IPNet Digest Volume 26, Number 09 October 28, 2019

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

Today's Topics:

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

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

From: ICIPE 20 <icipe20@strutture.univaq.it>
Subject: International Conference on Inverse Problems in Engineering (ICIPE 20), Abstract Deadline Extended October 31
Date: Wednesday, October 16

International Conference on Inverse Problems in Engineering (ICIPE 20), Abstract Deadline Extended October 31

Dear Colleagues,

Abstract Deadline Extended

The deadline for submitting abstracts is extended until Oct. 31, 2019. Please submit your abstract as soon as possible.

Dedication

The 10th International Conference on Inverse Problems in Engineering (ICIPE) will be held on May 18-21, 2020, in Francavilla al Mare (Chieti), Italy, in honor of Professor James V. Beck.

Scope

Papers are welcome in all areas of inverse analysis, including: mathematical and statistical aspects of inverse problems; design of experiments; inverse heat transfer; inverse analysis of structures; parameter estimation and inference; optimal design of experiments; stochastic inverse analysis and Bayesian inference; non-destructive testing; medical and industrial tomography.

Keynote Speakers

- Prof. Ryszard A. Bialecki, Silesian University of Technology, Poland
- Prof. Kyle Daun, University of Waterloo, Canada
- Prof. Denis Maillet, University of Lorraine & CNRS, France
- Prof. Jun Zou, The Chinese University of Hong Kong, Hong Kong

Conference Website: http://icipe20.univaq.it/wordpress/

Special issues and notification
- Inverse Problems in Engineering and Science - notification
- Heat Transfer Engineering – special issue
- Journal of Verification, Validation, Uncertainty and Quantification (ASME) – special issue

We are looking forward to hosting you in Francavilla al Mare, Italy!

Sincerely,
Filippo de Monte (University of L'Aquila, Italy), Conference Chair
Keith A. Woodbury (University of Alabama, USA), ICIPE Steering Committee
Kirk Dolan (Michigan State University, USA), IPS Steering Committee

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From: zhangwl <zhangwl@sustech.edu.cn>
Subject: The announcement of ICIPRT-2020 in SUSTech
Date: Wednesday, October 23, 2019

It is a pleasure to announce the International Conference on Inverse Problems and Related Topics (ICIP2019), which will be held in Shenzhen (China) on Feb 21-24, 2020. This conference is dedicated to Professor Michael Klibanov on the occasion of his seventieth birthday.

The purpose of this international conference is to provide an interdisciplinary platform for researchers around the world to present and discuss the most recent innovations, trends, and challenges in the frontier areas of inverse problems and related topics. The conference topics include but not limited to inverse problems in mathematical physics, optimal control, numerical analysis of partial differential equations (PDEs) & stochastic PDEs, efficient and robust numerical schemes for solving complex problems. This conference has been organised in cooperation with the National Science Foundation (NSF) of China, the International Center of Mathematics (ICM) of SUSTech, the Department of Mathematics of SUSTech, and Guangdong Provincial Key Laboratory for Computational Science and Material Design of SUSTech.

Organizing Committee:

Xiaoming Wang, SUSTech
Jingzhi Li, SUSTech
Hongyu Liu, HKBU
Fuming Ma, SUSTech

Last date for abstract submission: 15. 01. 2020

Journal of Inverse and Ill-Posed will publish a special issue dedicated to this conference and to the 70iest birthday of Professor Klibanov, provided that truly good papers would cover about 150 pages of this journal.

For detailed information about this conference, for registration and for abstract submissions, please visit the following website:
https://math.sustech.edu.cn/conference/11593.html

Should you accept the invitation, please reply to zhangwl@sustech.edu.cn at your earliest convenience. Should you need any assistance for Chinese visa application, we will prepare formal invitation letters for you.

Best regards,

Wenlong Zhang

From: Todd Quinto <Todd.Quinto@tufts.edu>
Subject: Organize a minisymposia at Inverse Problems Modeling and Simulation, 5/24-30, 2020
Date: Sunday, October 27, 2019

Dear Colleagues,

We would like to encourage you to consider organizing a minisymposium for The Tenth International Conference “Inverse Problems: Modelling and Simulation” (IPMS 2020), which will be held May 24-30, 2020 at the Congress Center of the Paradise Bay Hotel, Mellieħa, Malta. The IPMS conference series is one of the main scientific meetings in the field, and it has been organized every two years since 2002. The Conference IPMS 2020 is the tenth (jubilee conference) in the series and there will be a range of talks by top experts and up and coming researchers. The meeting is multidisciplinary and international, bringing together scientists working on a range of inverse problems in diverse areas.

