Volume 27, Number 07 IPNet Digest June 18, 2020 Today's Editor: Patricia (Patti) K. Lamm, Michigan State University Today's Topics: Doctoral Positions: Modeling, Analysis, Optimization at U. Klagenfurt, Austria Doctoral Position: Numerics in Acoustic Scattering Problems at IANM Post-doc Position: Information in Healthcare Hub (CMIH) at U. Cambridge Table of Contents: Inverse Problems in Science and Engineering 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: Kaltenbacher, Barbara <Barbara.Kaltenbacher@aau.at> Subject: Job announcement at the University of Klagenfurt, Austria Date: May 28, 2020 Dear colleagues, I am happy to announce that the Austrian Science Fund (FWF) has granted the doc.funds doctoral school Modeling - Analysis - Optimization of discrete, continuous, and stochastic systems: https://urldefense.com/v3/ http://www.math.aau.at/doctoralschool ;!!HXCxUKc!m1QMQ-1DnOgycs0b5t1F4jtAtd26AyJVg1LHkuajZ5EzzdTpIje7qrKwfAR69iZINvivDJI\$ For this doctoral school we announce 12 doctoral positions - the announcement can be found at https://urldefense.com/v3/__https://www.aau.at/wp-content/uploads/2020/05/324-20_12_A-Text_Senior-Scientist-Dokt.stellen-doc.funds_glob_FWF_STAT.pdf__;!!HXCxUKc!m1QMQ-1DnOgycs0b5t1F4jtAtd26AyJVg1LHkuajZ5EzzdTpIje7qrKwfAR69iZI41NcakA\$ So if you know any potential candidates, we would be very pleased if you could forward this announcement to them or if you could recommend them to us. Thank you very much and best wishes, Barbara Kaltenbacher -----From: "Zhang, Ruming (IANM)" <ruming.zhang@kit.edu> Subject: Job offer for publication Date: Thursday, June 4, 2020

Doctoral Researcher (f/m/d) in Applied Mathematics, 75% "High order numerical methods for acoustic scattering problems with locally perturbed periodic structures"

Job description

The project is funded by the German Research Foundation (DFG), starts on October 01, 2020. The aim of this project is to design high order numerical methods to simulate time-harmonic acoustic scattering problems, which are modelled by Helmholtz equations, in three-dimensional spaces. Numerical analysis and numerical experiments will be carried out to investigate both the convergence and efficiency of the newly proposed numerical methods.

We seek for an ambitious doctoral researcher with strong interest in the numerical methods for partial differential equations. The position is to be started on October 01, 2020. You will have the opportunity to attend conferences, workshops and summer schools. Engagement in teaching is encouraged.

The doctoral researcher will be integrated into the Collaborative Research Center (CRC) 1173 "Wave Phenomena" (waves.kit.edu). The CRC provides an inspiring, attractive, interdisciplinary, and internationally recognized scientific environment with access to excellent facilities of the KIT, a wide scope of advanced training options within our integrated research training group, and flexible working time models. The CRC aims at the implementation of equal opportunities; it promotes diversity and supports persons with childcare or eldercare responsibilities as well as persons with disabilities. Funds for travel and guests are available through the CRC.

Personal qualification

The following qualifications are required:

• Excellent Master or an equivalent degree in Applied Mathematics

Strong background in numerical methods for partial differential equations

Very good knowledge of programming (MATLAB, C++, ...)

If possible, basic knowledge of parallel computing

• We expect excellent writing and oral communication skills in English along with the ability to work independently within an international team.

Applications should include a cover letter, a curriculum vitae,

• a statement of research interest, contact information for two referees, and copies of degree certificate(s)

Salary Salary category E13, depending on the fulfillment of professional and personal requirements.

Organizational unit Institute for Applied and Numerical Mathematics (IANM)

Starting date 01.10.2020

Contract duration limited to three years

Application up to 30.06.2020

Contact person in line-management For further information, please contact Dr. Ruming Zhang, email: ruming.zhang@kit.edu, or Ms. Laurette Lauffer, email: laurette.lauffer@kit.edu

Application Please apply online using the following link: http://www.pse.kit.edu/karriere/joboffer.php?id=34389&language=en

Personnel Support is provided by Ms Brückner Telefon: +49 721 608-42016, Kaiserstr. 12, 76131 Karlsruhe

We prefer to balance the number of employees (f/m/d). Therefore we kindly ask female applicants to apply for this job.

If qualified, severely disabled persons will be preferred.

Submitted by: Ruming Zhang

From: CMIH admin <cmihadmn@hermes.cam.ac.uk> on behalf of CMIH Admin <cmih@maths.cam.ac.uk> Subject: Postdoc position in Data Science for Healthcare at Cambridge University Date: June 12, 2020

I am writing on behalf of Professor Carola Schönlieb to invite applications for a Post Doctoral Research Associate to work in the EPSRC Cambridge Mathematics of Information in Healthcare Hub (CMIH) at the University of Cambridge.

