \mathbb{R}^3$
be smooth compact closed surfaces and for all $\omega \in S^2$ their
apparent contours $C(M_1,\omega)$, $C(M_2,\omega)$ are SO-similar and
their convex hulls $conv(C(M_1,\omega))$, $conv(C(M_2,\omega))$ have
no rotation symmetries (the ratio of the similitude is not supposed to
be constant, independent of the plane $P(\omega)$), then the formula
(\ref{e:1})holds for some F which is either parallel translation or
homothety.}
The work was supported by NATO grant OUTR.CLG 970357.
\vspace{3mm}
\noindent
1. Golubyatnikov~V.P., On unique recoverability of visible compacta from
their projections. {\it Math. USSR Sbornik} (1992) {\bf 73}, No.\,5,
1--10.
\noindent 2. Pointet~F., Separation of hypersurfaces. {\it J. Geom.}
(1997) {\bf 59}, No.\,2, 114--124.
\end{document}
                    ****

Conference Location and Travel Arrangements
Conference takes place in Academgorodok (academic campus) near
Novosibirsk the largest city of Siberia. Academgorodok is situated in
the middle of Siberian forests in Golden Valley. It is about 40 km
from Novosibirsk and international airport Tolmachevo. There are
about 40 research institutes and Novosibirsk State University in
Academgorodok. Participants will be accommodated in international
hotel within walking distance from the Conference location (House of
Scientists).

Climate and Clothing
The Conference takes place during summer where the temperature is
around 25 C (77 F) during the day and 15 C (59 F) at night. It may be
useful to bring a sweater, umbrella and swimming suit.

Contact Information
Dr. Olga Klimenko
Sobolev Institute of Mathematics
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630090, Russia
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Fax: +7-3832-33-25-98
E-mail: klimenko@math.nsc.ru
www.math.nsc.ru/conference/mml

From: Jennifer Mueller <mueller@math.colostate.edu>
Subject: Workshop on Electrical Impedance Tomography
Date: Mon, 19 Nov 2001

We are pleased to announce:

The First Mummy Range Workshop on Electrical Impedance Tomography will
be held Aug. 1-7, 2002 at the Pingree Park Conference Center of

Colorado State University. The Pingree Park Campus is located in the
Mummy Range of the Rocky Mountains 53 miles west of Fort Collins,
Colorado, and just north of Rocky Mountain National Park. This rustic
setting offers unique opportunities for hiking and enjoying nature
while participating in the Workshop. The organizers of the Workshop
are David Isaacson (RPI), Jennifer Mueller (Colorado State
University), and Samuli Siltanen (Instrumentarium Corporation,
Finland).

Several themes of the Workshop include
1. Reconstruction algorithms
2. Issues of system design
3. Applications such as breast cancer detection, head imaging, and
    imaging of ventilation and perfusion
4. Conductive and dielectric properties of tissue and tumors
5. Planar and other electrode configurations

We are soliciting abstracts for presentations. Please submit your
half-page abstract to one of the organizers by March 1, 2002.
Registration information will be forthcoming. Further information
about the Workshop and Pingree Park may be obtained at the conference
website: http://www.eitworkshop.org

Submitted by:
Jennifer Mueller   Office: 970.491.7417
Department of Mathematics   FAX: 970.491.2161
101 Weber Building
Colorado State University   mueller@math.colostate.edu
Fort Collins, CO 80523-1874   www.math.colostate.edu/~mueller

----
From: ross@siam.org
Subject: SIAM Conference on Discrete Mathematics
Date: Mon, 12 Nov 2001

     Conference Name: SIAM Conference on Discrete Mathematics

     Location: Handlery Hotel & Resort, San Diego, California

     Dates: August 11-14, 2002

     The Call for Presentations for this conference is now available at:
     http://www.siam.org/meetings/dm02/

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

From: Ken Jackson <krj@cs.toronto.edu>
Subject: Workshops at the Fields Institute
Date: Fri, 9 Nov 2001

We are planning several events at the Fields Institute over the next
several months that may interest readers of the IPNet Digest. These
include:

1. Short Course and Lectures on Numerical Bifurcation and Center
    Manifold Analysis in Partial Differential Equations, Klaus Boehmer,
    November 19 - 28, 2001.

2. Workshop on Computational Biology, November 29 - December 2, 2001

3. Workshop on Computational Challenges in Dynamical Systems,
    December 3 - 7, 2001.

4. Short Course on PDE methods for path dependent options,
    Feb. 25 - 26, 2002.

5. Computational Methods and Applications in Finance Workshop,
    Feb. 27 - Mar. 1, 2002.

6. SIAM Conference on Optimization, May 19 - 22, 2002.
    Program-related event.

7. Validated Computing 2002, May 23 - 25, 2002.
    Program-related event.

8. Informal Working Group on Validated Methods for Optimization,
    May 26 - June 1, 2002

9. Symbolic Computational Algebra 2002, July 13 - 19, 2002.

10. Short Course on Numerical Solution of Advection-Diffusion-Reaction
    Equations, Jan Verwer, July 29 - August 2, 2002.

