IPNet Digest   Volume 26, Number 03   April 19, 2019

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

Today's Topics:

- 2nd IMA Conference On Inverse Problems From Theory To Application
- Call for Abstracts Extended: 5th Intl Symposium on Inverse Problems (IPDO2019)
- Call for Abstracts Extended: Inverse Problems Symposium (IPS 2019)
- Postdoc Position: Inverse problems, PDE, Applied Harmonic Analysis, Machine Learning
- Table of Contents: Inverse Problems

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

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

From: Pam Bye <Pam.Bye@ima.org.uk>
Subject: 2nd IMA Conference On Inverse Problems From Theory To Application
Date: March 27, 2019

2nd IMA Conference On Inverse Problems From Theory To Application
4-6 September 2019
University College London, Gower Street, London, UK

An inverse problem refers to a situation where the quantity of interest cannot be measured directly, but only through an action of a nontrivial operator of which it is a parameter. The corresponding operator, also called forward operator, stems from a physical application modelling. Prominent examples include: Radon and Fourier transforms for X-ray CT and MRI, respectively or partial differential equations e.g. EIT or DOT. The prevalent characteristics of inverse problems is their ill-posedness i.e. lack of uniqueness and/or stability of the solution. This situation is aggravated by the physical limitations of the measurement acquisition such as noise or incompleteness of the measurements. Inverse problems are ubiquitous in applications from bio-medical, science and engineering to security screening and industrial process monitoring. The challenges span from the analysis to efficient numerical solution. This conference will bring together mathematicians and statisticians, working on theoretical and numerical aspects of inverse problems, as well as engineers, physicists and other scientists, working on challenging inverse problem applications. We welcome industrial representatives, doctoral students, early career and established academics working in this field to attend.

Topic list: Imaging; Inverse problems in partial differential equations (Memorial Lecture for Slava Kurylev); Model and data driven methods for inverse problems; Optimization and statistical learning; Statistical inverse problems

For further information about this Conference, please visit our website at: https://ima.org.uk/11329/2nd-ima-conference-on-inverse-problems-from-theory-to-application/

Submitted by: Pamela Bye
Conference Support Officer
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From: IPDO 2019 <ipdo2019@hebut.edu.cn>
Subject: Call for Abstract Extended till 30th April 2019 | The 5th International Symposium on Inverse Problems, Design and Optimization (IPDO2019)
Date: April 15, 2019

Dear colleagues,

Due to overwhelming requests for an extension of the abstract submission deadline, we will extend the deadline of the submissions to 30th April 2019. We thank everyone who have submitted your abstracts and look forward to more from your colleagues.

IPDO sequence of international symposia's main objective is to bring three communities of researchers (inverse problems, multidisciplinary design theory and optimization experts) together in a unique international forum that provides an excellent basis for cross-fertilization of ideas, as well as for the creation of new synergistic approaches and methodologies. Successful previous versions of the IPDO Symposium were held in Rio de Janeiro, Brazil (2004), Miami Beach, USA (2007), Joao Pessoa, Brazil (2010), and Albi, France (2013). The upcoming 5th International Symposium on Inverse Problems, Design and Optimization (IPDO2019) will be held in Tianjin, China, during September 24-26, 2019, and Hebei University of Technology (China) is proud to facilitate the organization.

Currently, we have succeeded in attracting renowned first class scientists with significant contributions to the scientific literature from all over the world. The four plenary speakers for the symposium are Prof. H. Thomas Banks from USA, Prof. Gengdong Cheng from China, Prof. Kalyanmoy Deb from USA and Prof. Jari Kaipio from New Zealand. The six keynote speakers are Prof. Anatoly G. Yagola from Russia, Prof. Qing Li from Austrilia, Prof. Igor N. Egorov from Russia, Prof. Daniel Lesni from UK, Prof. Gyung-Jin Park from South Korea and Prof. Yanfei Wang from China. The MS organizers include Prof. Roland Potthast from German, Prof. Daniel Watzenig from Austria, Prof. Sergey Kabanikhin from Russia, Prof. Tommy H.T. Chan from Australia, et al. and Profs. Bo Han, Haitian Yang, Zhihai Xiang, Chao Jiang and Gongsheng Li et al. from China.

For more information, please visit: http:/ipdo2019.ipdos.org, which will be updated constantly.

Please find a copy of the Flyer of IPDO 2019 at
http://ipdo2019.ipdos.org/Flyer.html
please mark your calendar, and prepare for your abstract submission that will be due on

April 30, 2019.

We look forward to your two-page abstract, and hope this symposium will support your research and empower you to make an even greater impact in your field.

Best regards,
Prof. Xu Han, Chairman of IPDO2019
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Profs. George S. Dulikravich, Helcio R. B. Orlande and Marcelo J. Colaco, Honorary Chairman of IPDO2019
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From: Dharmendra Mishra <mishradh@purdue.edu>
Subject: IPS 2019 Abstract Submission Deadline Extended!
Date: April 1, 2019

The Inverse Problems Symposium 2019 Abstract Submission Deadline Extended to April 15!
  [**** NOTE: The website still seems to be accepting abstracts.
    Please see website or contact organizers for more information. -Ed]

The symposium will be held at Purdue University on May 29-31, 2019

Follow this link for abstract submission and registration:
https://www.inverseproblems2019.org

Deadline for abstract submission extended to April 15, 2019

This is the 32nd in the series of National and International meetings on Inverse Problems that were initiated at Michigan State University in 1988. Papers are solicited from all areas involving inverse methods and their applications. The symposium is organized in a single-session format to foster cross-disciplinary interaction.