The Hub is a collaboration between mathematics, statistics, computer science, medicine, and clinicians, and aims to develop rigorous and clinically practical algorithms for analysing healthcare data for personalised diagnosis and treatment as well as target identification and validation at the population level. Furthermore, this will focus on some of the most challenging public health problems, namely: cancer, cardiovascular disease, and dementia.

Applicants must have (or be about to receive) a PhD degree in mathematics or statistics (or a closely related discipline). The ideal candidate will be experienced in one or more of the following areas: statistical shape analysis, functional data analysis, longitudinal data analysis, machine learning, inverse problems, computational analysis, optimisation and/or data science. Experience in parallel computing and C programming skills are desirable.

The closing date for applications is 12th July 2020.

Informal enquiries can be made to: LE23160@maths.cam.ac.uk

For further information and application instructions please visit http://www.jobs.cam.ac.uk/job/25962/

Many thanks, Josh Submitted by: Josh Stevens Coordinator of the EPSRC CMIH University of Cambridge Wilberforce Road CB3 ØWA +44 (0)1223 338177 www.cmih.maths.cam.ac.uk From: "alerts@tandfonline.com" <alerts@tandfonline.com> Subject: Inverse Problems in Science and Engineering, Volume 28, Issue 6, June 2020 is now available online on Taylor & Francis Online Date: May 28, 2020 Inverse Problems in Science and Engineering June 2020 Volume 28, Issue 6, June 2020 Table of Contents An extended direct factorization method for inverse scattering with limited aperture data Koung Hee Leem, Jun Liu & George Pelekanos Prediction of nonlinear viscoelastic behaviour of simulative soil for deep-sea sediment using a thermodynamically compatible model S. Sumith, K. Sangam, K. Kannan & K. Shankar On the choice of Lagrange multipliers in the iterated Tikhonov method for linear ill-posed equations in Banach spaces M. P. Machado, F. Margotti & A. Leitão Source strength identification problem for the three-dimensional inverse heat conduction equations Tao Min, Shunquan Zang & Shengnan Chen Comparison of TVcDM and DDcTV algorithms in image reconstruction Zhiwei Qiao, Gage Redler, Shaojie Tang & Zhiguo Gui Application of an adaptive MCMC method for the heat flux estimation Zhou Yu, Qian Wei-qi & Shao Yuan-pei An improved generalized flexibility matrix approach for structural damage detection Haifeng Liu & Zhengguang Li Compton-scattering tomography with one source and one detector: a simple derivation of the filtered-backprojection solution Stephen J. Norton

https://www.tandfonline.com/toc/gipe20/28/6

From: "noreply@iopscience.org" <noreply@iopscience.org> Subject: Inverse Problems, Volume 36, Number 6, June 2020 Date: June 18, 2020

Inverse Problems June 2020 Table of Contents Volume 36, Number 6

Publisher's Announcement

Preface

Optimal control and inverse problems Christian Clason and Barbara Kaltenbacher

Special Issue Papers

Bilevel optimization, deep learning and fractional Laplacian regularization with applications in tomography Harbir Antil, Zichao Wendy Di and Ratna Khatri

Non-unique games over compact groups and orientation estimation in cryo-EM Afonso S Bandeira, Yutong Chen, Roy R Lederman and Amit Singer

Data assimilation in price formation Martin Burger, Jan-Frederik Pietschmann and Marie-Therese Wolfram

Radiative transport model for coherent acousto-optic tomography Francis J Chung, Jeremy G Hoskins and John C Schotland

Papers

Inverse problems for one dimensional conformable fractional Dirac type integro differential system Baki Keskin

Numerical results for Saito's uniqueness theorem in inverse scattering theory Teemu Tyni

The bound-state soliton solutions of the complex modified KdV equation Yongshuai Zhang, Xiangxing Tao and Shuwei Xu

A parameter choice rule for Tikhonov regularization based on predictive risk Federico Benvenuto and Bangti Jin

NETT: solving inverse problems with deep neural networks Housen Li, Johannes Schwab, Stephan Antholzer and Markus Haltmeier

Uniqueness criteria in multi-energy CT Guillaume Bal and Fatma Terzioglu Local solvability of an inverse problem to the Navier-Stokes equation with memory term Yu Jiang, Jishan Fan, Sei Nagayasu and Gen Nakamura

A dual approach to Kohn-Vogelius regularization applied to data completion problem Fabien Caubet and Jérémi Dardé

Limiting boundary correctors for periodic microstructures and inverse homogenization series Fioralba Cakoni, Shari Moskow and Tayler Pangburn

Direct algorithm for reconstructing small absorbers in thermoacoustic tomography problem from a single data Hanin Al Jebawy and Abdellatif El Badia

The inverse problem of reconstructing reaction-diffusion systems Barbara Kaltenbacher and William Rundell

Bayesian approach to inverse time-harmonic acoustic scattering with phaseless far-field data Zhipeng Yang, Xinping Gui, Ju Ming and Guanghui Hu

https://iopscience.iop.org/issue/0266-5611/36/6
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