

Contents

IPNet Digest	Volume 7, Number 01	January 30, 2000	2
IPNet Digest	Volume 7, Number 02	February 28, 2000	12
IPNet Digest	Volume 7, Number 03	March 30, 2000	25
IPNet Digest	Volume 7, Number 04	April 30, 2000	34
IPNet Digest	Volume 7, Number 05	May 31, 2000	42
IPNet Digest	Volume 7, Number 06	July 15, 2000	51
IPNet Digest	Volume 7, Number 07	August 31, 2000	59
IPNet Digest	Volume 7, Number 08	October 15, 2000	67
IPNet Digest	Volume 7, Number 09	December 4, 2000	79

IPNet Digest Volume 7, Number 01 January 30, 2000

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

Today's Topics:

Conference: Inverse Problems Conference (SFB) & Workshop (TMR)
Symposium: Inverse Problems in Materials Characterization
Conference: European Consortium for Mathematics for Industry
Conference: Advanced Concepts for Intelligent Vision Systems
New Paperback Edition: Regularization of Inverse Problems
Table of Contents: Inverse Problems in Engineering
Table of Contents: Surveys on Mathematics for Industry
Table of Contents: Linear Algebra and Its Applications

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

Mail to ipnet-request@math.msu.edu
<http://www.mth.msu.edu/ipnet>

From: "PROF.HEINZ W. ENGL" <engl@indmath.uni-linz.ac.at>
Subject: conference announcement
Date: Wed, 26 Jan 2000

First announcement

SFB Conference on Inverse Problems
in conjunction with
TMR Workshop on Inverse Problems.

(26th June - 1st July, 2000) These two distinct events have been organised together to provide an excellent overview of the field of Inverse Problems. The TMR workshop will take place in the first 2 days (26th- 27th June) , and will provide introductory lectures in this field, thus The TMR workshop (26th- 27th June, 2000) The TMR workshop will provide introductory courses on the following topics:
* Fundamental Inverse problem Theory & applications. * Ill-posed problems. * Regularisation Methods. * Optimal control. * Shape optimisation.

The precise titles of the lectures to be given are: * "Inverse problems, regularisation theory and applications: an introduction", (Dr. Barbara Kaltenbacher & Prof. Heinz Engl, Univ. of Linz) * "Various aspects of shape optimisation" (Dr. Christoph Stangl, Univ. of Linz) * "Locating imperfections by electrical impedance tomography" (Dr. Martin Bruehl, Univ. of Mainz). * "The reciprocity gap principle and planar cracks determination" (Dr. Amel Ben Abda, ENIT, Tunis) * "Mathematics of tomography, an introduction" (Dr. Volker Dicken, Univ. of Bremen)

The workshop is part of the T(raining) and M(obility) of R(esearchers) EU-project on Differential Equations in Industry and Commerce. The SFB conference (28th June - 1st July, 2000). The SFB conference will consist of advanced talks from internationally renowned speakers. These provide a natural continuation to the introductory courses given in the TMR Workshop. There will also be contributed talks in research carried out in applicati

A preliminary list of invited talks will be on the following topics: * "The far field operator in inverse electromagnetic obstacle scattering" (Prof. Dr. R. Kress , Goettingen) * "Some applications of inverse problems and signal processing in industry" (Prof. Dr. P. Maass, Bremen): * "Regularization, Diffusion Filtering, and Image (Sequence) Analysis" (Dr. J. Weickert, Mannheim) * "New Algorithms in Electrical Impedance Tomography" (Prof. Dr. M. Hanke, Mainz) * "On numerical techniques for the optimal control of semilinear PDEs" (Prof. Dr. F. Troeltzsch) * "Shape and Topology Optimization of High Power Electronic Devices" (Prof. Dr. H.W. Hoppe) * "Stabilizing a data completion algorithm in order to solve the Robin inverse problem" (Prof. M. Jaoua)
Titles to be announced: * H. Attouch (University of Montpellier II, France) * G. Chavent (Ceremade, Universite Paris-Dauphine & INRIA-Rocquencourt, France) * K. Ito (North Carolina State University, USA) * K. Kunisch (University of Graz, Austria) * Z. Nashed (University of Delaware, USA) * M. Pidcock (Oxford Brookes University, UK) * W. Rundell (Texas A & M University, USA) * V. Schulz (Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany) * J. Zou (Chinese University of Hong Kong)

The conference is part of the special research initiative (SpezialForschungsBereich) F013: Numerical and symbolic scientific computation of the University of Linz. Location. The combined event will take place in the St. Wolfgang Federal Institute for Adult Education (BIFEB-Bundesinstitut fur Erwachsenenbildung), which is located on the shores of the lake Wolfgang in the heart of the Austrian mountain region, and is close to t Registration forms and abstracts for the SFB conference. The combined registration form for the TMR-SFB events can be found on the web at:

imagewww.indmath.uni-linz.ac.at/sfb2000

The abstracts should preferably be written using the standard LATEX form which can be found at the same web address.

Both registration forms and abstracts should be sent by email to Luca Rondi (Email: rondi@indmath.uni-linz.ac.at) Failing this, you can send it by post to the address given below. Deadlines. We should receive your registration form for either event as well as the abstract for your contributed talk for the SFB conference by 31st of March, 2000. Please note: * that, due to time constraints, the number of talks will be limited. We therefore encourage you to register your contribution as soon as possible. * Talks can be at most 20 minutes each, + 5 minutes for question time. Fees. Both the TMR and SFB events have the following accommodation fees: single room: 400 ATS per night (breakfast not included) double room: 300 ATS per night (breakfast not included)

In addition, these are the meal prices:

Breakfast : 90 ATS each Lunch: 140 ATS each Dinner: 100 ATS each

These will be payable by you directly to the hotel in cash (Austrian currency). In addition, the SFB conference will also have a registration fee of 400 ATS which will be payable on arrival (only local currency accepted). Organising committee + contact addresses. For more information on the SFB conference, requesting/sending the combined SFB-TMR registration form, sending

abstracts to the SFB conference: Luca Rondi, Email:
rondi@indmath.uni-linz.ac.at

For more information on the TMR workshop: Andrea Schatz Email:
schatz@indmath.uni-linz.ac.at

Organising committee for SFB F013 Heinz Engl
(engl@indmath.uni-linz.ac.at) Otmar Scherzer
(scherzer@indmath.uni-linz.ac.at), Luca Rondi
(rondi@indmath.uni-linz.ac.at) Thorsten Hohage
(hohage@indmath.uni-linz.ac.at).

Address: Industrial Mathematics Institute, University of Linz,
Altenbergerstrasse, 69, A-4040 Linz, Austria.

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
693,
Altenbergerstrasse 69 secretary: ext.9220; as Dean: ext.3220
A-4040 Linz Fax:ext. 855, in Dean's
affairs:ext.3225
Oesterreich / Austria home phone: +43-(0)732-245518
World Wide Web: <http://www.indmath.uni-linz.ac.at/>

From: "G.W.Roberts" <mas039@bangor.ac.uk>
Subject: symposium on inverse problems
Date: Fri, 14 Jan 2000

SYMPOSIUM ON

INVERSE PROBLEMS AND EMERGING TECHNIQUES IN MATERIALS CHARACTERIZATION

LAKE VYRNWY HOTEL, MID WALES, UK

10-12 APRIL 2000

The above symposium is being organized by the University of Wales
Institute for Non-Newtonian Fluid Mechanics. The meeting will begin
with lunch on Monday 10th April and finish at lunchtime on Wednesday
12th April.

The purpose of the meeting is twofold. To discuss inverse problems in
rheology and materials characterization, and also to provide a forum
for the discussion of new techniques from areas outside rheology which
are either already beginning to make an impact on materials
characterization or have the potential to do so. To provide a workshop
ambience, the meeting will be restricted to about 40 participants.

A sample of the topics relevant to the meeting is:

The determination of linear viscoelastic functions.
The determination of molecular weight distributions.
Capillary viscometry.
The inverse viscous heating problem in viscometry.
Acoustic and optical back-scattering.

NMR spectroscopy.
Magnetic Resonance Imaging.
Dielectric spectroscopy
Atomic force spectroscopy

The following have agreed to speak : R.S.Anderssen (Canberra); W R Bowen (Swansea); R.Challis (Nottingham); I Emri (Ljubljana); Chr Friedrich (Freiburg); J Honerkamp (Freiburg); J Mewis (Leuven); M J W Povey (Leeds);
R A Williams (Leeds); H H Winter (Amherst).

The Lake Vyrnwy Hotel is located in one of the most spectacular regions of Wales. It is well known for its levels of comfort and excellent cuisine. The nearest airport is Manchester (England) which is a little over an hour's drive away. The registration fee, which includes the cost of accommodation and all meals, is £340, and is due by 14 February 2000. The cost for an accompanying person sharing a room with a delegate is £100.

If you wish to participate in the symposium, as a speaker or otherwise, please contact:

Dr Gareth W Roberts
School of Mathematics
University of Wales,
Bangor LL57 1UT, UK.
Tel: +44 1248 382480
Fax:+44 1248 383663
Email: G.W.Roberts@bangor.ac.uk

From: "PROF.HEINZ W. ENGL" <engl@indmath.uni-linz.ac.at>
Subject: Biannual Conference of ECMI
Date: Mon, 10 Jan 2000

ANNOUNCEMENT

XI Biannual Conference of ECMI -
The European Consortium for Mathematics for Industry

E C M I 2000

1. Place of the Conference:
Villaggio TORRE NORMANNA, Altavilla Milicia (Palermo), Italy
2. Dates of the Conference
September 26-30, 2000
3. The Organizing Committee:
 - A.M. Anile (University of Catania and ECMI Council)
 - V. Capasso (President of ECMI, 1999-2001) Co-Chairman
 - A. Donato (University of Messina)
 - A. Fasano (University of Florence)
 - A. Greco (University of Palermo) Chairman
 - R.M. Mattheij (Past President of ECMI, 1999-2001)
4. The Programme Committee
 - 4.1. The Board of ECMI
 - V. Capasso, President

- H. Ockendon, Vice President
- M. Brons, Secretary
- R.M. Mattheij, Past President

4.2. The International Scientific Committee

- R.E. Burkhard (Graz)
- H. Engl (Linz)
- H. Foellmer (Berlin)
- A. Greco (Palermo)
- J.L. Lions (College de France)
- A. Quarteroni (Milan and Lausanne)

5. Plenary Sessions (invited speakers)

"ALAN TAYLER" Lecture: Neunzert, H. (Kaiserslautern)

HISTORY OF APPLIED MATHEMATICS FROM GREEKS TO MODERN TIMES
Russo, L. (Rome)

FINANCE Schachermaier, W. (Wien)

SCIENTIFIC COMPUTING AND VISUALIZATION Jeltsch, R. (Zurich)

ECOSYSTEMS Van Duijn (CWI, Amsterdamn)

COMPUTING AND COMMUNICATIONS TECHNOLOGIES
Degli Antoni (Crema, It)

OPTIMIZATION Periaux, J. (Dassaul, Fr)

NONLINEAR DIFFUSION Herrero, M. A. (Madrid)

BIOFLUIDDYNAMICS Hughes, T. (Stanford)

DISCRETE MATHEMATICS Korte, B (Bonn)

6. Special Sessions (invited minisymposia)

1. MICROELECTRONICS (M.Anile - M.Guenther)
2. GLASS (N.Siedow)
3. POLYMERS (G.Marrucci - V.van de Ven)
4. ENVIRONMENT (J.Hunt)
5. FUEL PIPELINES (A.Fasano)
6. FINANCE (S.Howison)
7. COMPOSITE MATERIALS (S.Mc Kee)
8. BIOMEDICAL (J.Demongeot)
9. NEW TECHNOLOGIES (A.Greco)
10. MULTIBODY DYNAMICS (C.Fueher-B.Simeon)
11. AUTOMATIC DIFFERENTIATION AND SENSITIVITY ANALYSIS
(M.Masmoudie-A.Griewank)

Further information please visit the web site
<http://www.itdf.pa.cnr.it/ecmi2k>

or

<http://www.ecmi.dk>

For Additional Information or to submit contributed talks or minisymposia
please contact the conference organizers at
ecmi2k@pia.itdf.pa.cnr.it

PLEASE NOTE MY NEW E-MAIL ADDRESS
FOR FILE ATTACHMENTS PLEASE USE THE ADDRESS capasso@ares.mat.unimi.it

Prof. Dr. Vincenzo CAPASSO
MIRIAM
Milan Research Centre for Industrial and Applied Mathematics
Universita' di Milano Phone +39 0226602.274 Secr. 269 Operator
.1
Via Saldini 50 fax +39 0270630346
20133 MILANO (I) e-mail: Vincenzo.Capasso@mat.unimi.it

www.mat.unimi.it/~miriam

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
693,
Altenbergerstrasse 69 secretary: ext.9220; as Dean: ext.3220
A-4040 Linz Fax:ext. 855, in Dean's
affairs:ext.3225
Oesterreich / Austria home phone: +43-(0)732-245518
World Wide Web: <http://www.indmath.uni-linz.ac.at/>

From: Jacques Blanc-Talon <Jacques.Blanc-Talon@etca.fr>
Subject: Conference: Advanced Concepts for Intelligent Vision Systems
Date: Tue, 4 Jan 2000

Dear IPNet Digest Readers,

I just wrote the second Call for Papers for ACIVS'00, the 2nd
conference on Advanced Concepts for Intelligent Vision Systems, which
will be held in Baden-Baden, Germany (July 31 - August 4, 2000). The
topics of the conference fall within the four main tracks:

statistical/structural/syntactic pattern recognition,
image and video compression algorithms,
theory and applications of vision systems,
assessment of algorithms.

The conference homepage is : www.etca.fr/CTA/Events/Conf/acivs00.html,
the reply card is available at: [www.etca.fr/CTA/Events/Conf/acivs00-
form.html](http://www.etca.fr/CTA/Events/Conf/acivs00-form.html),
and the important dates are:

Deadline for paper submission: February 7, 2000
Notification of acceptance: March 3, 2000
Camera-ready manuscripts: March 31, 2000

Would you intend to submit a regular paper (there is no poster
session), please feel free either to send us a reply card or to
contact us.

Looking forward to meeting you in Baden-Baden and best wishes for 2000,

The Steering Committee

Jacques Blanc-Talon (Jacques.Blanc-Talon@etca.fr)

Dan Popescu (Dan.Popescu@cmis.csiro.au)

Submitted by:

Jacques Blanc-Talon

Scientific Manager

(Fractals, Computer Science, Image Processing, Robotics)

Co-chair of ACIVS'00 <http://www.etca.fr/CTA/Events/Conf/aciv00.html>

PC Member of GECCO, PDPTA, CISST, AISTA, WSG

CTA/GIP, 16 bis, Avenue Prieur de la cote d'or, 94114, Arcueil, FRANCE

Ph/Fax: (+33-1) 4231 9280/9964 www.etca.fr/CTA/gip/Publis/Blanctalon

From: "PROF.HEINZ W. ENGL" <engl@indmath.uni-linz.ac.at>

Subject: paperback edition of "Regularization of Inverse Problems"

Date: Tue, 18 Jan 2000

The book "Regularization of Inverse Problems" by H.W.Engl, M.Hanke and A.Neubauer, Kluwer 1996, will appear in February as paperback edition, whose price will be about DM 85,- (and hence much cheaper than the hardbound edition). The ISBN is 07923-61-407

heinz engl

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
693,

Phone:+43-(0)732-2468...,ext.9219 or

Altenbergerstrasse 69

secretary: ext.9220; as Dean: ext.3220

A-4040 Linz

Fax:ext. 855, in Dean's

affairs:ext.3225

Oesterreich / Austria

home phone: +43-(0)732-245518

World Wide Web: <http://www.indmath.uni-linz.ac.at/>

From: james beck <jamesverebeck@home.com>

Subject: Contents, Inverse Problems in Engineering

Date: Fri, 14 Jan 2000

Inverse Problems in Engineering 1999 Volume 7, Number 6
Table of Contents

Travel Time Inversion for the Determination of Stress Fields in Granular Soil Media A. M. V. Samani and G. M. L. Gladwell

Inverse Optimization of Supersonic Wing Design with Twist Specification S. Jeong, S. Obayashi and K. Nakahashi

Estimation of the Initial Temperature Field During Cooling of a 1-D Three Layer Body R Mousseau, Y. Jarny and D. Delaunay

Boundary Inverse Problems of Heat Exchange for Sliding Bearing Control and Diagnostics N. R Starostin and A. S. Kondakov

Enlargement of the Frequency Validity Domain of the Guyan Transformation G. Lallement, A. Ramanitranta and T. Piranda

From: "PROF.HEINZ W. ENGL" <engl@indmath.uni-linz.ac.at>
Subject: Contents, Surveys on Mathematics for Industry
Date: Fri, 14 Jan 2000

Surveys on Mathematics for Industry Volume 9, Number 1
 Table of Contents

Hierarchical, adaptive, and robust methods for image understanding
W. G. Kropatsch, A. Leonardis and H. Bischof

Network approach and differential-algebraic systems in technical
applications M. Hoschek, P. Rentrop and Y. Wagner

Surveys on Mathematics for Industry Volume 9, Number 2
 Table of Contents

On the analysis of the magnetic field around thin materials by
integral equations H. Igarashi, A. Kost and T. Honma

Construction of discrete transparent boundary conditions for
Schrödinger-type equations F. Schmidt

Cosimulation of electromagnetic fields and electrical networks in the
time domain M. Witting and T. Pröpper

Improved numerical methods for the simulation of microwave circuits
G. Hebermehl, R. Schlundt, H. Zscheile and W. Heinrich

Numerical analysis of three dimensional eddy current problems with
moving bodies by boundary element-finite-element method coupling
S. Kurz, J. Fetzner, G. Lehner and W.M. Rucker

Resume of the collection of articles on scientific computing in
electrical engineering M. Günter, U. Langer, U. van Rienen

Submitted by:

Heinz W. Engl
Johannes Kepler Universität Linz, Austria
Editor-in-Chief

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA vol 304
Date: Thu, 6 Jan 2000

Linear Algebra and Its Applications Jan 2000 Volume 304, Issue 1-3

The correlations with identity companion automorphism, of finite
desarguesian planes BC Kestenband

On pseudomatroid property of matrices R Sridhar, SN Kabadi

A quantitative version of the observation that the Hadamard product is
a principal submatrix of the Kronecker product G Visick

The Picard group of a structural matrix algebra J Haefner

Range kernel orthogonality of derivations BP Duggal

Semigroups of EP linear transformations G Lesnjak

On the cone of completely positive linear transformations DA Yopp

On factorization of matrix polynomials J Maroulas

Linear operators preserving multivariate majorization LB Beasley

A factorization of totally nonsingular matrices over a ring with identity M Fiedler

Gersgorin variations I: On a theme of Pupkov and Solov'ev
AJ Hoffman

Challenges in Matrix Theory 2000

Matrix rigidity B Codenotti

Matrix rank and communication complexity B Codenotti

Linear Algebra and Its Applications Jan 2000 Volume 305, Issue 1-3
Table of Contents

Ranks of submatrices and the off-diagonal indices of a square matrix
E Marques De Sa

The number of Kronecker indices of square pencils of a special kind
E Marques De Sa

On the Hadamard product of inverse M-matrices B Wang, F Zhang

Order intervals of matrices ML Thornburg, RD Hill

Creation and annihilation in matrix theory R Hartwig

On transitive linear semigroups R Drnovsek, L Livshits

On the Hu-Hurley-Tam conjecture concerning the generalized numerical range
Cheman Cheng, Chikwong Li

On an inequality for the Hadamard product of an M-matrix and its inverse Y Song

An integer programming problem and rank decomposition of block upper triangular matrices H Bart

Families of vectors with prescribed rank partition and a prescribed subfamily A Fonseca

Singular values, diagonal elements, and extreme matrices
HF Miranda

The conjugacy classes of fixed point free elements in $GL_n(F)$ and $SL_n(F)$ Jizhu Nan

Difference equations in a general setting DJ Hartfiel

Rank factorization and bordering of regular matrices over commutative rings E Ballico

A dimension formula for the nucleus of a Veronese variety
J Gmainer, H Havlicek

NOTE:

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

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)
University of Wisconsin-Madison	608-271-8477 (Home FAX)
Madison WI 53706 USA	http://www.math.wisc.edu/~hans (URL)
----- end -----	

IPNet Digest Volume 7, Number 02 February 28, 2000

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

Today's Topics:

Meeting: Tenth Seminar on Inverse Problems in Engineering
Communication: Austrian mathematics
Position: Large Scale Inverse Problems
Position: Mechanics Inverse Problems: Crack Identification
Positions: Identification and Control of Nonlinear Problems
Special Issues: Linear Algebra and Its Applications
Table of Contents: Electronic Transactions Numerical Analysis
Table of Contents: Advances in Computational Mathematics
Table of Contents: Linear Algebra and Its Applications

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

Mail to ipnet-request@math.msu.edu
<http://www.mth.msu.edu/ipnet>

From: "Keith A. Woodbury" <woodbury@me.ua.edu>
Subject: 10th Seminar on Inverse Problems in Engineering - 2nd
Announcement
Date: Wed, 16 Feb 2000

Tenth Inverse Problems in Engineering Seminar
Second Announcement

Monday, June 5 - Tuesday, June 6, 2000
The University of Texas at Arlington
Arlington, Texas

About the Seminar

The Tenth Inverse Problems in Engineering Seminar is the continuation of the informal seminars which were initiated at Michigan State University in 1987. This seminar will be sponsored by the School of Engineering and the Department of Mechanical and Aerospace Engineering at The University of Texas at Arlington.

