IPNet Digest Volume 29, Number 01 January 24, 2022 Today's Editor: Patricia (Patti) K. Lamm, Michigan State University Today's Topics: Advanced Course & Symposium: AI & Neuroscience (ACAIN 2022), Tuscany, Italy Symposium: Theoretical Electrical Engineering (ISTET 2022), Szczecin, Poland Research Fellowship: Artificial Intelligence for Imaging at UCL Postdoc: Complex Systems Modeling, incl. Inverse Problem Approaches, WLU, Waterloo Postdoc: Applied/Comp. Mathematics, incl. Inverse Problems, CUHK, Hong Kong New Book: Inverse Problems with Applications in Science and Engineering Table of Contents: Inverse Problems Table of Contents: Inverse Problems & Imaging Submissions for IPNet Digest: Mail to ipnet-digest@math.msu.edu Information about IPNet: https://ipnet.math.msu.edu/ From: ICAS <info@icas.cc> Date: Friday, January 14, 2022 Subject: 1st CfP 2nd Int. Advanced Course & Symposium on AI & Neuroscience -ACAIN 2022, 19-22 Sept. 1st Call for Participation and Papers #ACAIN2022, the 2nd International Advanced Course & Symposium on Artificial Intelligence & Neuroscience September 19–22, 2022, Certosa di Pontignano, Tuscany, Italy (https://www.lacertosadipontignano.com/en/) ACAIN 2022, an Online & Onsite Event! LECTURERS: Ila Fiete, MIT, USA Karl Friston, University College London, UK & Wellcome Trust Centre for Neuroimaging Wulfram Gerstner, EPFL, Switzerland Christopher Summerfield, Oxford University, UK Max Erik Tegmark, MIT, USA & Future of Life Institute More Lecturers and Speakers to be announced soon!

W: https://acain2022.artificial-intelligence-sas.org

E: acain@icas.cc
NEWS: https://acain2022.artificial-intelligence-sas.org/category/news/
Past Edition: https://acain2021.artificial-intelligence-sas.org

Early Registration (Course): by March 23 (AoE)
https://acain2022.artificial-intelligence-sas.org/registration/

Paper Submission (Symposium) : by Saturday April 23 (AoE)
https://acain2022.artificial-intelligence-sas.org/symposium-call-for-papers/
https://easychair.org/conferences/?conf=acain2022

See you in Tuscany !

ACAIN 2022 Organizing Committee.

W: https://acain2022.artificial-intelligence-sas.org
E: acain@icas.cc
Previous edition: https://acain2021.artificial-intelligence-sas.org

From: International Symposium on Theoretical Electrical Engineering <istet@zut.edu.pl> Date: Wednesday, January 19, 2022 Subject: XXI International Symposium on Theoretical Electrical Engineering, ISTET 2022, June 28th-30th, 2022

Dear colleagues and members of the scientific community,

It is with great pleasure to announce that the XXI International Symposium on Theoretical Electrical Engineering, ISTET 2022, will be held on June 28th–30th, 2022, in Szczecin, Poland. Due to the epidemiological situation of COVID–19, the Organizing Committee decided that the conference will be held online.

The 21st edition of ISTET conference will be organized by the Faculty of Electrical Engineering of the West Pomeranian University of Technology, Szczecin. The ISTET symposium series is devoted to research and education in theory and applications of electromagnetic fields, electrical and electronic circuits, signal processing, and the design and control of electromagnetic systems.

We invite members of the scientific community in universities, research centers, and industry to attend the conference and present their recent achievements. Abstract submission deadline will be April 30th, 2022. Authors of accepted and presented papers will be invited to submit a full paper that will be considered for publication in COMPEL journal.

The first call of abstract submission as well, as more information about the conference (information for authors, submission, and registration details) will be provided soon on the ISTET'22 webpage http://istet.zut.edu.pl/

We look forward to meeting all of you at the ISTET 2022.

Tomasz Chady (Chairman of the Organizing Committee) Przemyslaw Lopato, (Vice-Chairman of the Organizing Committee)

From: "Betcke, Marta" <m.betcke@ucl.ac.uk>
Date: Wednesday, January 12, 2022
Subject: Research Fellowship in Artificial Intelligence for Imaging at UCL

Research Fellowship in Artificial Intelligence for Imaging at UCL

Application deadline: 21 February 2022

We would like to bring to your attention Research Fellowship in Artificial Intelligence for Imaging at the Department of Computer Science at UCL. The position is funded by Learned Exascale Computational Imaging (LEXCI) programme for the first two years with an option of subsequent employment as a staff scientist at UCL Advanced Research Computing (ARC) Centre.