11. IMACS International Conference on Adaptive Methods for PDEs,
    August 6 - 9, 2002.

12. The 2002 Workshop on the Solution of Partial Differential
    Equations on the Sphere, August 12 - 15, 2002.

For more information about these and other events at the Fields
Institute,
see our webpage
    http://www.fields.utoronto.ca./programs/scientific/01-02/numerical/

From: Jennifer Mueller <mueller@math.colostate.edu>
Subject: Postdoctoral Position -- Imaging and Inverse Conductivity
Date: Mon, 5 Nov 2001

The Department of Mathematics at Colorado State University is seeking
an outstanding candidate for an anticipated 3-year postdoctoral
position beginning Fall of 2002 in Electrical Impedance Imaging and
the inverse conductivity problem. The individual must hold a
doctorate at the time of appointment. We will expect the successful
candidate to teach one course per semester, and to conduct a research
program in the above area under the direction of Prof. Jennifer
Mueller. We are expecting to be able to provide 11 months of salary
for this position, subject to available funds. Applicants should
submit a cover letter, a complete curriculum vita, a summary of future
research interests, evidence of effective teaching, and at least three
letters of recommendation to:

Postdoctoral Hiring Committee
Department of Mathematics
Colorado State University
Fort Collins, CO 80523

Applications received by January 15, 2001 will receive full

consideration, but screening will continue until the position
is filled.

From: "Janet Thomas" <janet.thomas@iop.org>
Subject: Table of Contents: Inverse Problems
Date: Tue, 20 Nov 2001

Inverse Problems   December 2001   Volume 17, Issue 6
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M Burger, H W Engl, P A Markowich and P Pietra

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linearized tomographic inverse scattering
M Brandfass, A D Lanterman and K F Warnick

Inverse scattering for periodic structures: stability of polygonal
interfaces   J Elschner and G Schmidt

The inverse generalized Regge problem V Pivovarchik and C van der Mee

Preconditioned all-at-once methods for large, sparse parameter
estimation problems   E Haber and U M Ascher

A new slant on the inverse problems of electromagnetic frequency
sounding: `convexification' of a multiextremal objective function via
the Carleman weight functions   M V Klibanov and A Timonov

Some problems for a system of nonlinear equations on a half-line
Pham Loi Vu

A nonlinear inverse problem inspired by three-dimensional diffuse
tomography   F A Gr\"unbaum

On the uniqueness of the inverse elastic scattering problem for
periodic structures   A Charalambopoulos, D Gintides and K Kiriaki

Estimation of non-stationary region boundaries in EIT---state
estimation approach   V Kolehmainen, A Voutilainen and J P Kaipio

An alternating iterative algorithm for the reconstruction of internal
cracks in a three-dimensional solid body
W Weikl, H Andr\"a and E Schnack

Comparison of formulations and solution methods for image restoration
problems   T K\"arkk\"ainen, K Majava and M M M\"akel\"a

The direct and inverse scattering problems for partially coated
obstacles   F Cakoni, D Colton and P Monk

CORRIGENDUM

Shape reconstruction of buried obstacles by controlled evolution of a
level set: from a min--max formulation to numerical experimentation
C Ramananjaona, M Lambert, D Lesselier and J-P Zol\'esio

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA vol 339 contents

Please note: The access restrictions on articles/abstracts vary. Many

journals have free access to abstracts, but in general access to full
text PDFs is restricted to subscribers.

Visit the journal at http://www.elsevier.nl/locate/jnlnr/07738

Submitted by:
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480 Lincoln Drive   608-263-8891 (Work FAX)
University of Wisconsin-Madison   608-271-8477 (Home FAX)
Madison WI 53706 USA   http://www.math.wisc.edu/~hans (URL)
------- end -------

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

Today's Topics:
     Open Positions: Kent State University
     Table of Contents: Mathematics of Control, Signals, Systems
     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: Lothar Reichel <reichel@mcs.kent.edu>
Subject: Open positions at Kent State University
Date: Fri, 21 Dec 2001

Kent State University
Department of Mathematical Sciences
Kent, OH 44242

Tenure-Track Positions in Numerical Analysis and Mathematical
Statistics

We invite applications for one or more tenure-track positions (pending
budget approval) in the areas of numerical analysis and
statistics. The appointments are to be at the assistant-professor
level and are to begin August 18, 2002. Candidates are required to
have a Ph.D. within the mathematical sciences. Preference will be
given to candidates with some postdoctoral experience.

Candidates are expected to have strong potential in research
(including the potential to attract external funding) and in
teaching. They should also be able to contribute to the
interdisciplinary outreach of the department and to support
established research strengths.

In numerical analysis, preference will be given to candidates with
backgrounds in at least one of the following areas: numerical linear
algebra, partial differential equations, inverse problems and
optimization.

In mathematical statistics, preference will be given to candidates
with backgrounds overlaping with at least one of the following areas:
mathematical finance, wavelet analysis, multivariate analysis,
geometric measure theory, inference in stochastic processes.

The Kent State Campus is a spacious, residential campus serving more
than 20,000 students. It is situated in a small university town
within 30 miles of the major metropolitan area of Cleveland. 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. It currently consists of 25 faculty. The
department has an extensive computer network for faculty and student

use. For further information about the department, please visit the
web site 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 15,
2002 are assured of receiving full consideration.

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

From: Secretary Support - Magrijn <magrijn.secsup@tip.nl>
Subject: Journal MCSS
Date: Mon, 10 Dec 2001

Mathematics of Control, Signals, and Systems 2001 Vol 14, No. 4
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Linear operator inequalities for strongly stable weakly regular linear
systems   R.F. Curtain

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Subject: LAA contents, Volumes 340-342
Date: Sat, 22 Dec 2001

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