Call for Papers

Papers are solicited from all areas involving inverse methods and their applications. Four broad categories are being used to organize sessions. These categories and possible sub-topics are:

1. Mathematical Aspects of Inverse Problems - inverse theory and methods, uniqueness and stability considerations, Volterra and other integral equations
2. Inverse Problems in Heat Transfer - inverse heat conduction, inverse Stefan problem, thermal property estimation
3. Inverse Problems in Mechanics - applications in dynamics, petroleum engineering, shape optimization, contact problems, control of fluid flow
4. Other Inverse Problems - bio-engineering inverse problems, inverse scattering and tomography, etc.

Presentations will be informal twenty minute talks. In addition, there will

be forty minute invited talks by:

Professor James V. Beck, Professor emeritus, Department of Mechanical Engineering, Michigan State University

Professor George Dulikravich, Department of Mechanical and Aerospace Engineering at The University of Texas at Arlington

Professor A. T. Watson, Department of Chemical Engineering, Texas A&M University

The guest speaker, Professor Daniel A. Tortorelli, Department of Mechanical & Industrial Engineering, University of Illinois at Urbana-Champaign

If the number of submissions warrants additional program time, a poster session will be included.

How to Register or Submit a Paper

The seminar fee is \$65. This fee includes continental breakfast both days of the seminar, a Texas barbecue on Monday evening, and a copy of the proceedings. If you are interested in registering for this conference, please contact a co-chair listed below to receive registration material. If you would like to submit a paper, please submit a tentative title and an abstract by March 15, 2000. Send titles and abstracts or other inquiries to:

Keith A Woodbury, Professor
Department of Mechanical Engineering
The University of Alabama
Box 870276
Tuscaloosa, AL 35487-0276
Phone: (205) 348-1647
Fax: (205) 348-6419
Email: woodbury@me.ua.edu

A. Haji-Sheikh, Professor
Department of Mechanical &
Aerospace Engineering
The University of Texas at Arlington
Box 19023
Arlington, TX 76019-0023
Phone (817) 272-2010
Fax: (817) 272-2952
Email: haji@mae.uta.edu

Abstracts/Proceedings

The abstract should be one page single space. The abstract and any materials submitted by the deadline (May 10, 2000) would be photocopied and distributed as informal proceedings to the conference participants at check-in.

Full Papers

Preparation of a full text is optional and if submitted by the deadline (May 10, 2000) will be included in the informal proceedings described above. The text should be prepared single space with 1-inch (2.5-cm) margins on 8.5 inch by 11 inch paper. Interested authors are invited to simultaneously submit an electronic copy of the full paper to Professor George Dulikravich <gsd@mae.uta.edu>, the founding editor of the Inverse Problems in Engineering journal. Following the standard review process for the IPE journal, the accepted papers will be published in a special issue.

From: "PROF.HEINZ W. ENGL" <engl@indmath.uni-linz.ac.at>
Subject: Austrian mathematics
Date: Sun, 27 Feb 2000

Dear Colleagues,

I am sure you heard about the unpleasant political developments in Austria. Let me assure you that the scientific community and also, I think, the majority of the Austrian population are not at all happy with this situation.

Austrian mathematics has always seen itself embedded into the international scientific community and of course continues to do so. In the current situation we need support from the international scientific community more than ever. I urge you not to punish your colleagues for developments for which they are not responsible by reducing scientific contacts.

I thank you for your continued support and remain with best regards,
Heinz Engl

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 693,
Altenbergerstrasse 69	secretary: ext.9220; as Dean: ext.3220
A-4040 Linz	Fax:ext. 855, in Dean's
affairs:ext.3225	
Oesterreich / Austria	home phone: +43-(0)732-245518
World Wide Web:	http://www.indmath.uni-linz.ac.at/

From: "PROF.HEINZ W. ENGL" <engl@indmath.uni-linz.ac.at>
Subject: position announcement
Date: Mon, 31 Jan 2000

RESEARCH POSITION AT JOANNES KEPLER UNIVERSITAET LINZ, AUSTRIA

The ``Spezialforschungsbereich'' SFB F013 ``Numerical and Symbolic Scientific Computing'' offers a Ph.D. student and/or post doc position for research in the field of ``Large Scale Inverse Problems'' within the SFB project 1308 of the same name, for one year (possibly extendable). The objective of this research project is to apply and develop solution methods for inverse problems in PDEs, where the numerical solution of the corresponding direct problems leads to large scale equations and therefore requires efficient solvers such as multigrid methods. The candidate is therefore expected to provide both sound knowledge in numerical mathematics and acquaintance with regularization methods for ill-posed problems, as well as the ability to cooperate with other research groups within the SFB.

Interested candidates are invited to send a CV together with a list of publications as soon as possible to

Prof. Dr. H.W.Engl
Johannes Kepler University Linz
Institute for Industrial Mathematics
Altenbergerstr. 69
A-4040 Linz
Austria

E-mail: engl@indmath.uni-linz.ac.at
Tel. ++43-732-2468-9168
Fax ++43-732-2468-855

For further information, see also

<http://www.indmath.uni-linz.ac.at>

For questions, please contact:

Dr.B. Kaltenbacher, kaltenbacher@indmath.uni-linz.ac.at

Submitted by:

Prof.Dr.Heinz W. Engl

E-Mail: engl@indmath.uni-linz.ac.at

Institut fuer Industriemathematik secretary@indmath.uni-linz.ac.at

Johannes-Kepler-Universitaet
693,

Phone:+43-(0)732-2468...,ext.9219 or

Altenbergerstrasse 69

secretary: ext.9220; as Dean: ext.3220

A-4040 Linz

Fax:ext. 855, in Dean's

affairs:ext.3225

Oesterreich / Austria

home phone: +43-(0)732-245518

World Wide Web: <http://www.indmath.uni-linz.ac.at/>

From: Georgios Stavroulakis <g.stavroulakis@tu-bs.de>

To: ipnet-digest@math.msu.edu

Subject: Student position at the Technical University of Braunschweig

Institute of Applied Mechanics, Technical University Braunschweig,
Germany

Scientific Assistant - PhD Candidate position

We are looking for a Civil or Mechanical Engineer with knowledge of
Mechanics, Mathematics and Physics, to work with us for a research
project supported by the German Research Society (Deutsche
Forschungsgemeinschaft) as Scientific Assistant.

The project deals with the study of inverse problems in engineering
mechanics and application on crack identification using modern
techniques of computational mechanics and soft computing (neural
networks, filters, etc.).

The financial support for the first two years is provided (salary
according to BATIIa). Extension to one more year is possible. The
completion of a PhD in this scientific area will be supported.

More details can be found in the official Stellenausschreibung

<http://www.infam.tu-bs.de/infam/aktuelles/stelle01.html>

in a page written in English

<http://www-public.tu-bs.de:8080/~i5042301/stellet.html>

and in the WWW-page of the Institute of Applied Mechanics

<http://www.infam.tu-bs.de>

If you are interested or if you need more information please contact

Dr.-Ing. Georgios E.Stavroulakis at: G.Stavroulakis@tu-bs.de or

Prof.Dr.rer.nat. Heinz Antes at: H.Antes@tu-bs.de

Institute of Applied Mechanics

Technical University of Braunschweig, Germany

Deadline of applications is 29.02.2000

Submitted by:

Dr Ing Georgios E. Stavroulakis

Institute for Applied Mechanics * Tel ++ 49 531 391 7107

Technical University Braunschweig, Spielmannstr. 11, P.O.Box 3329

D-38106 Braunschweig, Germany

Email g.stavroulakis@tu-bs.de

* URL <http://www.tu-bs.de/~i5042301>

From: Marty Brenner <gonzo@reseng2.dfrc.nasa.gov>

Subject: NASA/RRA/NRC Postdoctoral, Senior Research Awards

Date: Mon, 31 Jan 2000

NASA/RRA/NRC Postdoctoral and Senior Research Awards
NASA Dryden Flight Research Center

Proposed Research Title:

Nonlinear Analysis of Aerospace Systems using Multiresolution Methods

NASA Resident Research Associateships (RRA) are administered by the National Research Council (NRC). These opportunities at NASA Dryden are open only to US citizens.

Postdoctoral Research Associateships are awarded to those with a PhD less than five years, and Senior Research Associateships to those with the doctorate five years or more. They are usually for 1-2 years, but Senior awards for periods of three months or longer are considered. A Research Associate must conduct his research full-time and on-site.

Evaluations are conducted in June, October, and February by the NRC. Application deadlines are Apr 15, Aug 15, and Jan 15, respectively. Current annual stipend is about \$50K for Postdoc and \$80K for Senior.

Problem definition:

The ability to identify and control nonlinear phenomena is extremely important to the aerospace community. Understanding aeroelastic nonlinear dynamics is becoming vital for advanced design configurations. Stability estimation from flight data must account for nonlinearity to distinguish linear from nonlinear dynamics for model development.

Confidence bounds are desired in identification schemes to guarantee system stability within a flight regime. Realistic stability prediction requires system identification consistent with uncertainty and disturbance models.

Application of multiscale wavelet methods is an attractive approach to this problem. Adaptive signal decompositions for signal processing of nonlinear and time-varying systems is a major focus of research at NASA Dryden. Algorithms are needed to generate adaptive multiresolution representations for identification in aircraft dynamics analysis.

Dryden is studying linear and nonlinear identification algorithms and methodologies for in-flight aeroservoelasticity (aero+structures+controls). Intelligent data processing and analysis methods are desired for accurate control-oriented stability determination during flight testing. This integrated research effort requires innovative digital signal processing, identification, and robust system theory applications.

Contact:

Marty Brenner

NASA Dryden Flight Research Center

MS 4840D / RS

Edwards, California 93523-0273

Phone: 661-258-3793 (starting in March: 661-276-3793)
Email: martin.brenner@dfrc.nasa.gov

See:

<http://www/trc/Postdoc/nrc.html>

<http://www.national-academies.org/rap>

The following is a compilation of several different submissions to
the IPNet Digest. -ed

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA Special Issue
Date: Sat, 26 Feb 2000

LINEAR ALGEBRA AND ITS APPLICATIONS

CALL FOR PAPERS: Fourth Special Issue on Linear Systems and Control.

In the past, LAA has published three special issues devoted to the field of Linear Systems and Control: 1983 (vol. 50), 1989 (vols. 122-124) and 1994 (vols. 203-204). More than six years after the publication of the last special issue, it is time to take stock of recent and current interactions between Linear Algebra and Systems Theory.

The cross fertilization between these two fields has been very fruitful in the past. While linear algebraic methods have been instrumental for much of the development of linear systems theory, many system theoretic concepts and constructions are now part of the body of linear algebra. Today systems theory is a place where methods from many different parts of mathematics are combined. As a result linear systems theory has become a rich source of linear algebraic problems. More recently, new paradigms, new problems and areas of application have appeared on the scene: the behavioural approach, coding theory, distance problems and parameter uncertainty, the dynamic systems approach to algorithms, computational complexity issues in systems theory and discrete event systems.

These important subject areas have enriched linear systems theory and will influence the future development of linear algebra, too. We hope that the upcoming issue will further this process and we encourage all authors working in these areas to submit their contributions.

As in previous issues, this one will be open for all papers with significant new results in Systems and Control Theory where either linear algebraic methods play an important role or new tools and problems of linear algebraic nature are presented. Also survey papers are very welcome which illustrate specific areas where the interaction of Systems Theory and Linear Algebra has been particularly successful. Papers must meet the publication standards of Linear Algebra and Its Applications and will be refereed in the usual way.

Areas and topics of interest for this special issue include:

- Structure theory of linear systems and system families
- Stability theory
- Distance problems and analysis of uncertain systems
- Methods of robust control
- Approximation and interpolation problems arising in systems theory

- Geometric control theory and geometry of linear systems
- Linear behaviors
- Multidimensional systems and systems over rings
- Module theoretic techniques in system theory
- Coding theory with connections to systems theory
- Algorithms for linear systems
- Numerical issues in linear systems theory
- Computational complexity in linear algebra and systems theory
- Discrete event systems

The deadline for submission of papers is 31 December 2000, and the special issue is expected to be published in the first half of 2002. Papers should be sent to any of its special editors:

Vincent Blondel
 Department of Mathematical Engineering, CESAME
 Université catholique de Louvain
 Avenue Georges Lemaitre, 4
 B-1348 Louvain-la-Neuve
 Belgium
 E-mail: blondel@inma.ucl.ac.be

Diederich Hinrichsen
 Institut fuer Dynamische Systeme,
 Universitaet Bremen
 Postfach 330 440
 D 28334 Bremen
 Germany
 E-mail: dh@math.uni-bremen.de

Joachim Rosenthal
 Department of Mathematics
 University of Notre Dame
 Notre Dame, IN 46556-5683
 U.S.A.
 E-mail: rosen@nd.edu

Paul Van Dooren
 Department of Mathematical Engineering, CESAME
 Université catholique de Louvain
 Avenue Georges Lemaitre, 4
 B-1348 Louvain-la-Neuve
 Belgium
 E-mail: vdooren@anma.ucl.ac.be

From: Richard Brualdi <brualdi@math.wisc.edu>
 Subject: LAA Special Issue
 Date: Tue, 8 Feb 2000

Linear Algebra and its Applications is pleased to announce a special issue in honor of Professor T. Ando in recognition of his many and diverse, very important contributions to linear algebra, matrix theory, and operator theory, and in celebration of his seventieth birthday on February 1, 2002.

The deadline for submission of papers is February 1, 2001 with publication expected in late 2001 or early 2002. We invite you to submit a paper in the areas mentioned above for this special issue to any of its special editors:

Professor Rajendra Bhatia
Indian Statistical Institute
New Delhi 110 016
India
rbh@isid.ac.in

Professor Chi-Kwong Li
Dept. of Mathematics
The College of William and Mary
P. O. Box 8795
Williamsburg VA 23187-8975
USA
ckli@math.wm.edu

Professor Kazuyoshi Okubo
Mathematics Laboratory
Sapporo College
Hokkaido University of Education
Sapporo 020
Japan
okubo@atson.sap.hokkyodai.ac.jp

Michael J. Tsatsomeros
Dept. of Mathematics and Statistics
University of Regina
307.14 College West
Regina Sask SAS 0A2
Canada
tsat@math.uregina.ca

From: Mehrmann Volker <volker.mehrmann@Mathematik.TU-Chemnitz.DE>
Subject: LAA Special Issue
Date: Mon, 21 Feb 2000

Special Issue of Linear Algebra and its Applications on
Linear Algebra Methods in Representation Theory

In the last three decades in the representation theory of finite-dimensional algebras over a field or even of more general algebraic structures several new methods have emerged, including combinatorial, homological, categorical and geometric aspects. One underlying aspect is the input from Linear Algebra in a wider sense.

One basic problem in the representation theory is the classification of indecomposable objects in some Krull-Remak-Schmidt category, or in linear algebra terminology normal forms of indecomposable matrices. In case there exists (up to isomorphism) only finitely many such indecomposable objects (finite type) much more information is available and progress has been made in case this classification depends only on one-parameter families of indecomposable objects (tame type). In the remaining case which is usually called the wild case, there is only scattered information available.

Due to a vast number of internal questions but also problems arising in applications such as perturbation and control theory the wild case should be treated seriously.

In the last thirty years the area of representation theory has been

extending in several directions. We want to take this opportunity to devote a special issue on the Linear Algebra aspects. A preliminary list of topics would include.

Representations of quivers
Representations of posets and BOCS's
Normal forms of matrices with additional structure
Involutive algebras and their representation theory
Hall algebras
Applications to numerical linear algebra

This is a sample, but not an exclusive list of topics. If there is doubt about suitability of a particular paper, please contact one of the editors of the special issue.

Please submit three (3) hard copies to one of the special issue editors listed below. The format should follow the instructions given in the 'Information for Authors' in a recent issue of LINEAR ALGEBRA AND ITS APPLICATIONS.

The deadline for submission is DECEMBER 31, 2000.

Special editors:

Yuri Drozd
Faculty of Mechanics and Mathematics
Kyiv Taras Shevchenko University
252 033 Kyiv, Ukraine
e-mail: drozd@uni-alg.kiev.ua

Robert Guralnick
Department of Mathematics
University of Southern California
Los Angeles, California 90089-1113, USA
e-mail: guralnic@math.usc.edu

Dieter Happel
Fakultaet fuer Mathematik
Technische Universitaet Chemnitz
D-09116 Chemnitz, Germany
e-mail: happel@mathematik.tu-chemnitz.de

Claus Michael Ringel
Fakultaet fuer Mathematik
Universitaet Bielefeld
D-33501 Bielefeld, Germany
e-mail: ringel@mathematik.uni-bielefeld.de

From: Lothar Reichel <reichel@mcs.kent.edu>
Subject: Contents: Electronic Transactions on Numerical Analysis (ETNA)
Date: Wed, 9 Feb 2000

Electronic Transactions on Numerical Analysis 1999 Volume 8
Table of Contents

Domain decomposition algorithms for first-order system least squares
methods L. F. Pavarino

On Gersgorin-type problems and ovals of Cassini

R. S. Varga and A. Krautstengl

An optimum iteration for the matrix polar decomposition

A. A. Dubrulle

Preconditioners for least squares problems by LU factorization

A. Bjorck and J. Y. Yuan

On a posteriori error estimators in the finite element method on anisotropic meshes

M. Dobrowolski, S. Graf and C. Pflaum

On the convergence of multigrid methods for flow problems

I. Presson, K. Samuelsson and A. Szepessy

Numerical experiments with parallel orderings for ILU preconditioners

M. Benzi, W. Joubert and G. Mateescu

A note on the numerical solution of complex Hamiltonian and skew-Hamiltonian eigenvalue problems

P. Benner, V. Mehrmann and H. Xu

Discrete wavelet transforms accelerated sparse preconditioners for dense boundary element systems

K. Chen

Whitney Elements on pyramids

V. Gradinaru and R. Hiptmair

Electronic Transactions on Numerical Analysis 1999 Volume 9

Table of Contents

This volume contains the Proceedings of the International Workshop on Orthogonal Polynomials held at University Carlos III de Madrid in Leganes, Spain, 1998, organized by M. Alfaro, R. Alvarez-Nodarse, J. Arvesz and F. Marcellan (Chair). The proceedings were edited by R. Alvarez-Nodarse and F. Marcellan.