The goal of LEXCI is to develop a new paradigm of exascale computational imaging, integrating hybrid model and data based approaches with uncertainty quantification at large scale and in distributed environments. During the project lifetime the team will focus on applications to imaging from observations of the next-generation of radio interferometric telescopes and imaging of neuronal pathways in the human brain through diffusion MRI.

LEXCI is driven by a multi-disciplinary team of experts in machine learning, statistics, applied mathematics, physics, high-performance computing, and software research engineering, led by Prof. Jason McEwen (UCL MSSL), Assoc. Prof. Marta Betcke (UCL CS), Rev. Dr Jeremy Yates (UCL CS), and Assoc. Prof. Marcelo Pereyra (Heriot-Watt University).

The successful candidate will be working with Dr Marta Betcke and focus in particular on numerical methods development and algorithmic challenges in the context of big data and large scale, distributed hybrid architectures. They will also collaborate with Research Software Engineers in LEXCI team on deployment on modern and future high-performance computing infrastructure and with application domain specialists on knowledge transfer (astronomy, medical imaging and beyond).

This post is available to start as soon as possible but not later than September 2022 and is funded for 24 months in the first instance with the option of transitioning to an open-ended appointment as a staff scientist within UCL Advanced Research Computing (ARC) Centre at the end of this period, subject to satisfactory performance evaluation.

Please direct informal enquiries at Marta Betcke (m.betcke@ucl.ac.uk).

Further information and the application link (submission deadline 21 February

2022) are available at

https://atsv7.wcn.co.uk/search_engine/jobs.cgi?SID= amNvZGU9MTg4MTE3MCZ2dF90ZW1wbGF0ZT05NjUmb3duZXI9NTA0MTE30CZvd25lcnR5cGU9ZmFpciZi cmFuZF9pZD0wJmpvYl9yZWZfY29kZT0x0DgxMTcwJnBvc3RpbmdfY29kZT0yMjQ=

Submitted by: Dr Marta M. Betcke, Associate Professor Dept. Computer Science, University College London9, 0 High Holborn, WC1V 6LJ London, UK Email: m.betcke@ucl.ac.uk Tel: +44 (0)20 3549 5568 (Direct Dial)

From: "Prof. Roderick Melnik" <rmelnik@wlu.ca> Date: Monday, January 17, 2022 Subject: Postdoc Position, M3AI Lab/MS2Discovery, WLU in Waterloo, Canada

Postdoc Position, M3AI Lab/MS2Discovery, WLU in Waterloo, Canada

Applications are invited for a Postdoctoral Position in Modeling for Complex Systems, with a focus on data-dependent methods and application areas, including inverse problem approaches, highlighted on the webpage given below. The successful candidate will be part of the research program in mathematical modeling and computational & data sciences at the Laurier M3AI Lab and MS2Discovery Institute in Waterloo, Canada. Further information about the position and how to apply can be found at the following website:

http://m2netlab.wlu.ca/research/current-openings.html

The position is available from March 1, 2022, and will start at the mutually agreed date, but no later than September 1, 2022. The review of applications will begin immediately and continue until the position is filled.

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Submitted by:
Prof Dr Roderick Melnik,
Tier I Canada Research Chair in Mathematical Modelling,
M3AI @ MS2Discovery Interdisciplinary Research Institute,
Board of Directors | Founding Director |
WLU, 75 University Avenue West, Waterloo, ON, Canada, N2L 3C5 |
https://researchcentres.wlu.ca/ms2discovery-interdisciplinary-research-institute
/
| Institute | http://www.m3ai.wlu.ca | Lab | Mind - Mathematical Models - AI |
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From: Bangti Jin bangti.jin@gmail.com (via NA-Digest) Date: January 21, 2022 Subject: Postdoc Position, CUHK, Hong Kong

The Department of Mathematics, The Chinese University of Hong Kong invites the application for one postdoc position in applied and computational mathematics, to work with Prof. Bangti Jin, in the following areas: inverse problems, numerical analysis and machine learning. Candidates must have obtained a PhD preceding the start date of appointment in Mathematics, Applied Mathematics, Computer Science, Statistics, or related fields, and have a strong background and track record of accomplishment in inverse problems, numerical analysis or machine learning. The review of applications will start on February 5, 2022, and will continue until the position is filled. Early application is strongly encouraged.

