IPNet Digest	Volume 29,	Number 08	May 22 , 2022		
Today's Editor:	Patricia (Patti) K. Lamm,	Michigan State University		
Today's Topics: Conference: In PhD Position: Lectureships: Postdoc: Machi Berlin Table of Conte	verse Problems Mathematics of Mathematics for ine Learning, al ents: Inverse Pr	in Analysis Deep Learnin Healthcare, so Inverse F	and Geometry, U. Helsinki ng, University College London, University of Liverpool Problems, Image Processing, TU	UK	
Submissions for IPNet Digest: Mail to ipnet-digest@math.msu.edu					
<pre>Information about 1 https://ipnet.</pre>	[PNet: math.msu.edu/				
From: "Zewde, Hewar Date: Tuesday, May Subject: Inverse Pr	A" <hewan.zewd 17, 2022 oblems conferen</hewan.zewd 	e@helsinki.f ce at the Un	fi> niversity of Helsinki		
My name is Hewan and I am the project coordinator of Finnish Centre of Excellence in Inverse and Imaging, at the University of Helsinki. We have an upcoming one week conference, scheduled between August 1, 2022 and August 5, 2022.					

I am writing you to kindly ask if you could promote the conference to your subscribers in your circle. We would like to warmly welcome your subscribers to attend the conference in its entirety or in one or more of the days they wish to.

The conference "Inverse problems in analysis and geometry" will focus on recent progress in the mathematical theory of inverse problems and related methods in analysis and geometry. It will also celebrate the 70th birthday of Gunther Uhlmann, who is a leading expert in the field of inverse problems and former FiDiPro professor at the University of Helsinki.

This workshop aims to bring together some of the most prominent experts in the mathematical theory of inverse problems and closely related fields to present state- of-the-art results and address open problems. It will also provide a venue for promising young researchers to present their work, and to foster interaction between experts in different disciplines.

The conference is part of the activities of the Finnish Inverse Problems Society and of the Centre of Excellence in Inverse Modelling and Imaging. The organizers gratefully acknowledge support from the Federation of Finnish Learned Societies, the Finnish Academy of Science and Letters (Mathematics fund), Horizon 2020 under ERC CoG 770924, and the University of Helsinki.

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You can find more information about the conference here.
https://www.helsinki.fi/en/conferences/inverse-problems-analysis-and-geometry#:~
:text=The%20conference%20%22Inverse%20problems%20in,methods%20in%20analysis%
20and%20geometry.
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Please do let me know if there is any additional information you require from me.

Submitted by: Hewan Zewde Project coordinator Finnish Centre of Excellence in Research of Sustainable Space (FORESAIL) Finnish Centre of Excellence in Inverse Modelling and Imaging Mob: +358 29 412 1665

From: "Jin, Bangti" <b.jin@ucl.ac.uk> Date: Friday, May 13, 2022 Subject: PhD Position in Mathematics of Deep Learning, University College London, UK

The Department of Computer Science at University College London (UCL) is inviting applications for a fully funded 4-year PhD studentship (UK students only), under the supervision of Prof. Simon Arridge, supported by earmarked funding for The Mathematics for Deep Learning programme grant. The programme grant is a five year, EPSRC funded project between UCL, Cambridge, and University of Bath that aims to develop significant new mathematical, statistical and computational methods for understanding and progressing Deep Learning, with applications in medical imaging, inverse problems, scientific computing and meteorology.

The position is an opportunity to conduct cutting-edge research at the intersection of machine learning, scientific computing and inverse problems. The student will develop innovative mathematical and algorithmic techniques inspired by deep learning and training paradigms for solving forward and inverse problems modelled by partial differential equations at large scales. The PhD project will involve extensive implementation and testing for applications addressed by the programme consortium, and will work closely with other academic and industrial partners to ensure that translation to real applications will be realised.

The deadline for application is June 30, 2022. For enquiries about the project and its application please contact Dr. Bangti Jin (b.jin@ucl.ac.uk).