M. Alvarez de Morales, T. E. Pirez, M. A. Piqar and A. Ronveaux
Non-standard orthogonality for Meixner polynomials

Computation of Gauss-Kronrod quadrature rules with non-positive weights

G. S. Ammar, D. Calvetti and L. Reichel

Quadrature formulas for rational functions

F. Cala Rodriguez, P. Gonzalez-Vera, and M. Jimenez Paiz

A footnote on quaternion block-tridiagonal systems

C. Costa and R. Serodio

Sobolev orthogonal polynomials: interpolation and approximation

E. M. Garcia-Caballero, T. E. Pirez and M. A. Piqar

Orthogonal polynomials and quadrature

W. Gautschi

Software for the algorithmic work with orthogonal polynomials and special functions

W. Koepf

Creation and annihilation operators for orthogonal polynomials of continuous and discrete variables

M. Lorente

q-Classical orthogonal polynomials: a very classical approach

F. Marcellan and J. C. Medem

An iterative method for computing the eigenvalues of second kind
Fredholm operators and applications
P. Natalini, S. Noschese and P. E. Ricci

Evaluation of associated Legendre functions off the cut and parabolic
cylinder functions
J. Segura and A. Gil

Proof of a conjecture of Chan, Robbins, and Yuen
Doron Zeilberger

From: "Listowner" <listowner@baltzer.nl>
Subject: Contents of Advances in Computational Mathematics
Date: Mon, 31 Jan 2000

Advances in Computational Mathematics 12 (2000) 1-3
 Table of Contents

Special Issue: High dimensional integration
Editor: E. Novak

High dimensional integration Erich Novak

The exponent of discrepancy of sparse grids is at least 2.1933
Leszek Plaskota

Integration and approximation in arbitrary dimensions
F.J. Hickernell and H. Wozniakowski

An average discrepancy for optimal vertex-modified number-theoretic
rules Muni V. Reddy and Stephen Joe

On the Smolyak cubature error for analytic functions Knut Petras

Advances in Computational Mathematics 12 (2000) 2,3
 Table of Contents

On the detection of singularities of a periodic function
H.N. Mhaskar and J. Prestin

Some results for a class of generalized polynomials
Serena Morigi and Marian Neamtu

A fast matrix--vector multiplication method for solving the radiosity
equation Kendall Atkinson and David Da-Kwun Chien

Asymptotic convergence of degree-raising
Michael S. Floater and Tom Lyche

Parameterization of m-channel orthogonal multifilter banks
Qingtang Jiang

Weak greedy algorithms V.N. Temlyakov

Diagonally implicit Runge--Kutta methods for 3D shallow water
applications

P.J. van der Houwen and B.P. Sommeijer

Convergence of Galerkin method solutions of the integral equation for thin wire antennas Bryan P. Rynne

Modified Mini finite element for the Stokes problem in R^2 or R^3
Yongdeok Kim and Sungyun Lee

More information about contents, submission and preparation of papers can be found on

<http://www.baltzer.nl/adcom>

Please direct enquiries about subscription and other issues to

subscribe@baltzer.nl

Sincerely,
Baltzer Science Publishers

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA contents
Date: Sun, 13 Feb 2000

Linear Algebra and Its Applications February 2000 Vol. 306, Issue 1-3
Table of Contents

Equivalence constants for matrix norms: a problem of Goldberg
A Tonge

Classes of Schur D-stable matrices R Fleming

A representation theorem for algebras with commuting involutions
M Cabrera

Sparsity of orthogonal matrices with restrictions
GS Cheon, BL Shader

On sums of three square-zero matrices K Takahashi, Peiyuan Wu

The Nevanlinna-Pick interpolation problems and power moment problems for matrix-valued functions III: The infinitely many data case
Gongning Chen

Generalized totally positive matrices M Fiedler

On almost regular tournament matrices C Eschenbach, JR Weaver

Dual graphs and knot invariants M Lien, W Watkins

Decomposing a matrix into circulant and diagonal factors
M Schmid, R Steinwandt

Centrogenal matrices O Krafft

Spectral clustering properties of block multilevel Hankel matrices
D Fasino

On condensed forms for partially commuting matrices

YUA Alpin, L Elsner

A tree whose complement is not eigensharp VL Watts

Growth in Gaussian elimination for weighing matrices, $W(n, n-1)$
Christos Koukouvinos

Semidefiniteness without real symmetry CR Johnson, RB Reams

NOTE:

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

Submitted by:

Hans Schneider

Department of Mathematics

Van Vleck Hall

480 Lincoln Drive

University of Wisconsin-Madison

Madison WI 53706 USA

----- end -----

hans@math.wisc.edu.

608-262-1402 (Work)

608-271-7252 (Home)

608-263-8891 (Work FAX)

608-271-8477 (Home FAX)

<http://www.math.wisc.edu/~hans> (URL)

IPNet Digest Volume 7, Number 03 March 30, 2000

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

Today's Topics:

Workshop: High Performance Computing w/ App. to Image Processing
Second Announcement: Colloque Inverse Problems
Postdoc Position: Inverse Problems in Electromagnetics, Optics
Table of Contents: Inverse Problems in Engineering
Table of Contents: Surveys on Mathematics for Industry
Table of Contents: Numerical Algorithms
Table of Contents: Linear Algebra and Its Applications

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

Mail to ipnet-request@math.msu.edu
<http://www.mth.msu.edu/ipnet>

From: "Laurence T. Yang" <lyang@stfx.ca>
Subject: Call for Papers: HPSECA-00
Date: Sun, 05 Mar 2000

CALL FOR PAPERS

Workshop on High Performance Scientific and Engineering Computing with Applications

The Westin Harbour Castle, Toronto, Canada, August 21-24, 2000
in conjunction with
2000 INTERNATIONAL CONFERENCE ON PARALLEL PROCESSING (ICPP-2000)
(<http://www.cis.ohio-state.edu/~icpp2000>).

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 to the workshop organizers

(lyang@stfx.ca or pan@cps.udayton.edu) via electronic mail or three copies via postal mail . Contributions will be reviewed for relevance and technical contents on basis of papers. Accepted papers will be published by IEEE Computer Society Press as proceedings of the ICPP 2000 workshops.

Further information about the conference proceedings and registration fee can be found by web sites:
<http://www.cis.ohio-state.edu/~icpp2000>
<http://www.stfx.ca/people/lyang/activities/icpp00-hpseca.html>

Important Deadlines:

Paper submission Due April 1, 2000
Notification of Acceptance May 1, 2000
Final camera-ready paper June 1, 2000

Workshop Organizers:

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

Prof. Yi Pan (Co-Chair)
Department of Computer Science, University of Dayton
Dayton, OH 45469-2160, USA
Email: pan@cps.udayton.edu

Technical Committee:

Hamid R. Arabnia, University of Georgia, USA
Martin Buecker, Aachen University of Technology, Germany
Jack Dongarra, University of Tennessee and
Oak Ridge National Laboratory, USA
Len Freeman, University of Manchester, UK
John Gustafson, Ames National Laboratory, USA
Sanli Li, Tsinghua University, P. R. China
Svetozar Margenov, Center Laboratory for Parallel Progressing
Bulgarian Academy of Science, Bulgaria
Russ Miller, State University of New York, Buffalo, USA
Ahmed Sameh, Purdue University, USA
Eric de Sturler, Swiss Center for Scientific Computing (SCSC-ETHZ)

and

Swiss Federal Institute of Technology, The Switzerland
Karen Tomko, Wright State University, USA
Xian-He Sun, Illinois Institute of Technology, USA
Zahari Zlatev, National Environmental Research Institute, Denmark
Xiaodong Zhang, College of William and Mary , USA

From: Colloque Inverse Problems - JG Caputo <rcp264@LPM.univ-montp2.fr>
Subject: Second Announcement
Date: Tue, 28 Mar 2000

Second Announcement
RCP264: Inverse Problems and nonlinearity
Montpellier, France, June 20-24 2000

ALL THIS INFORMATION CAN BE FOUND ON

<http://www.lpm.univ-montp2.fr:7082/~rcp264>

PLEASE INFORM US IF YOU CAN'T ACCESS THE WEB PAGE

Second announcement

Together with this document you will find the registration form for the workshop. We have also included a preliminary program together with a list of participants presenting a lecture or a poster.

We remind you that June 20th is the first working day of the conference. Therefore we encourage you to arrive on Monday June 19th where there will be a registration session on Campus between 16h and 19h in the Administration building. You can also register on Tuesday morning between 8h30 and 9h30.

Please fill the registration form online or send it back by email rcp264@lpm.univ-montp2.fr or fax (33 4 67 54 48 50).

We remind you that you can pay the registration fee (600 FF or 100 US\$) either as a bank check before May 15th to the "Agent comptable de l'Universite Montpellier II : RCP264" or in cash when you arrive.

People interested in presenting a talk must send us by email the title and abstract as soon as possible and in any case before May 1st. We plan to have lectures (30 mins all included), short lectures (20 mins all included) and posters so please indicate which format you wish to present. If you have already submitted a talk please check that you are on the list. If you decide to cancel please inform us immediately. We will confirm other talks before May 15th.

We hope to convince a good scientific publisher to print the proceedings.

The organizer of the workshop
J. G. Caputo

Preliminary program

These are just short indications, breaks will be inserted with coffee, etc.

Monday, June 19th

16h -19h Registration

Tuesday, June 20th: "Inverse Problems for Linear PDES I, and Imaging"

8h30 - 10h00

Welcome to participants

Technical explanations on the meeting

Last registrations

10h00 - 12h30 : 5 lectures

14h00 - 18h00 : 12 short lectures

Wednesday, June 21st: "Inverse Problems for Linear PDES II, and Applications"

9h - 9h40 - P.C. Sabatier: Past and Future of Inverse Problems

10h00 - 12h30 : 5 lectures
14h00 - 18h00 : 12 short lectures

Thursday, June 22nd: "Inverse Spectral Problems and Nonlinear Evolution Equations"

9h00 - 12h40 : 4 lectures and 5 short lectures
14h00 - 18h00 : Excursion

Friday, June 23rd: "Algorithms and Regularisation of Ill-posed Problems"

9h00 - 12h30 : 5 lectures and 3 short lectures
14h00 - 16h00 : 6 short lectures
16h00 - 18h00 : Poster session (posters will be up for the duration of the whole conference)

Saturday, June 24th: "Other Interdisciplinary aspects"

9h00 - 12h00 : 4 lectures and 3 short lectures

Provisional list of participants presenting a lecture or a poster

ALBER M. - On Piece Wise Wave Solutions of Nonlinear Equations
ANDERS I. - Curved Asymptotic Solitons
ATKOSUN T. - title to be announced
BERCELO J.A., BARCELO T., and RUIZ A. - Stability of the Inverse Conductivity Problem in the Plane for less Regular Conductivities
BELISHEV M.I. - On Reconstruction of Gravity Field via External Electromagnetic Measurements
BENNA M. and BARRIOT J.P. - A 3D Simulation of the Radio Tomography of Comet Wirtanen (Rosetta space mission)
BERTERO M. - The Large Binocular Instrument (LBT) : a Challenging Instrument for Image Restoration
BOITI M. - Title to be announced
BOSCOLO S., NIJHOFF J.H.B. and TURITSYN S.K. - A Perturbative Analysis of Dispersion Managed Solitons
BOURGEOIS B., SUIGNARD A. and PERRUSON G. - Electric and Magnetic Dipoles and Current Filaments, a set of Inverse Models

for

the Interpretation of Electromagnetic Data in Geophysics.
CALOGERO F. - Title to be announced
CHAVENT G. - Title to be announced
CUER M. - Title to be announced
DEGASPERIS A. - Title to be announced
DE MOL C. - Title to be announced
DOLIWA A. - Universality of Conjugate Nets and Quadrilateral Lattices on the Inverse Problem Level
DRYUMA V. - On Application of Riemann geometry in theory of the second order ODE's
EL BADIA A. and HA-DUONG T. - On the Problem of Identification of Sources in Transient Regime Acoustics
FOKAS A. - title to be announced
FORDY A. - title to be announced
FRANCOISE J.P. and DEMONGEOT J. - Coupled Oscillators and Partial Differential Equations Modelling Biological Waves.
GAIDIDEI Y. - Stabilization of Nonlinear Excitations by Disorder
GANDARIAS M.L. - title to be announced
GERDJIKOV V. - Wave-wave Interactions with Quadratic

Nonlinearities: Reductions and new Examples
GISIN V., and MALOME B. - One- and Two-dimensional
Subwavelength Cubic-quintic Solitons
GREBENNIKOV A. - Spline-regularization of some Inverse
Heat-conduction Problems
GREEN J.J. - Ocean Wave Directional Spectra
GRIMSTAD A.-A. - Assessing the Validity of a Linearized Error
Analysis for a Nonlinear Parameter Estimation Problem
GRINBERG N. - Localisation of the Obstacle in Inverse

Scattering:

Impedance Boundary Problem
GRUNBAUM A. - title to be announced
HARNAD J. - Integrable Fredholm Integral Operators,
Riemann-Hilbert Problems and Duality
HOHAGE T. - Fast Regularized Newton Methods for the Inverse
Acoustic Inhomogeneous Medium Problem
HU J. - Symplectic Structures in the Painleve Test and the

Mirror

Transforms
ISAKOV V. - Identification of Nonlinear Equations
KARPMAN V. - Influence of Higher Order Dispersion on Soliton
Dynamics
KHURI - title to be announced
KISELEV O.M. - 2+1-dimensional Solitons under Perturbations
KONNO K. - Recurrence Formula of Integrable Equations Derived
from IKK System with Two Hierarchies
KONOTOP V. - On Quantization of Weakly Nonlinear Lattices:
Envelope Solitons
KUDRYASHOV N. - Double Backlund Transformations and
Specials integrals of the PII and KII Hierarchies
KUZHEL S. - On Inverse Problems in the Lax-Phillips Scattering
Theory
LAMBERT F., LESSELIER D. et al. - title to be announced
LEMONNIER H. - Unified Solution of Steady and Unsteady
Multidimensional Inverse Heat Diffusion Problem by the Boundary
Element Method Regularized by a priori Spectral Truncation (SVD).
LEON J. - title to be announced
LOUIS A.K. - Fast Inversion Methods for an Inverse Scattering
Problem
LUCE R. - Identification of the Thickness of a Thin Layer by
Boundary Measurements
MANNA M. - Short Wave Dynamics in the Euler's Equations for an
Incompressible Fluid
MASSONI E. - Parameter Identification using Inverse Analysis of

a

Finite Element Model
MATVEEV V. - Intertwining Relations between Discrete and
Continuous Fourier Transform, the Related Functional Identities

and

beyond
McLAUGHLIN J. - Finding Properties of Biological Tissue from
Vibration Data
MURLI A. and D'AMORE L. - Numerical Methods for
Total-Variation based Beblurring
NEUBAUER A. - Regularization for Curve and Surface
Representations
NIJHOFF F. - Integrable Lattices and the PVI Equation
OSBORNE A. - The search for giant ocean waves
PARKER A. - A Breakdown of Zakharov-Shabat Inverse Scattering
Theory?

PASHAEV O.K. - Solitons and Quantum Potential: Sabatier's Transform and Resonance Dynamics
 PELINOVSKY E., KHARIF C. and TALIPOVA T. - Nonlinear-dispersive Mechanism of the Freak Wave Formation
 PELLONI B. - Solving Moving Boundary Value Problems for Integrable PDEs
 PEMPINELLI F. - title to be announced
 PIKE E.R. - title to be announced
 RAMANAJOA, LESSELIER D. et al. - title to be announced
 REINISCH G. - Schroedinger-Poisson Model of Ground-State Helium
 RERIKH K. - Integrability of Functional Equations Defined by Birational Mappings
 ROGERS C., and SCHEIF W.K. - The Geometry of The Stationary Davey-Stewartson III Equation
 ROSSET E. - Optimal Stability for Inverse Parabolic Boundary Value Problems with Cavities
 RUNDELL W. - Title to be announced
 SHCHESNOVICH V, and BARASHENKOV I.V. - Soliton-radiation Interaction in the Parametrically Driven, Damped NLS Equation
 SHEKA D. D. - Soliton-Magnon Scattering in Isotropic 2d Magnets
 SHEPELSKY D, and DE BOUTET de MONVEL A. - Design of Dispersive Electromagnetic Structures and a Riemann-Hilbert Problem
 SYLVESTER J. - A Variational Approach to Layer Stripping
 UHLMANN G. - On the local Dirichlet to Neumann Map and the Radon Transform
 VAN der KAMP P. - Almost Integrable Evolution Equations
 WIRGIN A. - The Inverse Crime and Related Issues
 XU YONGZHI S. - Generalized Dual Space Indicator Method for Inverse Scattering Problems in Underwater Acoustics
 ZAGRODZINSKI J. - title to be announced
 ZAKHARIEV B. - New Results in Multichannel Inverse Problem and SUSYQ
 ZENG Y. - Solving Soliton Hierarchy with Self-consistent Sources by Inverse Scattering Method

Registration form:

_email :
 _lastname :
 _firstname :
 _institution :
 _phone :
 _fax :
 _building :
 _street :
 _city :
 _zipcode :
 _state :
 _country :
 _arrival : 2000-06-19 or 2000-06-20 or 2000-06-21
 _departure : 2000-06-24 or 2000-06-25
 _place : Close-to-the-university or Downtown
 _category : 250-300 or 300-400 or 400-
 _accompagnying_person : yes or no
 _comments :

From: Gang Bao <bao@math.msu.edu>
Subject: Postdoc Position at Michigan State University
Date: Sun, 19 Mar 2000

Michigan State University
Department of Mathematics

Applications are invited for one postdoc position funded in part by the Office of Naval Research beginning in fall 2000. The postdoc will be working on research problems in modeling and inverse problems in electromagnetics and optics. The requirements include: PhD in appl math, strong background in numerical/applied pde, and strong interests in mathematical modeling. There might be some light teaching involved.

Please e-mail your application to bao@math.ufl.edu.