Solicited topics include:

A. Mathematical and Statistical Aspects of Inverse Problems
    1. Theory and Methods of Inverse Problems
    2. Stability and Error Analysis
B. Design of Experiments
    1. Optimal Design of Experiments
    2. Analysis of Actual Experimental Data
C. Applications
    1. Heat Transfer, Applied Mechanics, Controls, Other Engineering Disciplines
    2. Biology, Biochemistry, Genetics, and Medicine
    3. Nondestructive Evaluation
    4. Nanoengineering
    5. Tomography and Inverse Scattering
    6. Geology and Environmental Phenomena

7. Economics
8. Food and Bioprocessing
9. Bioengineering
10. Packaging

We also welcome session organizers. Please contact Dharmendra Mishra (mishradh@purdue.edu) if you wish to organize a session.

Important dates, abstract submission, travel information and accommodation details are available at the link below.
https://www.inverseproblems2019.org

Thank you and looking forward to seeing you in West Lafayette.

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From: Giovanni S Alberti <giovanni.alberti@unige.it>
Subject: Postdoctoral Position in Mathematical Analysis at the University of Genoa - Expression of interest
Date: Friday, April 12, 2019

Hello,

It is a pleasure to announce the call for a Postdoctoral position in Mathematical Analysis at the Department of Mathematics of the University of Genoa. The main research themes will be inverse problems, PDE, applied harmonic analysis and machine learning. Candidates who are familiar with one or more of these topics are encouraged to apply.

The start of the position is planned in September 2019, and the duration of the contract is 1+1 years.

At this stage, perspective candidates are only asked to get in touch with me by sending their CV by the 5th May. The official call will open in May, and I will contact you personally with some instructions on the application procedure (which is not that simple even with a PhD in Maths!).

Please feel free to circulate this announcement.

Best wishes

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From: <noreply@iopscience.org>
Subject: Inverse Problems, Volume 35, Numbers 3/4, March/April 2019
Date: April 9, 2019

Inverse Problems March 2019 Volume 35, Number 3

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Special Issue Papers:

An inverse boundary value problem for the p-Laplacian: a linearization approach
Antti Hannukainen, Nuutti Hyvönen and Lauri Mustonen

Some analytic properties of the cone transform
Fatma Terzioglu

The V-line transform with some generalizations and cone differentiation
G Ambartsoumian and M J Latifi Jebelli

Papers:

Multichannel blind deconvolution via maximum likelihood estimator: application in neural recordings
S Akhavan, S Esmaeili, M Kamarei and H Soltanian-Zadeh

An accelerated primal-dual iterative scheme for the L 2-TV regularized model of linear inverse problems
Wenyi Tian and Xiaoming Yuan

Hierachical Bayesian models and sparsity: ℓ_2-magic
D Calvetti, E Somersalo and A Strang

Inverse problems for nonlinear quasi-variational inequalities with an application to implicit obstacle problems of p-Laplacian type
Stanisław Migórski, Akhtar A Khan and Shengda Zeng

Convexification of electrical impedance tomography with restricted Dirichlet-to-Neumann map data
Michael V Klibanov, Jingzhi Li and Wenlong Zhang

Unique determination of a penetrable scatterer of rectangular type for inverse Maxwell equations by a single incoming wave
Guanghui Hu, Long Li and Jun Zou

An inverse space-dependent source problem for hyperbolic equations and the Lipschitz-like convergence of the quasi-reversibility method
Loc Hoang Nguyen

Acousto-electric tomography with total variation regularization
Bolaji James Adesokan, Bjørn Jensen, Bangti Jin and Kim Knudsen

Landweber–Kaczmarz for parameter identification in time-dependent inverse problems: all-at-once versus reduced version
Tram Thi Ngoc Nguyen

https://iopscience.iop.org/issue/0266-5611/35/3

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Special Issue Papers:

Hybrid PET-MR list-mode kernelized expectation maximization reconstruction
Daniel Deidda, Nicolas A Karakatsanis, Philip M Robson, Yu-Jung Tsai, Nikos Efthimiou, Kris Thielemans, Zahi A Fayad, Robert G Aykroyd and Charalampos Tsoumpas

Papers:

Locating a complex inhomogeneous medium with an approximate factorization method
Fenglong Qu and Haiwen Zhang

An inverse problem for an electroseismic model describing the coupling phenomenon of electromagnetic and seismic waves
Eric Bonnetier, Faouzi Triki and Qi Xue

Carleman estimates for the time-fractional advection-diffusion equations and applications
Xinchi Huang, Zhiyuan Li and Masahiro Yamamoto

Compressive time-of-flight 3D imaging using block-structured sensing matrices
Stephan Antholzer, Christoph Wolf, Michael Sandbichler, Markus Dielacher and Markus Haltmeier

Bayesian inverse problems for recovering coefficients of two scale elliptic equations
Viet Ha Hoang and Jia Hao Quek

A regularized weighted least gradient problem for conductivity imaging
A Tamasan and A Timonov

Real-time adaptive optics with pyramid wavefront sensors: part I. A theoretical analysis of the pyramid sensor model
Victoria Hutterer, Ronny Ramlau and Iuliia Shatokhina

Real-time adaptive optics with pyramid wavefront sensors: part II. Accurate wavefront reconstruction using iterative methods
Victoria Hutterer, Ronny Ramlau and Iuliia Shatokhina

PDE-based numerical method for a limited angle x-ray tomography
Micheal V Klibanov and Loc H Nguyen

A reaction coefficient identification problem for fractional diffusion
Enrique Otárola and Tran Nhan Tam Quyen

String-averaging algorithms for convex feasibility with infinitely many sets
T Yung Kong, Homeira Pajoohesh and Gabor T Herman

Approximation of continuous EIT data from electrode measurements with Bayesian methods
D Calvetti, S Nakkireddy and E Somersalo

https://iopscience.iop.org/issue/0266-5611/35/4
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