From: "Chen, Ke" <cmchenke@liverpool.ac.uk>

Date: Tuesday, May 17, 2022

Subject: 2 Lectureships in Mathematics for Healthcare at University of Liverpool

We are seeking to further expand our strong team in the the area of Mathematics

for Healthcare through the appointment of two Permanent Lecturers. The post is in the Department of Mathematical Sciences, which is part of the School of Physical Sciences at the University of Liverpool. You should have a PhD in Mathematics and have an excellent track record in the area of Mathematics applied to Healthcare, including publications in internationally recognised journals and the ability to attract external research funding. You should have an enthusiasm for teaching diverse cohorts, and be interested in developing a research-connected curriculum. You will play a part in the development of the department through extending existing research networks within the University, and building new networks nationally and internationally. The School of Physical Sciences is an Athena SWAN Silver Award holder and is committed to encouraging, developing and supporting women in their research and academic careers. We are working to create an inclusive environment which values a diverse workforce and we recognise that many individuals value flexibility in their work/life balance. Therefore, this post may be taken up on a Part-Time (a minimum of 0.5 FTE) or Full-Time basis (including a Job Share). We strongly encourage applications from groups underrepresented within our workforce, in particular women.

Deadline: 23:30 on Tue 7 June

The University reserves the right to close the vacancy early if it is deemed that there have been enough applications received

Furher details from: http://tinyurl.com/4de4jxu2

From: Gabriele Steidl steidl@math.tu-berlin.de (via NA-Digest) Date: May 09, 2022 Subject: Postdoc Position, TU Berlin

Research Assistant with a follow-up commitment - Entgeltgruppe 13 TV-L Berliner Hochschulen. Faculty II - Institute of Mathematics; Reference number: II-285/22 For 4 years with a follow-up promise for a permanent position according to 110 Abs. 6 Berliner Hochschulgesetz (Berlin Higher Education Act)

Application deadline: 30. Juni 2022

The position is located in the Modeling, Numerics and Differential Equations group.

Job Description: Contribute to research and teaching in the field of applied analysis with experience in machine learning. In particular, the candidate should be experienced in one of the areas of Inverse problems, Harmonic Analysis, Mathematical image and data processing (including geometric/stochastic/variational aspects), Functional Analysis. Teaching responsibilities at the Department of Mathematics /4 SWS with full-time appointment). Expected Qualifications: Successfully completed academic university degree (Master's, Diploma or equivalent) in Mathematics. Completed doctoral degree in mathematics of outstanding quality. In-depth knowledge in the above areas supported by publications in peer-reviewed journals. Initial teaching experience. Very good ability to work in a team.

A follow-up commitment will be agreed with the position holder in accordance with S110 Abs. 6 Berliner Hochschulgesetz. In the last year of employment, an evaluation of the criteria listed in the follow-up commitment will take place. If these criteria are fulfilled, a permanent employment contract as a research assistant at the Institute of Mathematics will be concluded after the fixed-term employment. In addition to active research at the Institute and a teaching load of 8 SWS, this includes the assumption of administrative tasks at the Institute of Mathematics, which will be agreed upon in the follow-up commitment.

Please send your application with the usual documents (in a PDF document, max. 5 MB) by e-mail to steidl@math.tu-berlin.de, quoting the reference number: II-285/22

The job advertisement is also available on the Internet at: https://urldefense.com/v3/__https://tub.stellenticket.de/de/offers/133547__;!! HXCxUKc!2lXTwTN4HgIJK6YPBinqbmqnYyHjQz6MIr9o0c5JMsi6J0i9Ff5eEIv4Ahv28a070w0Ugij-PIzeN-t61AhP40pHzg9ISb8dhtY\$

From: noreply@iopscience.org Date: May 21, 2022 Subject: Contents, Inverse Problems, Volumes 37-38

Inverse Problems July 2021 Volume 37, Number 7 Table of Contents

Papers:

A fast image reconstruction method for planar objects CT inspired by differentiation property of Fourier transform (DPFT) Shusen Zhao, Dimeng Xia and Xing Zhao

Structure analysis of direct sampling method in 3D electromagnetic inverse problem: near- and far-field configuration Sangwoo Kang and Marc Lambert

Lippmann-Schwinger-Lanczos algorithm for inverse scattering problems V Druskin, S Moskow and M Zaslavsky

Sampling for the V-line transform with vertex on a circle Duy N Nguyen and Linh V Nguyen Unique recovery of unknown spatial load in damped Euler-Bernoulli beam equation from final time measured output Alemdar Hasanov, Vladimir Romanov and Onur Baysal

Sequentially optimized projections in x-ray imaging M Burger, A Hauptmann, T Helin, N Hyvönen and J-P Puska