From: james beck <jamesverebeck@home.com>
Subject: Contents, Inverse Problems in Engineering
Date: Fri, 10 Mar 2000

Inverse Problems in Engineering 2000 Volume 8, Number 1
Table of Contents

SPECIAL ISSUE: International Conference on Identification in
Engineering Systems, University of Wales Swansea, U.K.,
29-31 March 1999

On Feature Extraction for Condition Monitoring Using Time Series
Analysis and Distance Techniques
I. Trendafilova, H. Van Brussel and B. Verbeure

Damage Identification Using Multivariate Statistics: Kernel
Discriminant Analysis K. Worden and G. Manson

Reference Based Stochastic Subspace in Identification in Civil
Engineering B. Peeters and G. De Roeck

Estimation of Parameters and Model Order in State Space Innovation
Forms J. Lardies

From: "PROF.HEINZ W. ENGL" <engl@indmath.uni-linz.ac.at>
Subject: Contents, Surveys on Mathematics for Industry
Date: Fri, 3 Mar 2000

Surveys on Mathematics for Industry Volume 9, Number 1
Table of Contents

W.Kropatsch, A.Leonardis, H.Bischof, Hierarchical, adaptive and robust
methods for image understanding

M.Hoschek, P.Rentrop, Y.Wagner, Network approach and differential-
algebraic
systems in technical applications

Submitted by:
Heinz W. Engl
Editor-in-Chief

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
 693,
 Altenbergerstrasse 69 secretary: ext.9220; as Dean: ext.3220
 A-4040 Linz Fax:ext. 855, in Dean's
 affairs:ext.3225
 Oesterreich / Austria home phone: +43-(0)732-245518
 World Wide Web: http://www.indmath.uni-linz.ac.at/

 From: "Listowner" <listowner@baltzer.nl>
 Subject: Contents of Numerical Algorithms 22 (1999) 3,4
 Date: Fri, 3 Mar 2000

Numerical Algorithms 1999 Volume 22 Numbers 3,4
 Table of Contents

Experiments with a variable-order type 1 DIMSIM code
 J.C. Butcher, P. Chartier and Z. Jackiewicz

Solving Hamiltonian systems arising from ODE eigenproblems
 Carsten R. Maple and Marco Marletta

Bernstein bases in Müntz spaces Marie-Laurence Mazure

An O(n²) active set algorithm for the solution of a parametric
 quadratic program Manuel A. Gómez

A recurrence relation for generalized divided differences with respect
 to ECT-systems G. Mühlbach

Full collocation methods for some boundary integral equations
 Ricardo Celorrio and Francisco-Javier Sayas

Numerical experiments in computing bounds for the norm of the error in
 the preconditioned conjugate gradient algorithm Gérard Meurant

A continuation--domain decomposition algorithm for bifurcation
 problems C.-S. Chien, H.-S. Chou and B.-W. Jeng

Book reviews

More information about contents, submission and
 preparation of papers can be found on

<http://www.baltzer.nl/numa>

Please direct enquiries about subscription and other issues to

subscribe@baltzer.nl

Sincerely,
 Baltzer Science Publishers

 From: Hans Schneider <hans@math.wisc.edu>
 Subject: LAA contents
 Date: Tue, 21 Mar 2000

Linear Algebra and Its Applications March 2000 Vol. 307, Issue 1-3

The positive definite completion problem relative to a subspace
CR Johnson, RL Smith

The local exponent sets of primitive digraphs Mino Zhengke

Characteristic polynomials of graphs having a semifree action
Jaeun Lee

Some remarks on quasi-equivalence of bases in Frechet spaces
N Zobin

A norm bound for projections with complex weights
EY Bobrovnikova, SA Vavasis

On lattice property of group induced cone orderings M Niezgoda

Stable subnorms M Goldberg

On the ultimate behavior of the sequence of consecutive powers of a
matrix in the max-plus algebra B De Schutter

Strengthening the Gilbert-Varshamov bound A Barg, J Simonis

A matrix inequality and its statistical application J Jiang

Two-dimensional representations of the free group in two generators
over an arbitrary field L Vaserstein

Principal pivot transforms: properties and applications
M Tsatsomeros

Linear matrix period in max-plus algebra M Gavalec

Free product $Z_3 * Z_3$ of rotations with rational entries
G Liu, LC Robertson

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

Submitted by:

Hans Schneider

Department of Mathematics

Van Vleck Hall

480 Lincoln Drive

University of Wisconsin-Madison

Madison WI 53706 USA

----- end -----

hans@math.wisc.edu.

608-262-1402 (Work)

608-271-7252 (Home)

608-263-8891 (Work FAX)

608-271-8477 (Home FAX)

<http://www.math.wisc.edu/~hans> (URL)

IPNet Digest Volume 7, Number 04 April 30, 2000

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

Today's Topics:

Scientific query: A System Matrix Inverse Problem
Conference: Summer School and Conference in Edinburgh
Seminar: Inverse Problems Seminar of the Pacific Northwest
Position: Professorship in Applied and Computer-Oriented Math
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

Submissions for IPNet Digest:

Mail to ipnet-digest@math.msu.edu

Information about IPNet:

Mail to ipnet-request@math.msu.edu
<http://www.mth.msu.edu/ipnet>

From: Nils Wagner <nwagner@isd.uni-stuttgart.de>
Subject: Inverse problem
Date: Sat, 22 Apr 2000

Subject : Inverse problem

We assume that we sample a LTI system at a rate h .
The measurements are vector observations z_k which
satisfy the relation $z_{k+1} = \exp(Ah) z_k$ where A
is the system matrix associated with the observations.
The goal is to obtain an estimate of A from observations.
Is it possible to give a bound for the system matrix
error $\|A - A_{est}\|$?
I am looking for contributions to this area.

Nils Wagner
University of Stuttgart
Institute for Statics and Dynamics of Aerospace Structures
Pfaffenwaldring 27
D-70569 Stuttgart
Germany

From: Bill Lionheart <Bill.Lionheart@umist.ac.uk>
Subject: Summer School and Conference in Edinburgh
Date: Mon, 17 Apr 2000

New Analytic and Geometric Methods in Inverse Problems
EuroSummerSchool 24 July to 2 August 2000
Heriot-Watt University, Edinburgh

Recent Developments in the Wave Field and Diffuse Tomographic Inverse
Problems
EuroConference 3-5 August 2000
Heriot-Watt University, Edinburgh Satellite conference for ICMP,200

Details of these meetings can be found on
http://www.ma.hw.ac.uk/icms/current/invprob/sci_prog.html
And the programme on
http://www.ma.hw.ac.uk/icms/current/invprob/timetable_ss.html

Dr W.R.B. Lionheart,
Department of Mathematics UMIST, <http://www.ma.umist.ac.uk/bl/>

From: Adel Faridani <faridani@MATH.ORST.EDU>
Subject: Inverse Problems Seminar
Date: Tue, 18 Apr 2000

INVERSE PROBLEMS SEMINAR OF THE PACIFIC NORTHWEST

2000 Meeting

Oregon State University
Corvallis, OR

Saturday and Sunday, June 3-4, 2000

The purpose of the annual Inverse Problems Seminar of the Pacific Northwest is to foster communication between mathematicians and other scientists in the region working on various aspects of inverse problems. This year the meeting is at Oregon State University in Corvallis, Oregon. It will begin on Saturday, June 3 at 11:30am and conclude Sunday, June 4 in the early afternoon. Confirmed main speakers so far include Carlos Berenstein (Mathematics, University of Maryland), Eldad Haber (Geophysics, University of British Columbia), Jodi Mead (Oceanography, Oregon State University), and John Sylvester (Mathematics, University of Washington). There are a few openings for 20 minute contributed talks.

This conference is free to all participants, and advance registration is not necessary. Limited travel support is available.

Information about the meeting will be posted on the web
at <http://osu.orst.edu/~finchd/ipspn.html>

If you need more information, wish to contribute a talk, or to apply for travel support, please contact Adel Faridani (faridani@math.orst.edu) or David Finch (finch@math.orst.edu).

From: "PROF.HEINZ W. ENGL" <engl@indmath.uni-linz.ac.at>
Subject: position announcement innsbruck (austria)
Date: Tue, 25 Apr 2000

The Institute of Mathematics, University of Innsbruck, Austria,
invites applications for a tenured faculty position at the
Full Professor level in

Applied and Computer-Oriented Mathematics.

The duties of the new professor are:

- Research in applied and computer-oriented mathematics. Areas of interest include but are not limited to mathematical methods of image processing, mathematics of information and communication,

control theory, mathematics of neural sciences, optimization.

- Teaching in applied mathematics, in particular for graduate students (diploma and PhD candidates), as well as an appropriate contribution to undergraduate teaching.
- Establishing and promoting contacts with industry.

Besides fulfilling the standard requirements applicants should preferably have experiences in co-operative projects with industry. Women are particularly encouraged to apply.

Submit applications by June 9 to

Dekan der Naturwissenschaftlichen Fakultät
Univ.-Prof. Dr. Dietmar Kuhn
Universität Innsbruck
Innrain 52
A-6020 Innsbruck, Austria

A detailed description of all requirements including application instructions is available at <http://mathematik.uibk.ac.at/>

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
693,
Altenbergerstrasse 69 secretary: ext.9220; as Dean: ext.3220
A-4040 Linz Fax:ext. 855, in Dean's
affairs:ext.3225
Oesterreich / Austria home phone: +43-(0)732-245518
World Wide Web: <http://www.indmath.uni-linz.ac.at/>

From: james beck <jamesverebeck@home.com>
Subject: IPIE contents
Date: Fri, 31 Mar 2000

Inverse Problems in Engineering 2000 Volume 8, Number 2
 Table of Contents

Model Validation and Verification of Large and Complex Space
Structures D. C. Zimmerman

Projection Methods within Model Updating M. Oeljeklaus

Model Updating of the Complex Modeshapes and the Damping Matrix
Y. Halevi and R. Kenigsbuch

Non-linear Inverse Compensation of an SI Engine by System
Identification for Robust Performance Control
A. P. Petridis and A. T. Shenton

Estimation of Hysteretic Properties for Pseudo-elastic Materials,
C. Song, J. A. Brandon and C. A. Featherston

From: Secretary Support - Magrijn <magrijn.secsup@tip.nl>
Subject: MCSS volume 13 number 1 2000

Date: Tue, 18 Apr 2000

Mathematics of Control, Signals, and Systems 2000 Vol. 13, No. 1
Table of Contents

O-minimal hybrid systems G. Lafferriere, G.J. Pappas and S. Sastry

A convolution algebra of delay-differential operators and a related
problem of finite spectrum assignability H. Gluesing-Luerssen

Basic properties of the projective product with application to
products of column-allowable nonnegative matrices
F. Le Gland and L. Mevel

Exponential forgetting and geometric ergodicity in hidden Markov
models F. Le Gland and L. Mevel

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)

From: Lothar Reichel <reichel@mcs.kent.edu>

To: ipnet-digest@math.msu.edu

Subject: ETNA

Date: Thu, 30 Mar 2000

Electronic Transactions on Numerical Analysis (ETNA) 2000 Vol. 10
Table of Contents

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

Special Issue on Multilevel Methods

The Ninth Copper Mountain Conference on Multigrid Methods was held
April 11-16, 1999, at Copper Mountain, Colorado, U.S.A.. The major
theme of this meeting was "General Scalable Multigrid Methods:
Algebraic Algorithms and Parallel Techniques". The seven papers in
this volume were presented there and selected for publication in this
dedicated issue. The range of topics covered by these papers
demonstrates the breadth and strength of this still vibrant area of
research.

Seymour Parter, Guest Editor

Tom Manteuffel and Steve McCormick, Conference Co-Chairs

General highly accurate algebraic coarsening

Achi Brandt

R Bhatia

Linear Algebra and Its Applications April 2000 Vol. 309, Issue 1-3
Table of Contents

Proceedings of the international workshop on accurate solutions of
eigenvalue problems
Special editors: Jesse L. Barlow, Beresford N. Parlett, Kresimir Veslic

Preface: The Accurate solution of Eigenvalue Problems
JL Barlow

Weyl-type relative perturbation bounds for eigenvalues of Hermitian
matrices FM Dopico, JM Molera

Optimal perturbation bounds for the Hermitian eigenvalue problem
JL Barlow

Absolute and relative perturbation bounds for invariant subspaces of
matrices ICF Ipsen

Relative perturbation theory for hyperbolic eigenvalue problem
I Slapnicar

Accuracy assessment for eigencomputations: variety of backward errors
and pseudospectra F Chaitin-Chatelin, E Traviesas

Perturbation theory for the eigenvalues of factorised symmetric
matrices K Veselic

Rounding-error and perturbation bounds for the indefinite QR
factorization S Singer

Relatively robust representations of symmetric tridiagonals
BN Parlett

QR factorization with complete pivoting and accurate computation of
the SVD NJ Higham

Exponential splittings of products of matrices and accurately
computing singular values of long products S Oliveira, DE Stewart

Approximate eigenvectors as preconditioner Z Drmac

An implementation of dqds algorithm (positive case) BN Parlett

Balancing sparse matrices for computing eigenvalues
TY Chen, J Demmel

Large sparse symmetric eigenvalue problems with homogeneous linear
constraints: the Lanczos process with inner-outer iterations
GH Golub, H Zha

The influence of orthogonality on the Arnoldi method
T Braconnier

The relative error in the Pruess method for Sturm-Liouville problems
P Kosowski

Backward error and condition of polynomial eigenvalue problems
F Tisseur

Linear Algebra and its Applications May 2000 Volume 310, Issue 1-3
Table of Contents

Introduction to a group of articles in tribute to Vlastimil Ptak
H. Schneider

A remark on the Jordan normal form of matrices V. Ptak

On Ptak's derivation of the Jordan normal form C.de Boer

Applications of the duality method to generalizations of the Jordan
canonical form O. Holtz

Circumstances of the submission of my paper in 1956 V. Ptak

Vlastimil Ptak (8 November 1925 - 9 May 1999) M. Fiedler

List of publications of Vlastimil Ptak, 1995-1999 M. Fiedler

A modified Gram-Schmidt algorithm with iterative orthogonalization
and column pivoting A. Dax

On an operator inequality J. Singh Aujla

Canonical forms for positive discrete-time linear control systems
R. Bru, S. Romero, E. Sanchez

Linear preservers of minimal rank L. Rodman, P. Semrl

Superfast algorithms for Cauchy-like matrix computations and
extensions V.Y. Pan, A. Zheng

On the sequence of powers of a stochastic matrix with large exponent
S. Kirkland

A note on unsolvable systems of max-min (fuzzy) equations
K. Cechlarova

On maximal entries in the principal eigenvector of graphs
B. Papendieck, P. Recht

Commuting pairs and triples of matrices and related varieties
R.M. Guralnick, B.A. Sethuraman

Graph rigidity via Euclidean distance matrices A. Alfakih

Numerical approximation of the product of the square root of a matrix
with a vector E.J. Allen, J. Baglama, S.K. Boyd

Poincare series of semi-invariants of 2x2 matrices M. Domokos

NOTE:

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

Submitted by:

Hans Schneider
Department of Mathematics
Van Vleck Hall
480 Lincoln Drive
University of Wisconsin-Madison
Madison WI 53706 USA
----- end -----

hans@math.wisc.edu.
608-262-1402 (Work)
608-271-7252 (Home)
608-263-8891 (Work FAX)
608-271-8477 (Home FAX)
<http://www.math.wisc.edu/~hans> (URL)

IPNet Digest Volume 7, Number 05 May 31, 2000

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

Today's Topics:

Seminar: Inverse Problems, Design in Thermal/Mechanical Eng.
Meeting: Advanced Concepts for Intelligent Vision Systems
Symposium: SIAM/ACM Symposium on Discrete Algorithms
Positions: Numerical Methods for Solution of Inverse Problems
New Book: Surveys on Solution Methods for Inverse Problems
Web Content: Interactive Numerical Examples in ETNA
Announcement: Special Issue of Linear Algebra and Applications
Table of Contents: Inverse Problems in Engineering
Table of Contents: Numerical Algorithms

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: PLOURDE Frederic <plourde@let.ensma.fr>
Subject: Seminar: Inverse Problems, Design in Thermal/Mechanical Eng.
Date: Fri, 26 May 2000

CALL FOR PAPERS

Inverse Problems and Experimental Design in Thermal and Mechanical Engineering

EUROTHERM Seminar No. 68

5-7 March, 2001

Laboratoire d'Etudes Thermiques
UMR CNRS 6608
ENSMA Site du FUTUROSCOPE
POITIERS France

Date and place:

This seminar will take place from Monday, 5 March to Wednesday, 7 March at:

Ecole Nationale Supérieure de Mécanique et d'Aérotechnique (ENSMA)
1 Avenue Clément Ader. BP 40109
86961 FUTUROSCOPE CHASSENEUIL Cedex
France

The engineering school ENSMA is located in the Futuroscope park area about 10 km from Poitiers and 330 km from Paris.

Scientific Committee:

Chairman:
Pr. D. Petit (Poitiers, France)

Co chairmen:

Pr. D. B. Ingham (Leeds, UK)
Pr. Y. Jarny (Nantes, France)

Members:

Dr. A. Constantinescu (France)
Pr. A. Emery (USA)
Pr. N. Fomin (Belarus)
Dr. D. Lesnic (UK)
Dr. E. Massoni (France)
Pr. G. Milano (Italy)
Pr. J.E. Nordtvedt (Norway)
Dr. A.J. Nowak (Poland)
Dr. R. Potthast (Germany)
Pr. S.V. Reznik (Russia)
Pr. H.J. Reinhardt (Germany)
Pr. M. Tanaka (Japan)
Pr. K.A. Woodbury (USA)

and the METTI* French association:

Pr. E. Artyukhin (Universite de Belfort)
Pr. J.C. Batsale (ENSAM, Bordeaux)
Dr. D. Delaunay (ISITEM, Nantes)
Dr. C. Le Niliot (IUSTI, Marseille)
Dr. V. Ledez (LET, Poitiers)
Pr. D. Maillet (LEMTA, Nancy)
Pr. M. Raynaud (INSA, Lyon)
Dr. J.J. Serra (CTA, Odeillo)
* METTI: METrologie Thermique et Techniques Inverses

About Eurotherm:

The series of EUROTHERM Seminars has become a popular forum for high-level scientific and technical interchange of ideas in a wide range of specialist topics. While the presentation and publication of papers at the Seminars are encouraged, the primary aim is to stimulate discussion and liaison between specialist groups.

The President of EUROTHERM in 1996 - 2000 is Dr Gian Piero Celata, ENEA, Rome / Italy (Fax: +390630483026; E-mail : celata@casaccia.enea.it). The Secretary is Professor Paolo Tartarini, University of Modena/Italy (Fax: +39 059 376 799; E-mail : tartarini@unimo.it).

Information on the EUROTHERM Committee and its activities is available on the Internet at:

<http://termserv.casaccia.enea.it/eurotherm/>

Background:

Inverse problems are related to the determination of unknown causes from known consequences (the measurements). Aspects relative to the function estimation or the parameter identification can then be considered.

This seminar is the first one on Inverse Problems in the framework of the Eurotherm seminars but is linked to other conferences on Inverse Problems that have been held throughout the world, for example the three ICIPE* conferences: Port Ludow (1999), Le Croisic (1996) and Palm Coast (1994).

*International Conference on Inverse Problem in Engineering

Scope of the seminar:

In the framework of this congress, the recent developments in the resolution of inverse problems, the most recent applications and the links between modelling and experimentation will be presented. It will assist with the dissemination throughout the research and industrial worlds. The new ideas between the methods and their use with experimental data will be emphasised. The following topics will be included but papers on related topics are also encouraged: Mathematical aspects, optimisation and methodology in inverse problems. Inverse problems in heat and mass transfer, mechanics, acoustic, etc. Metrology, experimental methods, non intrusive measurements and optimum design problems. Data acquisitions, signal treatment, image processing, tomography, etc. Active transfer control.

To illustrate the benefits of improved methods, most of the papers should contain heat and mass transfer applications. Original developments relating to diffusive transport, are welcome and a specific effort will be made to include papers concerning inverse problems in convection and radiation. All the couplings between thermal and mechanical systems are particularly welcome as well as contributions in porous media.

Instructions for authors and deadlines:

All papers must be written in English. All the communications will be presented orally. Abstracts (minimum 500 words with a maximum of two pages), and then the papers, must be sent to the Seminar Secretary.

Deadlines:

15 September, 2000 deadline for abstracts
1 November, 2000 abstract acceptance
15 January, 2001 deadline for full-length papers

At the seminar, all the participants will have a copy of the abstracts and a compact disc containing the full-length papers.

After the seminar, a full review process will select the papers to be published in the final proceeding volume.

