IPNet Digest Volume 21, Number 03 February 28, 2014 Today's Editor: Patricia (Patti) K. Lamm, Michigan State University Today's Topics:

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International Conference on Inverse Problems and Related Topics 2014 Dec 15 - Dec 19, 2014, National Taiwan University, Taipei, Taiwan.

## BACKGROUND

The 7th International Conference on Inverse Problems and Related Topics will take place at National Taiwan University, Taipei, from Dec 15 to Dec 19, 2014. This series of conferences were previously held in Hong Kong (2002), Shanghai (2004), Hokkaido (2006), Daejeon (2009), Hong Kong (2010), and Nanjing (2012). This conference features speakers from both theoretical (mathematics) and applied (engineering) aspects of inverse problems. It aims to strengthen the interaction and, most importantly, to nurture collaborations between two groups of scientists. In addition, one of the focuses of the conference is to promote young scholars in inverse problems in the Asia-Pacific region.

## SCOPES

Inverse problems arise in many areas of science including mathematics, engineering, medicine, physics, and geophysics. The varieties of their applications are enormous such as medical imaging, oil exploration, radar, sonar and seismology. In the last twenty years the active research carried out in the field of inverse problems has made it become a very promising interdisciplinary topic. The themes of the conference include, but are not limited to:

Inverse boundary value problems Inverse scattering problems Medical imaging Cloaking and invisibility

All scientists who are interested in the current research trends in the field of inverse problems are welcome to attend the conference.

The conference website is http://homepage.ntu.edu.tw/~jnwang/icip2014

Submitted by: Jenn-Nan Wang, Institute of Applied Mathematics National Taiwan University, Taipei 106, Taiwan email: jnwang@math.ntu.edu.tw web: http://www.math.ntu.edu.tw/~jnwang

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Subject: MOPT 2014: From: baikal2014@isem.sei.irk.ru Date: 05/02/2014

MOPT 2014: 16th Baikal International Triannual School-Seminar Methods of Optimization & Their Applications

MOPT 2014, hosted by the Energy Systems Institute of Russian Academy of Sciences 30th of June - 6th of July 2014, will be held at the Baikalov Ostrog Resort located on picturesque Olkhon island, lake Baikal.

Program committee: Acad. Yu. G. Evtushenko, Prof. A. S. Antipin, Prof. A. V. Arguchintsev, Prof. V. P. Gergel, Prof. E. Kh. Gimadi, Prof. S. Dempe, Prof. V. A. Dykhta, Prof. A. I. Kibzun, Prof. A. A. Kolokolov, Prof. I. V. Konnov, Prof. Yu. A. Kochetov, Prof. E. A Nurminski, Prof. P. Pardalos, Prof. B. T. Polyak, Prof. Y. D Sergeev, Prof. V. A. Srochko, Prof. A. S. Strekalovsky, Prof. R. G Strongin, Prof. M. Yu. Khachay

This School-Seminar will include plenary lectures and sections talks.

The list of confirmed sections: Optimization in Inverse Problems Discrete Optimization Continuous Optimization Optimal Control Equilibrium & Bilevel Programming

Registration is now open: http://sei.irk.ru/conferences/mopt2014/en/

Contact Person: Dr. Aliona Dreglea, e-mail: baikal2014@isem.sei.irk.ru

We look forward to welcoming you to picturesque Baikal region.

With best wishes, Dr. Denis Sidorov

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Two PhD Positions in Inverse Problems/Tomography

DTU Compute (www.compute.dtu.dk/english) invites applications for two 3-year PhD positions starting Sept. 1 2014 in the section for Scientific Computing. The positions are affiliated with the project High-Definition Tomography (HD-Tomo, www.imm.dtu.dk/~pcha/HDtomo) financed by the European Research Council.