A projective two-point gradient Kaczmarz iteration for nonlinear ill-posed problems Guangyu Gao, Bo Han and Shanshan Tong

On the simultaneous reconstruction of boundary Robin coefficient and internal source in a slow diffusion system Mengmeng Zhang and Jijun Liu

A stochastic alternating direction method of multipliers for non-smooth and non-convex optimization Fengmiao Bian, Jingwei Liang and Xiaoqun Zhang

Corrigendum: The enclosure method for a generalized anisotropic complex conductivity equation (2021 Inverse Problems 37 055010) Rulin Kuan

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Papers:

Conforming and nonconforming finite element methods for biharmonic inverse source problem M Thamban Nair and Devika Shylaja

Distributed least squares prediction for functional linear regression Hongzhi Tong

On stochastic Kaczmarz type methods for solving large scale systems of ill-posed equations J C Rabelo, Y F Saporito and A Leitão

Reduced order model approach for imaging with waves Liliana Borcea, Josselin Garnier, Alexander V Mamonov and Jörn Zimmerling

F -convergence of Onsager-Machlup functionals: I. With applications to maximum a posteriori estimation in Bayesian inverse problems Birzhan Ayanbayev, Ilja Klebanov, Han Cheng Lie and T J Sullivan

F-convergence of Onsager-Machlup functionals: II. Infinite product measures on Banach spaces Birzhan Ayanbayev, Ilja Klebanov, Han Cheng Lie and T J Sullivan Imaging of 3D objects with experimental data using orthogonality sampling methods Thu Le, Dinh-Liem Nguyen, Hayden Schmidt and Trung Truong High resolution 3D ultrasonic breast imaging by time-domain full waveform inversion Felix Lucka, Mailyn Pérez-Liva, Bradley E Treeby and Ben T Cox An analysis of stochastic variance reduced gradient for linear inverse problems Bangti Jin, Zehui Zhou and Jun Zou On the stability of recovering two sources and initial status in a stochastic hyperbolic-parabolic system Bin Wu and Jijun Liu Target signatures for thin surfaces Fioralba Cakoni, Peter Monk and Yangwen Zhang Fixed-distance multipoint formulas for the scattering amplitude from phaseless measurements R G Novikov and V N Sivkin Material-separating regularizer for multi-energy x-ray tomography Jacek Gondzio, Matti Lassas, Salla–Maaria Latva–Äijö, Samuli Siltanen and Filippo Zanetti

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Inverse Problems

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Papers:

A generalized quasi-boundary value method for recovering a source in a fractional diffusion-wave equation Ting Wei and Yuhua Luo

Carleman contraction mapping for a 1D inverse scattering problem with experimental time-dependent data Thuy T Le, Michael V Klibanov, Loc H Nguyen, Anders Sullivan and Lam Nguyen

Covariance kernels investigation from diffusive wave equations for data assimilation in hydrology

T Malou and J Monnier

Optimal convergence of finite element approximation to an optimization problem with PDE constraint Wei Gong, Zhiyu Tan and Zhaojie Zhou

Inverse obstacle scattering for elastic waves in the time domain Lu Zhao, Heping Dong and Fuming Ma

Real-time identification of PMSM losses through a novel past-time averaging method Amal Zeaiter, Etienne Videcog and Matthieu Fénot

An asymptotical regularization with convex constraints for inverse problems Min Zhong, Wei Wang and Shanshan Tong

A probabilistic approach to tomography and adjoint state methods, with an application to full waveform inversion in medical ultrasound Oscar Bates, Lluis Guasch, George Strong, Thomas Caradoc Robins, Oscar Calderon-Agudo, Carlos Cueto, Javier Cudeiro and Mengxing Tang

Adaptive Tikhonov strategies for stochastic ensemble Kalman inversion Simon Weissmann, Neil K Chada, Claudia Schillings and Xin T Tong

Polarimetric radar interferometry in the presence of differential Faraday rotation Mikhail Gilman and Semyon Tsynkov

Simultaneous recovery of a locally rough interface and the embedded obstacle with its surrounding medium Jiaqing Yang, Jianliang Li and Bo Zhang

Corrigendum:

Corrigendum: Quantitative signal subspace imaging (2021 Inverse Problems 37 125006) Pedro González-Rodríguez, Arnold D Kim and Chrysoula Tsogka

https://iopscience.iop.org/issue/0266-5611/38/4
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