Seminar Secretary:

Information, inquires, abstract and paper submissions should be sent by email or mail to:

Dr. F. PLOURDE
LET ENSMA BP 40109
86961 FUTUROSCOPE CHASSENEUIL Cedex
France
Phone: 33 5 49 49 81 19
Fax: 33 5 49 49 81 01

e-mail : euro68@ensma.fr
Internet site : <http://www.euro68.ensma.fr>

Registration:

The registration fee is 400 Euro. This includes a copy of the proceedings, the lunches and coffee breaks, and a banquet. Registration for doctoral students is 280 Euro.

Submitted by:

Frederic PLOURDE LET/ENSMA
1, avenue Clément Ader, Teleport 2
BP 40109, 86961 FUTUROSCOPE CEDEX
tél : (33) 5.49.49.81.19
fax : (33) 5.49.49.81.30

From: Jacques Blanc-Talon <Jacques.Blanc-Talon@etca.fr>
Subject: ACIVS'2000 Registration and Final Program
Date: Thu, 11 May 2000

Dear IPNet Digest Readers,

The final program of ACIVS'2000 (Advanced Concepts for Intelligent Vision Systems) is now available on our web site at:

www.etca.fr/CTA/Events/Conf/acivs00.html

Looking forward to meeting you in Baden-Baden,

The Steering Committee
Jacques Blanc-Talon (Jacques.Blanc-Talon@etca.fr)
Dan Popescu (Dan.Popescu@cmis.csiro.au)

Submitted by:

Jacques Blanc-Talon Scientific Manager
(Fractals, Computer Science, Image Processing, Robotics)
Co-chair of ACIVS'00 <http://www.etca.fr/CTA/Events/Conf/acivs00.html>
PC Member of GECCO, PDPTA, CISST, AISTA, WSG
CTA/GIP, 16 bis, Avenue Prieur de la cote d'or, 94114, Arcueil, FRANCE
Ph/Fax: (+33-1) 4231 9280/9964 www.etca.fr/CTA/gip/Publis/Blanctalon

From: ross@siam.org
Subject: Twelfth Annual SIAM/ACM Symposium on Discrete Algorithms
Date: Thu, 11 May 2000

A Friendly Reminder

Twelfth Annual SIAM/ACM Symposium on Discrete Algorithms (SODA)

Important Dates:

Long form abstracts in electronic form are due July 10, no later than 5:00 PM EDT. Instructions and information about electronic submissions will be posted later at: <http://www.siam.org/meetings/da01/> .

Short form abstracts in electronic form are due no later than August 2, 5:00 PM EDT. Instructions and information about electronic submissions will be posted later at: <http://www.siam.org/meetings/da01/> .

To know more about this conference, visit:

<http://www.siam.org/meetings/da01/>

or contact SIAM by:

e-mail: meetings@siam.org

phone: 215-382-9800

fax: 215-386-7999

Submitted by:

Darrell Ross, Conference Program Manager

Society for Industrial & Applied Mathematics 3600 Market St

University City Science Center

Philadelphia, PA 19104

ross@siam.org Phone: (215) 382-9800 Fax: (215) 386-7999

<http://www.siam.org/meetings/>

From: Rainer Kress <kress@math.uni-goettingen.de>

Subject: Positions: Numerical Methods for Solution of Inverse Problems

Date: Mon, 08 May 2000

The Institut für Numerische und Angewandte Mathematik of the University of Göttingen wishes to appoint a head of a group of young researchers in the field of New Numerical Methods for the Solution of Inverse Problems. This group will be created through a recent initiative of the state of Lower Saxony. The salary will be according to BAT Ia.

In addition to the head, the young researchers group will have one postdoc position according to BAT IIa and two Ph.D. student positions according to BAT IIa/2. Within a five year period the objective of the group will be to develop new numerical methods for the solution of inverse problems for partial differential equations, in particular for three-dimensional inverse scattering problems and related problems. This research will include both the theoretical foundations and the numerical implementation of the methods including tests with real data arising in applications. For further details see also

<http://www.num.math.uni-goettingen.de/kress/nachwuchs.html>

We expect applications from candidates who have the qualifications to guide and supervise both pre and post doctoral level researchers, including the ability to develop research contacts with institutions interested in applications, to effectively present the results of the group within the scientific community, and to obtain outside funding. For further qualification, i.e., for habilitation, the holder of the position will have to teach and to participate in the guidance of Diplom and Ph.D. students in the Mathematische Fakultät.

Applications including a curriculum vitae and a list of publications should be sent to the Director of the Institute by

15. Juni 2000

The University of Göttingen aims at increasing the proportion of women within its scientific personnel and therefore explicitly asks qualified women to apply. In case of equivalent qualifications, women will be given special consideration.

In case of equivalent qualifications, handicapped applicants will be

given priority.

Institut fuer Numerische und Angewandte Mathematik
Lotzestr. 16-18, D 37083 Goettingen, Germany
Tel: 0049 551 394511 Fax: 0049 551 393944
<http://www.num.math.uni-goettingen.de/kress>

From: "PROF.HEINZ W. ENGL" <engl@indmath.uni-linz.ac.at>
Subject: new book on inverse problems
Date: Mon, 29 May 2000

The following book has just appeared:

D.Colton, H.Engl, A.Louis, J.McLaughlin, W. Rundell (eds.),
Surveys on Solution Methods for Inverse Problems

Springer Vienna/New York 2000
ISBN 3-211-83470-2

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
693,
Altenbergerstrasse 69 secretary: ext.9220; as Dean: ext.3220
A-4040 Linz Fax:ext. 855, in Dean's
affairs:ext.3225
Oesterreich / Austria home phone: +43-(0)732-245518
World Wide Web: <http://www.indmath.uni-linz.ac.at/>

From: Lothar Reichel <reichel@mcs.kent.edu>
Subject: Interactive numerical examples in ETNA
Date: Tue, 2 May 2000

Many papers in computational mathematics contain numerical examples that illustrate the theory discussed, or the virtues or shortcomings of numerical methods. The examples, in general, depend on certain parameters, whose values are chosen by the author of the paper. A reader may be interested in studying the examples for other parameter values, but typically this is not straightforward. Computer programs may have to be written or requested from the author of the paper.

The Electronic Transactions on Numerical Analysis (ETNA) makes it possible to publish interactive examples that allow readers to vary parameter values. Presently, two papers

J. Baglama, D. Calvetti and L. Reichel, Fast Leja points,
ETNA 7 (1998), pp. 124-140,

R. S. Varga and A. Krautstengl, On Gersgorin-type problems
and ovals of Cassini, ETNA 8 (1999), pp. 15-20,

illustrate this feature. Click on the ``interactive supplement''
for these papers for a demonstration.

Authors of papers accepted for publication in ETNA are encouraged

to supply interactive examples. The ETNA staff will assist with the design and Java programming of the examples.

ETNA is available at

<http://etna.mcs.kent.edu>

and at mirror sites. In addition volumes 1-10 of ETNA are available on a new CDROM. The ETNA CDROM contains papers published in ETNA 1993-2000, interactive examples, a search engine and web browsers. A limited number of CDROMs are available for \$10 each. Please send e-mail to etna@mcs.kent.edu if you would like your own portable copy of ETNA on a CDROM.

From: Hans Schneider <hans@math.wisc.edu>
Subject: Special Issue of Linear Algebra and its Applications
Date: Wed, 10 May 2000

Linear Algebra and its Applications

Special Issue on

STRUCTURED AND INFINITE SYSTEMS OF LINEAR EQUATIONS

Deadline extension

The scope of the 'Special Issue on 'Infinite Linear Systems of Equations finitely specified' with deadline June 1st has been slightly extended to include very large structured systems and methods that may lead to the treatment of infinite systems. There have already been submissions to the previously announced special issue which fit the extended scope. We wish to give all potential authors the chance to submit papers fitting the broader scope and are therefore extending the deadline for submission to August 31st. The new, slightly adapted description of the special session reads as follows:

One of the traditional hunting grounds of linear algebra is the area of finite systems of linear equations, as described by a matrix equation $Ax = b$. Here A is a known matrix, b a known vector of finite dimensions, and x is an unknown vector of finite dimensions, which is to be determined such that the equation is either satisfied, or, if that is not possible, approximately satisfied. Many techniques are known for finding solutions or approximate solutions, depending on the properties of the given data and the approximation technique chosen.

If the system of equations is not finite, i.e. A is not a matrix but an operator, and b and x are of infinite dimension, then algebraic and numerical techniques can still be used provided the given data are finitely specified. Operators with such a property are often called 'structured operators', and it turns out that one can solve such infinite equations in an exact or approximate sense using finite methods and algorithms. Also in the case of very large structured matrices, methods can be devised that are in principle extendable to the infinite case.

The conjunction of linear algebra and inversion theory for finitely specified infinite operators brings interesting connections to the forefront: algebraic equivalents of inner-outer factorizations e.g.,

or the algebraic significance of Kalman filtering. Structured matrices can be of many types, e.g. systems with finite displacement ranks or time-varying systems with state spaces of finite dimensions and whose limiting behaviour is known, e.g. as a time invariant system.

A non-limiting list of topics of interest in this area is (assuming \mathcal{A} is an infinite but finitely described operator of some kind):

- inversion methods
- decomposition methods for the operator A
- quadratic approximation methods
- complexity reduction
- equivalencies
- canonical forms
- transform techniques.

Examples of operator structure:

- systems with low displacement rank
- finitely described time-varying systems
- finitely described almost-periodic systems
- differentials of non-linear systems.

Interested authors are kindly invited to submit full papers with significant contributions to this area to any of the three guest editors listed below before August 31st, 2000.

Patrick Dewilde
DIMES, Delft University of Technology
POB 5031,
2600GA Delft, the Netherlands.
Fax: +31 15 262 3271
email: dewilde@DIMES.tudelft.nl

Vadim Olshevsky
Department of Mathematics and Computer Science
Georgia State University
University Plaza
Atlanta, GA 30303, USA
Fax: +1 404 651 2246
email: volshevsky@cs.gsu.edu

Ali Sayed
Rm 44-123A Engr. IV Bldg
Dept. of Electrical Engineering
University of California
Los Angeles, CA 90095-1594, USA
Fax: +1 310 206 8495
email: sayed@biruni.icsl.ucla.edu

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)
University of Wisconsin-Madison	608-271-8477 (Home FAX)
Madison WI 53706 USA	http://www.math.wisc.edu/~hans (URL)

From: james beck <jamesverebeck@home.com>
Subject: IPIE contents

Date: Sun, 07 May 2000

Inverse Problems in Engineering 2000 Volume 8, Number 3
Table of Contents

A Comparison of Generalized Eigensystem, Truncated Singular Value
Decomposition, and Tikhonov Regularization for the Steady Inverse Heat
Conduction Problem L. Olson and R. Throne

A Numerical Method for the Shape Reconstruction Problem in Acoustic
Scattering R Miao, Y. X. You and Y. Z. Lie

Damage Identification of Flexible Beam Structures Using Large
Displacements M. Reynier and B. Nedjar

Multidisciplinary Optimization for Gas Turbine Airfoil Design
S. S. Talya, J. N. Rajadas and A. Chattopadhyay

From: "Listowner" <listowner@baltzer.nl>
Subject: Contents of Journal "Numerical Algorithms 23 (2000) 2,3 "
Date: Fri, 19 May 2000

Numerical Algorithms 2000 Volume 23, Numbers 2,3
Table of Contents

Design, analysis, and implementation of a multiprecision polynomial
rootfinder Dario Andrea Bini and Giuseppe Fiorentino

Nonlinear multiscale decompositions: The approach of A. Harten
Francesc Aràndiga and Rosa Donat

Spatial shape-preserving interpolation using nu-splines
M.I. Karavelas and P.D. Kaklis

Sensitivity of best recovery in the Sobolev spaces $W_{r,d}^{\infty}$,
 $\widetilde{W}_{r,d}^{\infty}$ for perturbed sampling
Marek A. Kowalski

A result about scale transformation families in approximation:
application
to surface fitting from rapidly varying data
Dominique Apprato and Christian Gout

Book reviews Claude Brezinski

More information about contents, submission and
preparation of papers can be found on

<http://www.baltzer.nl/numa/>

Please direct enquiries about subscription and other issues to

subscribe@baltzer.nl

Sincerely,
Baltzer Science Publishers

----- end -----

IPNet Digest Volume 7, Number 06 July 15, 2000

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

Today's Topics:

Masterclass: The Inverse Conductivity Problem
Workshop: Mathematics and Image Analysis
Conference: Applied Inverse Problems
SIAM Conference: Computational Science and Engineering
Announcement: 2001-02 NA Year at the Fields Institute, Toronto
Table of Contents: Inverse Problems
Table of Contents: Mathematics of Control, Signals, and Systems
Table of Contents: Advances in Computational Mathematics
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: Bill Lionheart <Bill.Lionheart@umist.ac.uk>
Subject: EIDORS masterclass: the inverse conductivity problem
Date: Tue, 11 Jul 2000

EIDORS `Masterclass' Sept 14th and 15th 2000 in Manchester UK.

Bill Lionheart and Marko Vauhkonen will be running this practical 2 day course on image reconstruction from electrical data (the inverse conductivity problem).

For details see
<http://www.ma.umist.ac.uk/bl/eidors/eidors-masterclass01.html>

Submitted by:
Dr W.R.B. Lionheart,
Department of Mathematics
UMIST, PO Box 88, Manchester, M60 1QD UK
Tel +44- 161-200-8978 Fax +44-161-200 3669
Bill.Lionheart@umist.ac.uk

From: Frederic Barbaresco <Frederic.Barbaresco@airsys.thomson-csf.com>
Subject: Workshop on Mathematics and Image Analysis
Date: Wed, 12 Jul 2000

Mathematics and Image Analysis

Paris, 25 - 27 September 2000

A high level scientific workshop entitled Mathematics and Image Analysis will be held in Paris this Autumn (25-27 September 2000). This conference is organised jointly by GDR MSPC and GDR ISIS, with support of Thomson-CSF Airsys. The scientific program will include invited conferences at the interface between researches in applied mathematics and new developments in various areas of computer

vision, related to mathematical topics including Wavelets, Scale-space and PDE's, Information Theory, Invariants, Deformations...

The workshop venue is in the center of Paris, near the Latin quarter, at the carré des sciences Registration information is available below email: mia2000@cmla.ens-cachan.fr

Scientific committee:

Yali Amit (Professor, Chicago University)
Frédéric Barbaresco (Thomson-csf)
Laurent Cohen (Université Paris Dauphine)
Donald Geman (University of Massachussets)
Nicolas Rougon (Institut National de Télécommunications)
Alain Trouvé (Université Paris 13)
Laurent Younes (CMLA, ENS de Cachan)

Organizing Committee:

Frédéric Barbaresco
Laurent Cohen
Nicolas Rougon
Alain Trouvé
Laurent Younes

Preliminary list of speakers (long talks and short talks):

Nicholas Ayache (INRIA Sophia-Antipolis)
Elie Bienenstock (ENSPCI and Brown University)
Ron Kimmel (Technion Institute)
Stéphane Mallat (Ecole Polytechnique)
Joachim Weikert (University of Mainheim)
Keith Worsley (Mc Gill University)
Yali Amit (Chicago University)
Giovanni Belletini (Universite di Roma Tor Vergata)
Freddy Bruckstein (Technion Intitute)
Joerg Dahmen (RWTH Aachen)
Ronan Fablet (IRISA)
Yann Gousseau (ENS de Cachan)
Bruno Jedynak (Universite de Lille 1)
Alexey Koloydenko (University of Massachussets)
Michael Miller (University John Hopkins)
Lionel Moisan (ENS de Cachan)
Eric Pauwels (Université Catholique de Louvins)
Huseyin Tek (Brown University)
Antonio Turiel (ENS Paris)

Registration deadline: 15 august 2000.

[For more information on this workshop, including registration forms, see

<http://www.ceremade.dauphine.fr/~cohen/mia2000/>

-Ed.]

Submitted by:

Frédéric BARBARESCO
THOMSON-CSF AIRSYS (RD/RDTA)
TBU Radar Development
Direction Technique Opérationnelle
Filière Algorithmes et Etudes Fonctionnelles
7/9, rue des Mathurins
92223 Bagneux Cedex

Phone : 33.1.40.84.20.04
Fax : 33.1.40.84.36.31
E-mail : frederic.barbaresco@airsys.thomson-csf.com

From: Lothar Reichel <reichel@mcs.kent.edu>
Subject: Conference on inverse problems
Date: Thu, 15 Jun 2000

Preliminary announcement for conference on

Applied Inverse Problems: Theoretical and Computational Aspects
to be held June 18-22, 2001, at Montecatini Terme, Italy.

The scope of the meeting is to bring together scientists and engineers who are working on theoretical and computational aspects of inverse problems. The meeting will consist of longer invited lectures, minisymposia and contributed talks.

The following speakers have agreed to present invited lectures:

S. Arridge
A. Bjorck
T. F. Chan
L. Elden
H. W. Engl
G. H. Golub
P. C. Hansen
J. Nagy
Z. Nashed
F. Natterer
R. J. Plemmons
F. Santosa
E. Somersalo

Organizing and Scientific Committee:

M. Bertero, D. Calvetti, T.F. Chan, G.H. Golub, G. Inglese, A. Murli,
R.J. Plemmons, L. Reichel, S. Seatzu, F. Sgallari, G. Talenti

Further information will be made available in early August. Questions about the conference can be sent to aip2001@mcs.kent.edu.

From: flores@siam.org
Subject: First SIAM Conference on Computational Science & Engineering
Date: Fri, 16 Jun 2000

First SIAM Conference on Computational Science and Engineering
September 21-24, 2000
Wyndham City Center Hotel

in anisotropic elastic media: a least-squares approach
M V de Hoop and S Brandsberg-Dahl

Binary-constrained inversion of a buried cylindrical obstacle from
complete and phaseless magnetic fields M Lambert and D Lesselier

On the determination of elastic coefficients from indentation
experiments N Tardieu and A Constantinescu

On some nondecaying potentials and related Jost solutions for the heat
conduction equation B Prinari

The initial value problem for reductions of the Benney equations
L Yu and J Gibbons

Sequential predictor--corrector regularization methods and their
limitations W Ring and J Prix

High-resolution computed tomography from efficient sampling
A Faridani and E L Ritman

An inverse source problem in potential analysis
A El Badia and T Ha-Duong

Identification of the diffusion coefficient in a one-dimensional
parabolic equation V Isakov and S Kindermann

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

The 3D Doppler transform: elementary properties and computation of
reconstruction kernels T Schuster

Determination of point wave sources by pointwise observations:
stability and reconstruction G Bruckner and M Yamamoto

Some eigenvalue problems for the vectorial Hill's equation
C-L Shen

On reconstruction in the inverse conductivity problem with one
measurement M Ikehata

Minimization of strictly convex functions: an improved optimality test
based on Fenchel duality C Heinrich and G Demoment

Two-dimensional patterns in reaction--diffusion systems: an analytical
tool for the experimentalist N Giovambattista, M Bellini and R Deza

Phase recovery with nondecaying potentials T Aktosun and P E Sacks

An algorithm of geophysical data inversion based on non-probabilistic
presentation of a priori information and definition of
Pareto-optimality E Kozlovskaya

Three-dimensional microwave tomography. Theory and computer
experiments in scalar approximation
A E Bulyshev, A E Souvorov, S Y Semenov, R H Svenson, A G Nazarov,
Y E Sizov and G P Tatsis

Di-Rong Chen, Bin Han and Sherman D. Riemenschneider

Error analysis of upwind-discretizations for the steady-state incompressible Navier--Stokes equations Lutz Angermann

More information about contents, submission and preparation of papers can be found on

<http://www.baltzer.nl/adcom/>

Please direct enquiries about subscription and other issues to

subscribe@baltzer.nl

Sincerely,
Baltzer Science Publishers

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA contents
Date: Sun, 18 Jun 2000

Linear Algebra and its Applications July 2000 Volume 313, Issue 1-3
Table of Contents

Matrix pencils and a generalized Clifford algebra
C.J. Pappacena

Linear systems with signed solutions S.-J. Kim, B.L. Shader

A new relative perturbation theorem for singular subspaces
R.-C. Li, G.W. Stewart

Inner-outer factorization and the inversion of locally finite systems of equations P. Dewilde, A.-J. van der Veen

A correction: orthogonal representations and connectivity of graphs
L. Lovasz, M. Saks, A. Schrijver

Fast and stable eigendecomposition of symmetric banded plus semi-separable matrices S. Chandrasekaran, M. Gu

On the digraphs of sign solvable linear systems J.-Y. Shao

On vector Hankel determinants A. Salam

The cycle completable graphs for the completely positive and doubly nonnegative completion problems
J.H. Drew, C.R. Johnson, S.J. Kilner, A.M. McKay

Reducibility theorems for pairs of matrices as rational criteria
Y.A. Al'pin, K.D. Ikramov

Inverses of Perron complements of inverse M-matrices M. Neumann

Inverse M-matrix completions of patterns omitting some diagonal positions L. Hogben

On a discrete nonlinear boundary value problem
S. Sun Cheng, H.-T. Yen

A test for copositive matrices W. Kaplan

NOTE:

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/jnlmr/07738>

Submitted by:

Hans Schneider

Department of Mathematics

Van Vleck Hall

480 Lincoln Drive

University of Wisconsin-Madison

Madison WI 53706 USA

----- end -----

hans@math.wisc.edu.