Further details of the position and the application procedure can be found at the following link: https://urldefense.com/v3/__https://sites.google.com/view/bangtijin/opening__;!! HXCxUKc!nAzOMrLWXqaTHzaUZk-Sh7lsnQXD-r9ZCq6BDsH5ewNBcL4f09h56UJmdS-y_ywT\$

From: Daniel Lesnic <D.Lesnic@leeds.ac.uk>
Date: Wednesday, December 22, 2021
Subject: new book

A new book in inverse problems has been published.

Lesnic, D. (2021) Inverse Problems with Applications in Science and Engineering, CRC Press, Taylor & Francis Group, Abingdon, UK. ISBN: 978-0-367-00198-8 (hardback), ISBN: 978-1-032-12538-1 (paper back), ISBN: 978-0-429-40062-9 (e-back). DOI: 10.201/9780429400629.

The book examines thoroughly some representative classes of inverse and improperly-posed problems for partial differential equations governing a wide range of physical phenomena. The natural practical applications arise in heat transfer, electrostatics, porous media, fluids and acoustics. Intended readers of the book include postgraduate students and post-doctoral fellows from qualitatively-oriented fields of mathematical sciences and engineering, as well as scientists and researchers from either academic and industrial settings, where inverse problems naturally occur.

Submitted by: Daniel Lesnic Department of Applied Mathematics, University of Leeds, UK

From: noreply@iopscience.org Date: January 17, 2022 Subject: Inverse Problems, Volume 38, Number 1, January 2022

Inverse Problems

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Special Issue Article

A variational non-linear constrained model for the inversion of FDEM data A Buccini and P Díaz de Alba Papers

An accelerated majorization-minimization algorithm with convergence guarantee for non-Lipschitz wavelet synthesis model Yanan Zhao, Chunlin Wu, Qiaoli Dong and Yufei Zhao A noniterative reconstruction method for solving a time-fractional inverse source problem from partial boundary measurements R Prakash, M Hrizi and A A Novotny Factorization method with one plane wave: from model-driven and data-driven perspectives

. Guangiu Ma and Guanghui Hu

Estimate the spectrum of affine dynamical systems from partial observations of a single trajectory data Jiahui Cheng and Sui Tang

Local saddles of relaxed averaged alternating reflections algorithms on phase retrieval Pengwen Chen

The Dantzig selector: recovery of signal via ℓ_1 – $\alpha\ell_2$ minimization Huanmin Ge and Peng Li

Levenberg-Marquardt method for ill-posed inverse problems with possibly non-smooth forward mappings between Banach spaces Vu Huu Nhu

Joint estimation of Robin coefficient and domain boundary for the Poisson problem Ruanui Nicholson and Matti Niskanen

Determination of a spatial load in a damped Kirchhoff–Love plate equation from final time measured data D Anjuna, K Sakthivel and A Hasanov

https://iopscience.iop.org/issue/0266-5611/38/1

From: AIMS Updates <updates@aims-newsletter.org> Date: Monday, January 24, 2022 Subject: New Issue IPI: Now Available Online

Inverse Problems & Imaging(IPI)

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Research Articles:

A stable non-iterative reconstruction algorithm for the acoustic inverse boundary value problem Tianyu Yang and Yang Yang

Overcomplete representation in a hierarchical Bayesian framework Monica Pragliola, Daniela Calvetti and Erkki Somersalo

Inverse problems for a half-order time-fractional diffusion equation in arbitrary dimension by Carleman estimates Xinchi Huang and Atsushi Kawamoto

A mathematical approach towards THz tomography for non-destructive imaging Simon Hubmer, Alexander Ploier, Ronny Ramlau, Peter Fosodeder and Sandrine van Frank

On numerical aspects of parameter identification for the Landau-Lifshitz-Gilbert equation in Magnetic Particle Imaging Tram Thi Ngoc Nguyen and Anne Wald

https://www.aimsciences.org/journal/1930-8337
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