Project 1: Prior-Driven Diffusion Regularization for Inverse Problems

We consider a special type of regularization based on (often nonlinear and anisotropic) diffusion, in which the diffusivity is designed using prior information. Such methods are well-understood in image analysis in the context of denoising, but for solving general inverse problems in tomography little is known. The results from image analysis will serve as the starting point for the project, and we will both seek to advance the theory in the field and develop algorithms for a computational approach to the problem.

For more details, see www.dtu.dk/job/job?id=76e0ea51-7993-4c48-a2bd-0862cb13c2e9

Project Description 2: Segmentation-Driven Tomographic Reconstruction

We consider tomographic reconstruction aimed at subsequent segmentation. Based on certain applications such as porous materials analysis, we will incorporate many kinds of prior information in order to produce more suitable reconstructions for the segmentation. One obvious advantage is that with the help of "better" reconstruction results the segmentation can be simplified and become more robust to the parameter selection, e.g., a simple thresholding technique may suffice. Concerning prior information in porous material, we will design new mathematical models and numerical algorithms to obtain new kinds of tomographic reconstruction, which can benefit the segmentation.

For more details, see www.dtu.dk/job/job?id=308ccaea-44d8-46a3-88e8e52cb5a1d07f

Candidates for both positions must have a master degree in applied mathematics, or equivalent academic qualifications, and must have a strong background in applied mathematics and numerical computations.

Applications must be submitted ONLINE in English as one single PDF, and we must have your online application by March 30. Please open the link in the red bar in the top of the page: "apply online".

More information can be obtained from Prof. Per Christian Hansen (pcha@dtu.dk), Assoc. Prof. Kim Knudsen (kiknu@dtu.dk), and Assist. Prof. Yiqiu Dong (yido@dtu.dk).

Submitted by: Kim Knudsen, Lektor, DTU Compute Danmarks Tekniske Universitet http://www.dtu.dk/images/DTU\_email\_logo\_01.gif Institut for Matematik og Computer Science Matematiktorvet, Bygning 303 B, 2800 Kgs. Lyngby Direkte telefon 45253026 k.knudsen@mat.dtu.dk www.mat.dtu.dk/ ------

Subject: Call for nomination: MediaV Young Researcher Award From: Jenn-Nan Wang <jnwang@math.ntu.edu.tw> Date: 2/25/2014

Call for nomination: MediaV Young Researcher Award

The biannual international conference on inverse problems in the Asia-Pacific region (International Conference on Inverse Problems and Related Topics) established the MediaV Young Researcher Award in 2010 with a generous donation from the MediaV Information Technology (Shanghai) Co Ltd. This prize is awarded to scholars at the age of 40 or less who have made important contributions to the field of inverse problems. At most two awardees are given and the recipients will be invited to give plenary speeches in ICICP 2014. Each awardee will receive RMB 5,000 and a certificate. The award will be presented during the opening ceremony of the conference on December 15, 2014. The chair of the selection committee for the MediaV Young Researcher Award in 2014 is Prof. Dr. Alfred K. Louis.

For nomination, please send candidate's CV, two reference letters (email is acceptable) and two published papers of the candidate to the committee chair Prof. Dr. A. K. Louis at sek-louis@num.uni-sb.de before August 31, 2014.

Previous MediaV Young Researcher Award recipients:

2010, Shuai Lu (Fudan University, Shanghai, China)

2012, Bangti Jin (University of California, Riverside, USA), Mikko Salo (University of Jyvaskyla, Finland)

For further information about the award and the conference in 2014, please link to http://homepage.ntu.edu.tw/~jnwang/icip2014

Submitted by: Jenn-Nan Wang, Institute of Applied Mathematics National Taiwan University, Taipei 106, Taiwan email: jnwang@math.ntu.edu.tw web: http://www.math.ntu.edu.tw/~jnwang

Subject: Contents for Journal of Inverse and Ill-Posed Problems From: <noreply@degruyter.com> Date: 2/1/2014

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Submitted by: Dr. Romas Baronas, Deputy-Editor-in-Chief, Nonlinear Analysis: Modelling and Control, http://www.mii.lt/NA/