608-262-1402 (Work)

608-271-7252 (Home)

608-263-8891 (Work FAX)

608-271-8477 (Home FAX)

<http://www.math.wisc.edu/~hans> (URL)

IPNet Digest Volume 7, Number 07 August 31, 2000

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

Today's Topics:
Special Issue: Sabatier Birthday Issue of Inverse Problems
Special Issue: Accurate Solution of Eigenvalue Problems for LAA
Table of Contents: Inverse Problems
Table of Contents: Inverse Problems in Engineering
Table of Contents: Numerical Algorithms
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: Colloque Inverse Problems - JG Caputo <rcp264@LPM.univ-montp2.fr>
Subject: RCP264: Inverse Problems and Nonlinearity
Date: Thu, 27 Jul 2000

RCP264: Inverse Problems and Nonlinearity
Montpellier, France, June 20-24 2000

Dear Colleagues,

I remind you that there will be a special issue of Inverse Problems to celebrate Pierre Sabatier's 65th birthday. Not only the participants but also all who were interested by our meeting but did not come for some reason are invited to submit a paper (see the message of Inverse Problems below). The deadline is September 30th.

You can find all the information on the meeting web site:
<http://www.lpm.univ-montp2.fr:7082/~rcp264>
in particular an updated list of participants together with the call for papers.

Sincerely yours,
Jean Guy Caputo

.....

Inverse Problems Special Issue to celebrate Pierre Sabatier's 65th Birthday.

Guest Editors:
Mario Bertero, Universita di Genova, Genoa, Italy
F Alberto Grunbaum, University of California, Berkeley, USA
Frank Natterer, Universitat Munster, Germany

We are pleased to announce a forthcoming Special Issue of Inverse Problems to celebrate the occasion of Pierre Sabatier's 65th birthday. Professor Sabatier was the founding editor of the journal, initiated the RCP264 meetings in Montpellier, and is one of the foremost exponents of the field of inverse problems. This issue is associated

with the meeting RCP264: Inverse Problems and Nonlinearity: theory and applications, Montpellier, France, from 20-24 June 2000. Those attending the meeting are invited to submit their original work to this issue. The Guest Editors have extended this invitation to those who are unable to attend but would also like to contribute to this issue by submitting their original work to the journal.

All papers will be peer reviewed and the normal refereeing standards of Inverse Problems will be maintained. The manuscripts should be prepared according to the general guidelines for authors published in the journal or via our web page:

<http://www.iop.org/Journals/nfa/index.html>

Manuscripts should be submitted to the Publishing Editor at the address given below, (preferably by e-mail if possible), by 30 September 2000, although authors are strongly encouraged to submit their work as soon as possible. Please indicate clearly that your paper is to be considered for the Special Issue to celebrate Pierre Sabatier's birthday.

Elaine Longden-Chapman
Publishing Editor
Inverse Problems
Institute of Physics Publishing, Dirac House,
Temple Back, Bristol BS1 6BE, UK
Tel: +44 (0) 117 9301131
Fax: +44 (0) 117 9294318
E-mail: ip@ioppublishing.co.uk
WWW: <http://www.iop.org>

From: Jesse Barlow <barlow@cse.psu.edu>
Subject: LAA Special Issue on Accurate Solution of Eigenvalue Problems
Date: Fri, 28 Jul 2000

Special Issue of Linear Algebra and Its Applications
ACCURATE SOLUTION OF EIGENVALUE PROBLEMS II

In the last several years, there have been a number of advances in the accurate solution of eigenvalue problems. Many of the results have come from the realization that eigenvalue algorithms that exploit the structure of the problem can lead to more accurate eigenvalue and eigenvector computations. Well known examples include faster and more accurate methods for solving the symmetric tridiagonal eigenproblem, more accurate methods for computing the singular value decomposition, and further understanding of the conditioning theory for the non-symmetric eigenvalue problem.

To recognize these advances and to encourage further advances, we are proposing to have a special issue of Linear Algebra and Its Applications on Accurate Solution of Eigenvalue Problems. This is the second such special issue. The first was volume 309 of Linear Algebra and Its Applications, published in early 2000.

This special issue is in coordination with the International Workshop on Accurate Solution of Eigenvalue Problems III held in Hagen, Germany on July 3-6, 2000. The participants in the workshop have been strongly encouraged to submit papers to the special issue. Submissions are also welcome from non-participants as long as they are consistent with the themes of the workshop.

The development of space-time interaction processes with given spectral structure E Renshaw, S Phayre and E Jakeman

Existence of strong solutions to the generalized inverse of the quasi-geostrophic equations R K Scott

BV-type regularization methods for convoluted objects with edge, flat and grey scales K Ito and K Kunisch

Nondestructive evaluation using a reduced-order computational methodology H T Banks, M L Joyner, B Wincheski and W P Winfree

Bäcklund transformation, and Q operator for the Toda lattice A G Choudhury and A R Chowdhury

The Toda lattice with step-like initial data. Soliton asymptotics A Boutet de Monvel and I Egorova

Exact--approximate boundary reachability of thermoelastic plates under variable thermal coupling G Avalos and I Lasiecka

Inverse problems for homogeneous transport equations: I. The one-dimensional case G Bal

Inverse problems for homogeneous transport equations: II. The multidimensional case G Bal

Numerical implementation of two noniterative methods for locating inclusions by impedance tomography M Brühl and M Hanke

Numerical method for finding the convex hull of an inclusion in conductivity from boundary measurements M Ikehata and S Siltanen

Reconstructing planar domains from their moments B Gustafsson, C He, P Milanfar and M Putinar

COMMENT

A reply to a comment: a note on an integrable discretization of the nonlinear Schrödinger equation Y B Suris

CORRIGENDUM

A finite-element model of electron transport in radiation therapy and a related inverse problem J Tervo, P Kolmonen, M Vauhkonen, L M Heikkinen and J P Kaipio

BOOK REVIEW

Electromagnetic Nondestructive Evaluation (III) D Lesselier and A Razek (eds) (reviewed by R S Anderssen)

Submitted by:

Janet Thomas
Production Editor
Institute of Physics Publishing
Dirac House, Temple Back,
Bristol BS1 6BE, UK
Tel: +44 (0)117 930 1081

Newton--Thiele's rational interpolants
Jieqing Tan and Yi Fang

Quadrature rules based on partial fraction expansions
J.A.C. Weideman and D.P. Laurie

Hankel determinants of some polynomials arising in combinatorial
analysis Jet Wimp

More information about contents, submission and preparation of papers
can be found on

<http://www.baltzer.nl/numa/>

Please direct enquiries about subscription and other issues to

subscribe@baltzer.nl

Sincerely,
Baltzer Science Publishers

From: Hans Schneider <hans@math.wisc.edu>
Subject: LAA Contents
Date: Sun, 20 Aug 2000

Linear Algebra and its Applications July 15, 2000 Vol. 314, 1-3
Table of Contents

On Lie gradings III. Gradings of the real forms of classical Lie
algebras M. Havlicek, J. Patera, E. Pelantova

On triality and automorphisms and derivations of composition algebras
A. Elduque

Construction of the Jordan decomposition by means of Newton's method
D. Schmidt

Interpolation theory in sectorial Stieltjes classes and explicit
system solutions D. Alpay, E. Tsekanovskii

Hankel matrices, positive functions and related questions
Y.V. Genin

The eigenvalue problem for networks of beams B. Dekoninck, S. Nicaise

On the nonuniqueness of the factorization factors in the product
singular value decomposition D. Chu, B. De Moor

Linear Algebra and its Applications Aug. 15, 2000 Volume 315, 1-3
Table of Contents

Sums of diagonalizable matrices J.D. Botha

Convexity properties of $\text{Tr}[(a^*a)^n]$ L.E. Mata-Lorenzo, L. Recht

Identification of almost invariant aggregates in reversible nearly
uncoupled Markov chains

P. Deufhard, W. Huisinga, A. Fischer, C. Schutte

Some general techniques on linear preserver problems

A. Guterman, C.-K. Li, P. Semrl

On the curvature of monotone metrics and a conjecture concerning the Kubo-Mori metric J. Dittmann

Explicit factorization of the Vandermonde matrix

H. Oruc, G.M. Phillips

The invariant polynomials degrees of the Kronecker sum of two linear operators and additive theory C. Caldeira, J.A. Dias da Silva

The determinant of random power series matrices over finite fields

K.A.S. Abdel-Ghaffar

Numerical ranges and matrix completions

D.W. Hadwin, K.J. Harrison, J.A. Ward

Maximal orthogonality and pseudo-orthogonality with applications to generalized inverses M.Q. Rieck

Characterization of joint spectral radius via trace

Q. Chen, X. Zhou

The Ostrowski-Reich theorem for SOR iterations: extensions to the rank deficient case J.-Y. Yuan

Two-dimensional Q -algebras T. Nakazi

Linear Algebra and its Applications Sep 1, 2000 Volume 316, 1-3
Table of Contents

Dedication to Robert J. Plemmons

Lower bounds for the eigenvalues of Laplacian matrices

A. Berman, X.-D. Zhang

Markov chain sensitivity measured by mean first passage times

G.E. Cho, C.D. Meyer

Structured matrix representations of two-parameter Hankel transforms in adaptive optics

V.P. Pauca, B.L. Ellerbroek, R.J. Plemmons, X. Sun

Regular Markov chains for which the transition matrix has large exponent S.J. Kirkland, M. Neumann

Comparison theorems for the convergence factor of iterative methods for singular matrices I. Marek, D.B. Szyld

Cosine transform preconditioners for high resolution image reconstruction M.K. Ng, R.H. Chan, T.F. Chan, A.M. Yip

Domain decomposition splittings R.E. White

A mathematical framework for the linear reconstructor problem in adaptive optics M. Chu, V. Pauca, R. Plemmons, X. Sun

Solving total least-squares problems in information retrieval
E. Jiang, M. Berry

GMRES-type methods for inconsistent systems
D. Calvetti, B. Lewis, L. Reichel

A fast eigenvalue algorithm for Hankel matrices F.T. Luk, S. Qiao

Unifying unitary and hyperbolic transformations
A. Bojanczyk, S. Qiao, A.O. Steinhardt

On the existence and computation of rank-revealing LU factorizations
C.-T. Pan

Quasi-Newton approach to nonnegative image restorations
M. Hanke, J.G. Nagy, C. Vogel

A new approach to constrained total least squares image restoration
M.K. Ng, R.J. Plemmons, F. Pimentel

Convergence of the alternating minimization algorithm for blind
deconvolution T. Chan, C.K. Wong

NOTE:

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/jnlmr/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)
University of Wisconsin-Madison	608-271-8477 (Home FAX)
Madison WI 53706 USA	http://www.math.wisc.edu/~hans (URL)

----- end -----

IPNet Digest Volume 7, Number 08 October 15, 2000

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

Today's Topics:

International Conference: Applied Inverse Problems
International Symposium: Inverse Problems in Engineering Mech.
SIAM Meeting: 2001 SIAM Annual Meeting
Program: Workshop on Inverse Problems in Leeds
Positions: Young Researchers Group in Inverse Problems
Position: Research Scientist in Image Reconstruction Methods
Positions: Mathematics Department Positions at UC Davis
Positions: Visiting Mathematics Positions at UC Davis
Table of Contents: Mathematics of Control, Signals, and Systems
Table of Contents: Numerical Algorithms
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: AIP 2001
Date: Sat, 23 Sep 2000

International Conference on

Applied Inverse Problems: Theoretical and Computational Aspects

is to be held in Montecatini, Italy, June 18-22, 2001. The purpose of the meeting is to bring together scientists and engineers who work on theoretical and computational aspects of inverse problems. The meeting will consist of invited talks, contributed talks and minisymposia. The following speakers have tentatively agreed to present invited lectures:

S. Arridge
M. Bertero
A. Bjorck
T. F. Chan
D. Colton
D. Donoho
L. Elden
H. W. Engl
I. Galligani
G. H. Golub
A. Grunbaum
M. Hanke
P. C. Hansen
J. McLaughlin
J. Nagy
Z. Nashed
F. Natterer
R. Pike
R. J. Plemmons

W. Rundell
P. C. Sabatier
F. Santosa
E. Somersalo
C. Vogel
J.-P. Zolesio

Details about the conference, such as invited speakers, information on submission of contributed presentations and minisymposia, registration and accommodation, as well as travel information, a map and a Tuscany picture show can be found at the conference web site

<http://lanczos.cwru.edu/~aip2001>

Montecatini is a popular spa located in Tuscany close to Florence. For inquiries about the conference, please send e-mail to

aip2001@mcs.kent.edu

Organizing and Scientific Committee:

M. Bertero, D. Calvetti, T. F. Chan, G. H. Golub, G. Inglese, A. Murli, R. J. Plemmons, L. Reichel, S. Seatzu, F. Sgallari and G. Talenti

From: Masataka Tanaka <dtanaka@gipwc.shinshu-u.ac.jp>
Subject: Symposium on Inverse Problems in Engineering Mechanics
Date: Tue, 10 Oct 2000

Announcement:

International Symposium on Inverse Problems in Engineering Mechanics (ISIP2001)
February 6 - 9, 2001 at the hotel "MIELPARQUE NAGANO",
Nagano City, Japan (<http://homer.shinshu-u.ac.jp/ISIP2001/>)

Organized by
Department of Mechanical Systems Engineering, Shinshu University, Japan

Co-Organized by
The University of Texas at Arlington, USA
Ecole Polytechnique, France

Sponsored by
Ministry of Education, Science, Sports and Culture, Japan

Co-sponsored by
Japan Society for Computational Methods and Engineering (JASCOME)

Chair
Prof. Tanaka, Masa., Shinshu University, Japan
<mailto:dtanaka@gipwc.shinshu-u.ac.jp>

Co-Chair
Prof. Dulikravich, G.S., The University of Texas at Arlington, USA
<mailto:dulikra@mae.uta.edu>

OBJECTIVES

Inverse Problems can be found in many topics of engineering mechanics. Following the first IUTAM Symposium in Tokyo held in May 1992, the

second one in Paris held in 1994, the third one in 1998, and also the last successful Symposium held in March 2000 in Nagano City, we think it should be very fruitful to gather researchers and engineers again for exchange of the latest ideas and discussion on recent developments. The Symposium will again be financially supported by the Japanese Government.

The following general areas will be the subject of presentations and discussions at ISIP2001: mathematical and computational aspects of the inverse problems, parameter or system identification, shape determination, sensitivity analysis, optimization, material property characterization, ultrasonic nondestructive testing, elastodynamic inverse problems, thermal inverse problems, and other engineering applications. The selected papers presented at the Symposium will be published after the symposium as a hard-cover book from an established publisher.

SYMPOSIUM LOCATION

The Symposium will be held at Mielparque Nagano Hotel which is only five minutes walk from Nagano Station in Nagano City. Nagano City is located at the center of Japan's main island, Honshu, and about 90 minutes by a bullet train, called Shinkansen, from Tokyo. Nagano is surrounded by beautiful high mountains and it is famous for natural beauty and many hot springs. The 1998 Winter Olympic Games was held in this city.

OFFICIAL LANGUAGE

The symposium language is English.

CALL FOR PAPERS

Papers are invited on the topics related to the wide area of inverse problems in engineering mechanics. Contributors are requested to send as soon as possible via email a MSWord, TeX, post-script, or Acrobat pdf of the abstract to the Chair of the Symposium (<mailto:dtanaka@gipwc.shinshu-u.ac.jp>). An extended abstract should be not longer than four (4) single-spaced pages of A4 format written in English. Shorter abstracts can also be accepted, if a comprehensive explanation of the presentation is given. The abstracts, which are recommended by the Symposium Committees for presentation at the Symposium, will be published in a soft-cover booklet which will be available at the Symposium. If the papers are presented at the Symposium and recommended by the Symposium Committees for publication, the paper will be included in the Symposium book which will appear after the Symposium from the publisher, Elsevier Science.

IMPORTANT DATES

Deadline for extended abstract within 4 pages of A4 sheet: October 20, 2000

Notification of acceptance: December 11, 2000

Deadline for final camera-ready manuscript: February 6, 2001

Conference: February 6-9, 2001

The above deadline date of extended abstract is flexible, if in advance you confer with the symposium chair, Prof. Masa. Tanaka (<mailto:dtanaka@gipwc.shinshu-u.ac.jp>), about your situation.

Note that during the symposium only a soft-cover volume of extended abstracts will be available. The symposium book of selected papers will be published by an established publisher after the symposium. The instructions for authors concerning the final camera-ready manuscript

will in due course be sent to those whose abstracts are accepted for presentation at the Symposium.

Submitted by:
Masa. Tanaka
Chair of the ISIP2001 Symposium
Department of Mechanical Systems Engineering
Faculty of Engineering
SHINSHU UNIVERSITY
4-17-1 Wakasato, Nagano 380-8553, Japan
Fax: +81-26-269-5124; Tel: +81-26-269-5120
Mailto:dtanaka@gipwc.shinshu-u.ac.jp

From: cyoung@siam.org
Subject: Announcement: SIAM 2001 Annual Meeting
Date: Thu, 07 Sep 2000

Announcement: 2001 SIAM Annual Meeting (AN01)
Location: Town & Country Hotel, San Diego, CA, USA
Dates: July 9-13, 2001

Call for Papers

To submit go to:
<http://www.siam.org/meetings/an01/>

Submission Deadlines:
MiniSymposium Proposals - 01/15/01
Abstracts in Lecture or Poster format - 02/09/01

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

From: Bill Lionheart <Bill.Lionheart@umist.ac.uk>
Subject: Programme for British Workshop on Inverse Problems in Leeds
Date: Thu, 05 Oct 2000

The Programme for the next workshop on Inverse Problems in Leeds follows

Leeds, Wednesday November 1st

The next meeting of the workshop will be held at the University of Leeds on Wednesday 1st November

Programme:

- 1:30 Dr R. Potthast (Brunel University) "The back projection operator - a flexible tool for inverse scattering"
- Prof. D. Natroshvili (Tbilisi) "Direct and Inverse Fluid-Structure Interaction Problems"
- Dr S. Chandler-Wilde (Brunel University) "Inverse scattering by rough surfaces"
- 3.20 - 3.40 Tea
- Dr K. Hutcheson (University of Edinburgh) Constructing an Improved Picture of a Hydrocarbon Reservoir Using Pressure Transient and Material Balance Methods
- Dr Toropov (University of Bradford) Use of Approximation Techniques and Genetic Programming for Optimization and Inverse Problems

The workshop will take place in the Roger Stevens Building (close to the School of Mathematics). From 1.30 pm until 3.20pm it will be in Lecture Theatre 9 and from 3.40 pm until the end it will be in Lecture Theatre 8.

Further information:

- 1) Accommodation: If you require accommodation over-night please let us know well in advance.
- 2) Directions: If you require directions on how to reach Leeds University and the School of Mathematics please include your address and we will send to you a map of the campus. Leeds University is situated at about 15 minutes walk from the train station, whilst the School of Mathematics is situated adjacent to the main library (Edward Boyle library). The Roger Stevens Building is 2 Minutes walk from the School of Mathematics. MAP
- 3) Car parking: If you are traveling with a car you can park it in the campus for the day but you need to let us know your car registration number in advance.

Contacts:

Professor B.D.Sleeman e-mail: bds@amsta.leeds.ac.uk
tel: 0113-2335188

or

Dr Lionel Elliott (l. e-mail: l.elliott@amsta.leeds.ac.uk
tel: 0113 233 5121
Department of Applied Mathematics
University of Leeds, Leeds LS2 9JT

The British Workshops on Inverse Problems are supported by the London Mathematical Society and Institute of Physics Publishing.

Submitted by:

Dr W.R.B. Lionheart,
Department of Mathematics
UMIST, PO Box 88, Manchester, M60 1QD UK
Tel +44- 161-200-8978 Fax +44-161-200 3669
Bill.Lionheart@umist.ac.uk

From: "Roland Potthast" <potthast@scienceatlas.com>
Subject: Young researchers group: positions available
Date: Mon, 18 Sep 2000

Young researchers group in inverse problems

The Institut for Numerical and Applied Mathematics of the University of Göttingen in Germany is currently establishing a young researchers group with the title "New Numerical Methods for the Solution of Inverse Problems". This group will be created through a recent initiative of the state of Lower Saxony. Within a five year period the objective of the group will be to develop new numerical methods for the solution of inverse problems for partial differential equations, in particular for three-dimensional inverse scattering problems and

related problems. This research will include both the theoretical foundations and the numerical implementation of the methods including tests with real data arising in applications. For further details see also

<http://www.scienceatlas.de/potthast/nachwuchsforschergruppe>

The group will be lead by Privatdozent Dr. Roland Potthast (age 33). Currently, a postdoc position and two PhD positions are available. The salary will be according to BAT IIa (Postdoc) and BAT IIa/2 (PhD) with additional finances arising from industry projects. Application from both EU and international countries are strongly encouraged.

The University of Göttingen aims at increasing the proportion of women within its scientific personnel and therefore explicitly encourages qualified women to apply. In case of equivalent qualifications, women will be given special consideration. In case of equivalent qualifications, handicapped applicants will be given priority. Applications should be directed to the Director of the Institut.

Institut f. Numerische und Angewandte Mathematik
Lotzestr. 16-18,
D 37083 Göttingen,
Germany

Submitted by:

Dr. habil. Roland Potthast
potthast@scienceatlas.com

From: "Dr. Jose Carlos Gamio Roffe" <jgamio@www.imp.mx>
Subject: Research Scientist in Image Reconstruction Methods
Date: Fri, 29 Sep 2000

A RESEARCH SCIENTIST (PhD) is required, to work at the Mexican Petroleum Institute in Mexico City, in the field of

IMAGE RECONSTRUCTION METHODS FOR ELECTRICAL CAPACITANCE TOMOGRAPHY

In electrical capacitance tomography (ECT) we have a circular array of contiguous rectangular electrodes (referred to as the 'sensor') surrounding the area under investigation, which should be non-conducting. We measure all the inter-electrode capacitances, which are a function of the sensor geometry (known) and the permittivity (or dielectric-constant) distribution inside the sensor (unknown). THE PROBLEM OF IMAGE RECONSTRUCTION IS TO DETERMINE THIS PERMITTIVITY DISTRIBUTION FROM THE MEASURED INTER-ELECTRODE CAPACITANCES. This, of course, will give us information about the distribution of materials inside the sensor. Image reconstruction involves complex mathematical procedures and belongs to the category of INVERSE PROBLEMS. ECT is an active and challenging field of research and has potential industrial application to multiphase flow visualisation and measurement. One of the greatest challenges in this particular application is to perform the real-time inversion of the capacitance measurements (i.e. real-time image reconstruction) with sufficient accuracy.

The ideal candidate must hold a PhD in a relevant area and should have

a strong working knowledge of the following subjects (preferably applied to electromagnetic problems):

- Numerical analysis, modelling and simulation.
- Inverse problems and regularisation.
- Finite element methods.
- Computer programming skills using C and/or C++ and/or Fortran.
- Parallel processing techniques.

The successful candidate will become the fourth member of a newly formed team working on the four-year research project 'Multiphase Flow Measurement Using Tomographic Methods'. The opportunity exists to start working immediately both as an employee or as a visiting researcher (say on a sabbatical).

Applicants should contact:

Dr. Carlos Gamio
Instituto Mexicano del Petroleo (Mexican Petroleum Institute)
Eje Central L Cardenas Nte #152
Mexico, D.F., CP07730
Tel (+52 5) 333-7593
Fax (+52 5) 567-5476
email: jgamio@imp.mx

From: Bill Broadley <bill@math.ucdavis.edu>
Subject: UC Davis Mathematics Tenure Positions available
Date: Mon, 9 Oct 2000

The Department of Mathematics at the University of California, Davis, is soliciting applications for a tenure-track/tenured position starting July 1, 2001. This position and appointment is contingent upon budgetary and administrative approval.

Appointment of the tenure-track/tenured position will be made commensurate with qualifications. It will normally be made at the level of Assistant Professor, but exceptional candidates will be considered for Associate Professorship with tenure. The Department of Mathematics plans to fill the tenure-track/tenured position in the area of Applied Mathematics/Scientific Computation. However, applications from exceptionally strong candidates with demonstrated excellence in the following areas are also considered: 1) Analysis and Partial Differential Equations; 2) Discrete Mathematics; 3) Geometry and Topology; and 4) Mathematical Physics. Minimum qualifications for this position include a Ph.D. degree in mathematical sciences and great promise in research and teaching. Duties include mathematical research, undergraduate and graduate teaching (4.0 quarter courses per year), and departmental and university service. Candidates for the Associate Professor position must have demonstrated outstanding attainment in research and teaching.

The Department of Mathematics includes faculty, in both pure and applied mathematics, engaged in numerous areas of research and undergraduate and graduate instruction. The Department offers a full range of academic programs leading to the A.B., B.S., M.A., M.A.T., and Ph.D. degrees in Mathematics. The Graduate Group in Applied Mathematics, consisting of faculty from Mathematics and other disciplines, is also housed in the Department. The Graduate Group offers M.S. and Ph.D. degrees in Applied Mathematics. The Davis

campus is the third largest of the nine University of California campuses. The City of Davis is located in Northern California's Central Valley, and lies within ninety minutes of the San Francisco Bay Area and the Sierra Nevada Mountains.

Applications will be accepted until the positions are filled, but to receive full consideration, the application should be received by December 15, 2000. To initiate the application process, please request an application package by either sending an e-mail message to forms@math.ucdavis.edu, or, by writing to the Chair of Search Committee, Department of Mathematics, University of California, One Shields Avenue, Davis, CA 95616-8633. Our Application Form is identical to the AMS Standard Cover Sheet.

Additional information on the Department may be found on the World Wide Web at <http://math.ucdavis.edu/>.

The University of California, Davis, is an affirmative action/equal opportunity employer. The University undertakes affirmative action to assure equal employment opportunity for minorities and women, for persons with disabilities, and for special disabled veterans, Vietnam era veterans, and any other veterans who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized.

Submitted by:
Bill Broadley
Programmer/Analyst
Mathematics, UC Davis

From: Bill Broadley <bill@math.ucdavis.edu>
Subject: UC Davis Mathematics Visiting Positions available
Date: Mon, 9 Oct 2000

The Department of Mathematics at the University of California, Davis, is soliciting applications for a few Visiting Research Assistant Professor (VRAP) positions starting July 1, 2001. These positions and appointments are contingent upon budgetary and administrative approval.

The VRAP positions are renewable for a total of three years with satisfactory performance in research and teaching. The VRAP applicants are required to have completed their Ph.D. by the time of their appointment, but no earlier than 1997. The Department is interested in applicants in 1) Analysis and Partial Differential Equations; 2) Applied Mathematics; 3) Discrete Mathematics; 4) Geometry and Topology; 5) Mathematical Physics; and 6) Numerical Analysis and Scientific Computation.

The Department of Mathematics includes faculty, in both pure and applied mathematics, engaged in numerous areas of research and undergraduate and graduate instruction. The Department offers a full range of academic programs leading to the A.B., B.S., M.A., M.A.T., and Ph.D. degrees in Mathematics. The Graduate Group in Applied Mathematics, consisting of faculty from Mathematics and other disciplines, is also housed in the Department. The Graduate Group offers M.S. and Ph.D. degrees in Applied Mathematics. The Davis campus is the third largest of the nine University of California campuses. The City of Davis is located in Northern California's

Central Valley, and lies within ninety minutes of the San Francisco Bay Area and the Sierra Nevada Mountains.

Applications will be accepted until the positions are filled, but to receive full consideration, the application should be received by December 15, 2000. To initiate the application process, please request an application package by either sending an e-mail message to forms@math.ucdavis.edu, or, by writing to the Chair of Search Committee, Department of Mathematics, University of California, One Shields Avenue, Davis, CA 95616-8633. Our Application Form is identical to the AMS Standard Cover Sheet.

Additional information on the Department may be found on the World Wide Web at <http://math.ucdavis.edu/>.

The University of California, Davis, is an affirmative action/equal opportunity employer. The University undertakes affirmative action to assure equal employment opportunity for minorities and women, for persons with disabilities, and for special disabled veterans, Vietnam era veterans, and any other veterans who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized.

Submitted by:
Bill Broadley
Programmer/Analyst
Mathematics, UC Davis

From: Secretary Support - Magrijn <magrijn.secsup@tip.nl>
Subject: Contents, Journal MCSS
Date: Thu, 12 Oct 2000

Mathematics of Control, Signals, and Systems 2000 Vol. 13, No. 3
Table of Contents

Admissible observation operators for the right-shift semigroup
J.R. Partington and G. Weiss

Formal elimination for multidimensional systems and applications to control theory J.F. Pommaret and A. Quadrat

Induced convolution operator norms of linear dynamical systems
V. Chellaboina, W.M. Haddad, D.S. Bernstein and D.A. Wilson

Balanced parametrizations of discrete-time stable SISO all-pass system
B. Hanzon and R.L.M. Peeters

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

Anti-triangular and anti-m-Hessenberg forms for Hermitian matrices and pencils C. Mehl

State feedback in linear control theory
S. Mondie, P. Zagalak, V. Kucera

On the third largest eigenvalue of a graph B. Liu, Z. Bo

Disproof of a conjecture on the existence of the path-recursive period for a connected graph X. Yong, S. Cao

Elementary operators and orthogonality A. Turnsek

A note on diagonally dominant matrices G. Dahl

The exponential Vandermonde matrix J. Robbin, D. Salamon

Modified Gauss-Seidel type methods and Jacobi type methods for Z-matrices W. Li, W. Sun

Linear Algebra and its Applications October 2000 Vol. 318, Issue 1-3
Table of Contents

Description of the sub-Markov kernel associated to generalized ultrametric matrices. An algorithmic approach
C. Dellacherie, S. Martnez, J. San Martn

A characterization of convex cones of matrices with constant regular inertia N. Cohen, I. Lewkowicz

Moore-Penrose inverse of set inclusion matrices R.B. Bapat

The algebraic properties of the generalized Pascal functional matrices associated with the exponential families X. Zhao, T. Wang

The equivalence structure of descriptor representations of systems with possibly inconsistent initial conditions
U. Baser, J.M. Schumacher

On two questions about quaternion matrices L. Huang

Complementary inequalities to inequalities of Jensen and Ando based on the Mond-Pecaric method J. Micic, J. Pecaric, Y. Seo

Cartesian decompositions and Schatten norms R. Bhatia, F. Kittaneh

Single elements of matrix incidence algebras
W.E. Longstaff, O. Panaia

Partial realization for singular systems in standard form
S. Feldmann, G. Heinig

Symmetric failures in symmetric control systems R. Tanaka, K. Murota

A note on affine toric varieties
E. Reyes, R.H. Villarreal, L. Zarate

Weak crossed products and a generalisation of a result of Sarason
M.R. Alaimia

Systems of linear congruences with individual moduli
D.C. Torney, J. Wang

Solution of infinite linear systems by automatic adaptive iterations
P. Favati, G. Lotti, O. Menchi, F. Romani

NOTE:

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

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)
University of Wisconsin-Madison	608-271-8477 (Home FAX)
Madison WI 53706 USA	http://www.math.wisc.edu/~hans (URL)
----- end -----	

IPNet Digest Volume 7, Number 09 December 4, 2000

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

Today's Topics:

Query: Researchers Working on Dynamic Inverse Problems
Inverse Propagation/Scattering Sessions: ISAAC 2001
Inverse Problems Sessions: ICTACEM 2001
Short Course: HYDRUS
SIAM Conference: Imaging Science
SIAM Conference: The Life Sciences
Inverse Problems Section: 12th Baikal International Conference
Temporary Address Change for Prof. Heinz W. Engl
Postdoctoral Position in Inverse Problems
Research Assistantship in Electromagnetic Imaging
Postdoctoral Fellows: Fields Institute in Toronto
Research Position: NASA Dryden Flight Research Center
Tenure-Track Position: University of Haifa, Israel
New Book: Constrained Global Optimization
Special Issue: Linear Systems and Control (LAA)
Table of Contents: Inverse Problems
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: "PROF.HEINZ W. ENGL" <engl@indmath.uni-linz.ac.at>
Subject: Researchers working on dynamic inverse problems
Date: Tue, 28 Nov 2000

Dear Inverse Problems Community,

I am looking for people working on "dynamic inverse problems". I know of a group in St. Petersburg, but do not have contact information. Any information on people working in that field is welcome.

Best regards
Heinz Engl

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: Armand Wirgin <wirgin@lma.cnrs-mrs.fr>

Subject: Inverse Propagation/Scattering Sessions at ISAAC
Date: Mon, 23 Oct 2000

The International Society for Analysis, Applications and Computations (ISAAC) will hold its Third International Congress from August 20-25, 2001 at the Freie Universitat in Berlin, Germany. ISAAC has organized these biannual meetings since 1997; previous Congresses were held in Newark, DE, USA (1997) and Fukuoka, Japan (1999). The Congress Proceedings have been published in a special series since 1998 by Kluwer Academic Publishers. These meetings attempt to provide an appropriate forum for both "pure and applied" mathematicians, stressing their common grounds in broad areas of analysis.

The complete Congress details can be found on the web at
<http://www.math.udel.edu/isaac>
(click on "Third International ISAAC Congress'2001"). Further ISAAC information can be found at
<http://www.math.fu-berlin.de/rd/ag/isaac>

We are organizing a number of special sessions centered around DIRECT and INVERSE WAVE PROPAGATION and SCATTERING, and would like to invite you to speak in one of these sessions. Please reply, either way, by January 15, 2001 by e-mail to <Shidi53@aol.com>. If you intend to participate, please forward your complete postal mailing address, e-mail address, telephone and fax numbers, and a tentative talk title with your e-mail reply. Instructions for the submission of the final title and abstract information to the organizers in Berlin will be contained in the Second Announcement which should be available in January. Please, also e-mail a copy of your final title and abstract to <Shidi53@aol.com> at the appropriate time.

We hope that you will be able to participate in these special sessions, and look forward to your response.

Best regards,

Lou Fishman
Code 7181
Naval Research Laboratory
Stennis Space Center, MS 39529 USA
Shidi53@aol.com

Armand Wirgin
Laboratoire de Mecanique et d'Acoustique
UPR 7051 du CNRS
31 chemin Joseph Aiguier
13402 Marseille cedex 20, France
wirgin@lma.cnrs-mrs.fr

Bob Gilbert
Department of Mathematical Sciences
University of Delaware
Newark, DE 19716 USA
gilbert@math.udel.edu

George N. Makrakis
Foundation for Research and Technology Hellas
Inst. of Applied and Computational Mathematics
P.O. Box 1527, GR-71110 Heraklion, GREECE
makrakg@iacm.forth.gr

Yongzhi Steve Xu
Department of Mathematics
University of Tennessee at Chattanooga
Chattanooga, TN 37403 USA
yxu@cecasun.utc.edu

Masahiro Yamamoto
myama@ms.u.-tokyo.ac.jp

From: Armand Wirgin <wirgin@lma.cnrs-mrs.fr>
Subject: Inverse Problems Sessions at ICTACEM 2001
Date: Mon, 23 Oct 2000

The Second International Conference on Theoretical, Applied,
Computational and Experimental Mechanics (ICTACEM 2001)
<http://www.jeo.org/ictacem>
which includes sessions on Inverse Problemes, will be held in
Dec. 2001 in India. Interested persons are invited to submit proposals
for communcations as of now.

A. Wirgin

From: "Jirka SIMUNEK" <JSIMUNEK@ussl.ars.usda.gov>
Subject: HYDRUS short course
Date: Fri, 17 Nov 2000

Dear friends and colleagues,

Please find an announcement about the next HYDRUS short course
(Modeling of water flow and solute transport in variably-saturated
media), to be held December 14-15, 2000, in San Francisco,
California. The instructors are Drs. Jirka Simunek and Rien van
Genuchten from the U.S. Salinity Laboratory in Riverside, CA.

The registration deadline for the low class rate (\$575) is December 1,
2000 (after that date registration is \$650, and enrollment is limited
to 30 participants. Please distribute this message to potentially
interested colleagues.

Registration should be through the Office Special Programs And
Continuing Education:

SPACE
Colorado School of Mines
Golden, Colorado 80401-1887
Phone: (303) 273-3321
Fax: (303) 273-3314
e-mail: space@mines.edu

Questions can be directed to:

International Ground Water Modeling Center
Colorado School of Mines
Golden, Colorado 80401-1887
Phone: (303) 273-3103
Fax: (303) 384-2037
e-mail: igwmc@mines.edu

Regards,
Rien van Genuchten and Jirka Simunek

[NOTE: The full announcement of this short course may be found in the
"Appendix to Digest Vol. 7, No. 9" link under
http://www.math.msu.edu/ipnet/ipnet_archive/digest_appendices/
-Ed.]

From: ross@siam.org
Subject: First SIAM Conference on Imaging Science
Date: Thu, 02 Nov 2000

Conference Name: First SIAM Conference on Imaging Science
Location: Boston Park Plaza Hotel, Boston, MA
Dates: September 22 - 24, 2001.

The Call for Presentations for this conference is now available at:
<http://www.siam.org/meetings/is01/>

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

From: ross@siam.org
Subject: First SIAM Conference on The Life Sciences
Date: Mon, 06 Nov 2000

Conference Name: First SIAM Conference on The Life Sciences
Location: Boston Park Plaza Hotel, Boston, MA
Dates: September, 24-26, 2001

The Call for Presentations for this conference is now available at:
<http://www.siam.org/meetings/lis01/>

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

From: "Denis N. Sidorov" <dsidorov@isem.sei.irk.ru>
Subject: Inverse and ill-posed problems of applied mathematics sections
Date: Mon, 4 Dec 2000

First Announcement
12th Baikal International Conference

Optimization Methods and their Applications
24 June - 1 July, 2001
Irkutsk, Lake Baikal

RUSSIA, 2001

The 12th Baikal International Conference Methods of Optimization and
Their
Applications is dedicated to the memory of academician N. N. Moiseev
who was the organizer of the first Baikal school-seminars together
with academician L. A. Melentiev in 1969.

International Program Committee:

V.P.Bulatov (Russia) - Chairman
Yu.G.Evtushenko (Russia) - Co-Chairman
E.N.Yaskova (Russia) - Secretary
V.L.Beresnev (Russia)
O.V.Vasiliev (Russia)
S.N.Vasiliev (Russia)
N.I.Voropai (Russia)
R.Gabasov (Belarus)
V.I.Gurman (Russia)
V.T.Dementiev (Russia)
I.I.Eremin (Russia)
P.S.Krasnoschekov (Russia)
A.A.Petrov (Russia)
B.T.Polyak (Russia)
B.N.Pshenichni (Ukraine)
V.V.Fedorov (Russia)
F.I.Chernousko (Russia)
S.Budniam (Mongolia)
J.Guddat (Germany)
H.Th.Jongen (Germany)
P.Kall (Switzerland)
P.M.Pardalos (USA)
D.Pallashke (Germany)
H.Tuy (Vietnam)
R.Horst (Germany)
G.Feichtinger (Austria)
W.Forster (UK)

In the framework of the conference it is planned to hold the following sections:

1. Mathematical programming
2. Optimal control
3. Mathematical economics and applications
4. Inverse and ill-posed problems of applied mathematics
(contact address: Dr. Denis N. Sidorov dsidorov@isem.sei.irk.ru)
5. Discrete analysis and coding theory

and the seminars "Mathematical modeling in agricultural production",
"Control of aircraft".

Those wishing to take part in the conference are kindly requested to send a registration form to the organizing committee no later than January 15, 2001. Papers should be sent at the address of the organizing committee no later than March 15, 2001.

Invitations and additional information will be sent after consideration of the submitted papers.

Proceedings are planned to be published by the beginning of the conference. Papers of 5 pages in length should be mailed to the organizing committee in the printed form and e-mail. Section and plenary papers will be published in book form. Style file and requirements to the papers are available in Internet on link <http://www.idstu.irk.ru/Style.zip> or an inquiry can be sent to e-mail: elv@isem.sei.irk.ru

Detailed information on the conference will be available in Internet on site: <http://www.idstu.irk.ru>.

Address organizing committee:

Bulatov Valerian Pavlovich
Institute of System Dynamics and
Control Theory of SB RAS
134, Lermontov str.,
Irkutsk, 664033, Russia
E-mail: secr@icc.ru

Yaskova Elvira Nikolaevna
Institute of Energy Systems
130, Lermontov str.,
Irkutsk, 664033, Russia
Phone: (3952) 464-711
Fax: (3952) 462-796
E-mail: elv@isem.sei.irk.ru

From: "PROF.HEINZ W. ENGL" <engl@indmath.uni-linz.ac.at>
Subject: Temporary address change
Date: Sun, 3 Dec 2000

Dear Colleagues,

>From January 5 to July 15, 2001, I will be on sabbatical. My address during that time will be:

Prof.Heinz W. Engl
University of Oxford
OCIAM
Mathematical Institute
24-29 St Giles
Oxford OX1 3LB
England

Phone: +44-1865-270507
Fax: +44-1865-270515
EMail: engl@maths.ox.ac.uk

Mail sent to Linz will be forwarded, but will therefore be delayed. Papers submitted to "Surveys on Mathematics for Industry" should be sent to Linz.

Also, I will continue to read my regular Austrian Email, but maybe not on a daily basis. I can also be reached via mobile phone at +43-664-5209029

Best regards
Heinz Engl

From: Peyman Milanfar <milanfar@cse.ucsc.edu>
Subject: Postdoc Position in Inverse Problems
Date: Thu, 26 Oct 2000

Post-Doctoral Research Associate Position Available in
Computational and Applied Inverse Problems, and Signal Processing

The Scientific Computing and Computational Mathematics Program at
Stanford University, along with the Electrical Engineering Department

at the University of California, Santa Cruz, announce a joint opening for a Post-Doctoral Research Associate. The research will center around mathematical, statistical, and numerical techniques, and applications, for geometric inverse problems related to the inversion of shape from indirect measurements, specifically moment data.

The prospective candidate must have a Ph.D. in Applied Mathematics, Electrical Engineering, Computer Science, or related fields, with strong analytical skills in some subset of the following technical areas:

1. Inverse Problems in Imaging (application is geophysics, medicine, etc.)
2. Statistical Signal/Image Processing
3. Numerical Analysis, Linear Algebra
4. Optimization
5. Applied Complex Analysis

The candidate is expected to be fluent in a high level prototyping programming language such as MATLAB, and is also expected to carry out research in an independent manner. Strong written and oral communication skills are a must.

The researcher will be located at Stanford, and will spend nominally at least one day per week interacting with faculty at UC Santa Cruz. Funding is available for up to two years. The salary will be commensurate with qualifications, but will be in the \$45,000 range. The position is open immediately, and applications will be accepted and reviewed on an ongoing basis until the position is filled.

To apply or inquire further, all interested parties are invited to contact either

Prof. Gene Golub
Scientific Computing and Computational Mathematics Program
Computer Science Department
Stanford University
Gates Building 2B-280
Stanford, CA 94305-9025
golub@sccm.stanford.edu
<http://www-sccm.stanford.edu>

OR

Prof. Peyman Milanfar
225 Baskin Engineering Building
Electrical Engineering Department
University of California
1156 High Street
Santa Cruz, CA 95064-1077
milanfar@cse.ucsc.edu
<http://www.cse.ucsc.edu/~milanfar>

From: Bill Lionheart <Bill.Lionheart@umist.ac.uk>
Subject: Research Assistantship in Electromagnetic Imaging
Date: Tue, 14 Nov 2000

Research Assitant sought for six months to work on

Reconstruction Algorithms for Electromagnetic Imaging of Molten Steel

The Inverse Problems group in the Mathematics Department at UMIST, Manchester seeks a Research Assistant to work for six months on reconstruction algorithms for electromagnetic imaging of molten steel. Building on the success of the EIDORS code for conductivity and permitivity imaging the aim of the project is to develop algorithms to image molten steel flowing in a pipe using inductive measurements. The project is in collaboration with Corus Group's Teesside Technology Centre.

The successful applicant will have experience in programming, preferably in MATLAB and C, and in the application of the Finite Element Method to electromagnetics. Previous experience of numerical methods for inverse problems is also an advantage. Ability to write and speak English is also required. Salary £16775-£18731. Closing date December 6th 2000.

For further information please contact Dr Bill Lionheart
Bill.Lionheart@umist.ac.uk and see web page

<http://www.ma.umist.ac.uk/inverseproblems.html>

From: Ken Jackson <krj@cs.toronto.edu>
Subject: Postdoctoral Fellows at the Fields Institute in Toronto
Date: Fri, 3 Nov 2000

This is a followup to my earlier announcement of a Thematic Year on "Numerical and Computational Challenges in Science and Engineering" (NCCSE) at the Fields Institute in Toronto from August 2001 to August 2002. More information about the Fields Institute in general 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.

The main point of this announcement is to inform prospective applicants that there are several openings for postdoctoral fellows associated with the program. More information about the fellowships, as well as an update on the program, can be found on our web-page

<http://www.fields.utoronto.ca/numerical.html>

From: Marty Brenner <martin.brenner@dfrc.nasa.gov>
Subject: Research Position at NASA Dryden Flight Research Center
Date: Tue, 07 Nov 2000

Research Position at NASA Dryden Flight Research Center

National Research Council (NRC) Resident Research Associateships (RRA)
Program at NASA Dryden Flight Research Center

Opportunities for research for US Citizens.

The NRC RRA Program is intended to provide postdoctoral, faculty, scientists, and engineers of unusual promise and ability opportunities for research on problems that are compatible with the interests of

NASA Dryden.

See: <http://www.dfrc.nasa.gov/trc/Postdoc/nrc.html>
<http://www4.nas.edu/osep/rap.nsf/frmLabInfoSearchResults?ReadForm&44.80~D>
FRC

Under "Research Opportunities":

- 1) Fast Adaptive Multiresolution Data Decompositions
for Aircraft Dynamics Analysis
- 2) Robust Nonlinear Stability Estimation of Aeroservoelastic
Systems from Flight Data Measurements

Please contact:

Marty Brenner
Aerospace Engineer/Aerostructures Branch
Code RS, Mail Code 4840D
NASA Dryden Flight Research Center
P.O.Box 273
Edwards, CA 93523
E-Mail: Marty.Brenner@dfrc.nasa.gov
Telephone: (661) 276-3793

From: Yair Censor <yair@math2.haifa.ac.il>
Subject: Tenure-track position, University of Haifa, Israel.
Date: Wed, 29 Nov 2000

The Department of Mathematics of the University of Haifa, Israel, announces an opening for a tenure-track position beginning in October 2001. Candidates must hold a Ph.D. in either mathematics or computer science, and, also, a master degree, preferably in the other field among the two mentioned above. Candidates are expected to have an excellent record in research and teaching.

The position will require the continuation of a high level research work, 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 bachelor programs and has no connection to this announcement.

Please send a letter of application, which addresses your suitability for the position described above, a complete CV and a list of publications. In addition, please have three letters of recommendation sent directly to us. All should be sent by air mail to

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

From: "Yaroslav D. Sergeyev" <yaro@si.deis.unical.it>
Subject: New book on constrained global optimization
Date: Wed, 22 Nov 2000

A new book in constrained global optimization and multiple criteria decision making:

Global Optimization with Non-Convex Constraints:
Sequential and Parallel Algorithms
by

Roman G. Strongin
Nizhni Novgorod State University, Russia
Yaroslav D. Sergeyev
Institute of Systems Analysis and Information Technology of the CNR,
c/o University of Calabria, Italy and Nizhni Novgorod State University,
Russia

NONCONVEX OPTIMIZATION AND ITS APPLICATIONS
Volume 45

This book presents a new approach to global non-convex constrained optimization. Problem dimensionality is reduced via space-filling curves. To economize the search, constraint is accounted separately (penalties are not employed). The multicriteria case is also considered. All techniques are generalized for (non-redundant) execution on multiprocessor systems.

Audience: Researchers and students working in optimization, applied mathematics, and computer science.

Kluwer Academic Publishers, Dordrecht
Hardbound, ISBN 0-7923-6490-2
October 2000, 728 pp.
NLG 560.00 / USD 275.00 / GBP 174.00

For a complete table of contents please access Kluwer Academic Publisher's web site <http://www.wkap.nl/> . You may also order books directly on line by accessing the web.

Submitted by: Yaroslav D. Sergeyev, Ph.D., D.Sc.
Professor
University of Nizhni Novgorod, pr. Gagarina, 23,
603600 Nizhni Novgorod, Russia;
Senior Researcher
Institute of Systems Analysis and Information Technology,
c/o DEIS, Universita' della Calabria, 87036 Rende (CS) Italy
e-mail : yaro@si.deis.unical.it
FAX : (39)-0984-839054, (39)-0984-494713
tel. : (39)-0984-839047
<http://isi-cnr.deis.unical.it:1080/~yaro/>

From: Hans Schneider <hans@math.wisc.edu>
Subject: Special LAA Issue on Linear Systems and Control
Date: Mon, 6 Nov 2000

Linear Algebra and Its Applications

Second call for papers for the Fourth Special Issue on

LINEAR SYSTEMS AND CONTROL

New deadline for submission: February 15, 2001

In the past, LAA has published three special issues devoted to the field of Linear Systems and Control: 1983 (vol. 50), 1989 (vols. 122-124) and 1994 (vols. 203-204). More than six years after the publication of the last special issue, it is time to take stock of recent and current interactions between Linear Algebra and Systems Theory.

The cross fertilization between these two fields has been very fruitful in the past. While linear algebraic methods have been instrumental for much of the development of linear systems theory, many system theoretic concepts and constructions are now part of the body of linear algebra. Today systems theory is a place where methods from many different parts of mathematics are combined. As a result linear systems theory has become a rich source of linear algebraic problems. More recently, new paradigms, new problems and areas of application have appeared on the scene: the behavioural approach, coding theory, distance problems and parameter uncertainty, the dynamic systems approach to algorithms, computational complexity issues in systems theory and discrete event systems.

These important subject areas have enriched linear systems theory and will influence the future development of linear algebra, too. We hope that the upcoming issue will further this process and we encourage all authors working in these areas to submit their contributions.

As in previous issues, this one will be open for all papers with significant new results in Systems and Control Theory where either linear algebraic methods play an important role or new tools and problems of linear algebraic nature are presented. Also survey papers are very welcome which illustrate specific areas where the interaction of Systems Theory and Linear Algebra has been particularly successful. Papers must meet the publication standards of Linear Algebra and Its Applications and will be refereed in the usual way.

Areas and topics of interest for this special issue include:

- Structure theory of linear systems and system families
- Stability theory
- Distance problems and analysis of uncertain systems
- Methods of robust control
- Approximation and interpolation problems arising in systems theory
- Geometric control theory and geometry of linear systems
- Linear behaviors
- Multidimensional systems and systems over rings
- Module theoretic techniques in system theory
- Coding theory with connections to systems theory
- Algorithms for linear systems
- Numerical issues in linear systems theory
- Computational complexity in linear algebra and systems theory
- Discrete event systems

The deadline for submission of papers is 15 February 2001, and the special issue is expected to be published in 2002. Papers should be sent to any of its special editors:

Discrete layer-stripping algorithms and feasibility conditions for the
2D inverse conductivity problem A E Yagle

Time-domain profile inversion using contrast sources
R F Bloemenkamp and P M van den Berg

Reconstruction of buried objects surrounded by small inhomogeneities
M Saillard, P Vincent and G Micolau

Some characteristics of the conducting plate model in the inversion of
geophysical electromagnetic data S-E Hjelt and M Pirttij\ "arvi

Electric and magnetic dipoles for geometric interpretation of
three-component electromagnetic data in geophysics
B Bourgeois, K Suignard and G Perrusson

On optimization techniques for solving nonlinear inverse problems
E Haber, U M Ascher and D Oldenburg

Reconstruction of axisymmetric media with an FFHT-enhanced extended
Born approximation Z Q Zhang and Q H Liu

3D electromagnetic inversion based on quasi-analytical approximation
M Zhdanov and G Hursan

Linearized and nonlinear parameter variance estimation for
two-dimensional electromagnetic induction inversion
D L Alumbaugh

Bayesian inversion of DC electrical measurements with uncertainties
for reservoir monitoring A Malinverno and C Torres-Verd\ '{rm i}n

Solution strategies for two- and three-dimensional electromagnetic
inverse problems G A Newman and G M Hoversten

PAPERS

Time and frequency domain scattering for the one-dimensional wave
equation B L Browning

Block-iterative interior point optimization methods for image
reconstruction from limited data C Byrne

The technique of micropore size distribution reconstruction on the
basis of the Dubinin theory of volume filling
G Yu Cherkashinin, M K Ismakaev, A V Bubnov and V A Drozdov

An extension of the Henrici formula for Laplace transform inversion
L D'Amore, A Murli and M Rizzardi

The analysis of a discrete scheme of the iteratively regularized
Gauss-Newton method Q N Jin

Estimating crystal growth rates using computed tomography
O D Jones, E T White and B K Butler

Statistical inversion and Monte Carlo sampling methods in electrical
impedance tomography
J P Kaipio, V Kolehmainen, E Somersalo and M Vauhkonen

Regularization by projection with a posteriori discretization
level choice for linear and nonlinear ill-posed problems
B Kaltenbacher

Inverse scattering for a locally perturbed half-plane
R Kress and T Tran

On relaxation-spectrum estimation for decades of data: accuracy and
sampling-localization considerations J R Macdonald

Electrical resistance tomography: complementarity and quadratic models
A Tamburrino, S Ventre and G Rubinacci

Inverse Problems December 2000 Volume 16, Issue 6
Table of Contents

TOPICAL REVIEW

Ray tracing methods for inverse problems
V Pereyra

SPECIAL SECTION: INVERSE PROBLEMS IN UNDERWATER ACOUSTICS

Guest Editor's introduction A Wirgin

Geoacoustic model inversion using artificial neural networks
J Benson, N R Chapman and A Antoniou

An inverse problem in underwater acoustic source localization: robust
matched-field processing B F Harrison

Applications of matched-field processing to inverse problems in
underwater acoustics A Tolstoy

Acoustic sensing of temperature changes in a strongly range-dependent
ocean K A Naugolnykh, E C Shang and Y Y Wang

Bottom geoacoustic inversion by matched field processing -- a
sensitivity study M I Taroudakis and M G Markaki

Neural network approach for inverting velocity dispersion; application
to sediment and to sonar target characterization
M E Zakharia and P Chevret

Identification, by the intersecting canonical domain method, of the
size, shape and depth of a soft body of revolution located within an
acoustic waveguide J L Buchanan, R P Gilbert, A Wirgin and Y Xu

Identification of the size, proportions and location of a soft body of
revolution in a shallow-water waveguide P Cristini and A Wirgin

An inverse method for the acoustic detection, localization and
determination of the shape evolution of a bubble
N A Gumerov and G L Chahine

Generalized dual space indicator method for underwater imaging
Y Xu, C Mawata and Wei Lin

Imaging an object buried in the sediment bottom of a deep sea by linearized inversion of synthetic and experimental scattered acoustic wavefields R Guillermin, P Lasaygues, J P Sessarego and A Wirgin

Acoustic imaging in a shallow ocean with a thin ice cap
R P Gilbert and Y Xu

PAPERS

Scattering problem for the Zakharov--Shabat equations on the semi-axis
A Boutet de Monvel and V Kotlyarov

Parametrization of periodic weighted operators in terms of gap lengths
M Klein and E Korotyaev

On the ill-posedness of the 2.5-dimensional linearized density inversion model Liu Jijun

A model for the control of a multileaf collimator in radiation therapy treatment planning J Tervo and P Kolmonen

Calculating capillary pressure curve from single-speed centrifuge experiments M C C Cunha and A C Moretti

A new approach to convergence rate analysis of Tikhonov regularization for parameter identification in heat conduction H W Engl and J Zou

CORRIGENDUM

Electric and magnetic dipoles for geometric interpretation of three-component electromagnetic data in geophysics
B Bourgeois, K Suignard and G Perrusson

Submitted by:

Janet Thomas, Senior Production Editor
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@iopublishing.co.uk WWW: <http://www.iop.org>

From: james beck <jamesverebeck@home.com>
Subject: Contents, Inverse Problems in Engineering
Date: Sat, 11 Nov 2000

Inverse Problems in Engineering 2000 Vol. 8, No. 5
Table of Contents

2D Inverse Convection Dominated Problem for Estimation of Inflow Parameters from Outflow Measurements A.K. Alekseev

Estimation of Heat Flux and Temperature in a Tool During Turning
J.-L. Battaglia and J.-C. Batsale

A Generalized Approach for Atomic Force Microscopy Image Restoration with Bregman Distances as Tikhonov Regularization Terms
G.A.G. Cidade, C. Anteneodo, N.C. Roberty and A.J.S. Neto

Optimization of the Frequency Characteristics in SAW Filter Design
K.-C. Park, Y. Kagawa, T. Tsuchiya and K.-R. Cho

480 Lincoln Drive
University of Wisconsin-Madison
Madison WI 53706 USA
----- end -----

608-263-8891 (Work FAX)
608-271-8477 (Home FAX)
<http://www.math.wisc.edu/~hans> (URL)