Organizing a minisymposium is easy—you collect between 6 and 15 or so speakers with talk titles, if possible, and submit a short proposal with names to the organizing committee at ipmsconference@gmail.com by January 31, 2020. A proposal template is at http://www.ipms-conference.org/ipms2020/images/ipms2020/Minisymposium-Proposal-sample-IPMS2020.doc

For more information, including current minisymposia and plenary talks, registration, and housing, please visit

http://www.ipms-conference.org/ipms2020/index.php

Sincerely,

Todd Quinto

On behalf of the organizers: Alemdar Hasanov Hasanoglu, Chair; Roman Novikov, Otmar Scherzer, Cristiana Sebu, and myself, Cochairs

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From: CMI Admin <cmi@maths.cam.ac.uk>
Subject: OPEN DAY 2019: PhD in Mathematics of Information
Date: Wednesday, October 16, 2019

Applications are sought for the CMI PhD course in Mathematics of Information and we are holding an open day on Tuesday 12 November.

We encourage anyone interested in applying to the CMI PhD programme to come along to find out more.

The event will be held at the Centre for Mathematical Sciences, University of Cambridge (Wilberforce Road, CB3 0WA).

The provisional timetable is as follows;
1.00 Registration and lunch
2.00 Welcome and overview by CMI Directors
2.20 - 3.20 Academic staff talks
3.20 Break
3.30 Q & A
3.40 - 4.20 Student talks
4.20 Tea and coffee with staff and students
5.00 Close

Please register in advance if you are planning to attend https://forms.gle/zh6FkvcQvjXVUGfj8

To find out more, visit http://www.maths.cam.ac.uk/cmi or email cmi@maths.cam.ac.uk

Submitted by:
Tessa Blackman
Faculty of Mathematics Graduate Office
Centre for Mathematical Sciences, University of Cambridge
www.maths.cam.ac.uk/cmi

From: Min Hadler <min.hadler@univie.ac.at>
Subject: Call Eurasian Association on Inverse Problems (EAIP) Young Scientist Award
Date: Wednesday, October 9, 2019

Nominations for the EAIP Young Scientist Award are open

The Eurasian Association on Inverse Problems (EAIP) Young Scientist Award is awarded to young scientists under the age of 40 at the time of the "Inverse Problems: Modeling and Simulation" conference, May, 24th - May, 30th, 2020 in Malta.

The EAIP Young Scientist Award recognizes outstanding achievements in inverse problems analysis and its applications.

Candidates for the awards may be nominated by their organizations as well as may apply themselves. Nomination materials (Cover Letter and CV including a complete list of publications) should be submitted via email to the Conference Secretariat (ipmsconference@gmail.com) with a CC to Otmar Scherzer (otmar.scherzer@univie.ac.at). The deadline for nominations is March, 23rd, 2020.

Submitted by:
Mag.a Min Hadler
Faculty of Mathematics
University of Vienna
Oskar-Morgenstern-Platz 1
A-1090 Vienna
T +43-1-4277-55771
E min.hadler@univie.ac.at
https://urldefense.proofpoint.com/v2/url?u=http-3A__www.csc.univie.ac.at&d=DwICaQ&c=nE__W8dFE-shTxStwXtp0A&r=d_ce0_mh_PXvtyDkkix951B_s_t7QYc8Dtq82B52K8I&m=AIUQ5IsnQB7Hq0j83D24SZimIx95XHLzWkMeMlMaHiU&s=g5Tb4on5VRFvd3PNDFUIWGVJhkLCUCO2kIxa39exclo&e=
https://urldefense.proofpoint.com/v2/url?u=http-3A__mathematik.univie.ac.at_&d=DwICaQ&c=nE__W8dFE-shTxStwXtp0A&r=d_ce0_mh_PXvtyDkkix951B_s_t7QYc8Dtq82B52K8I&m=AIUQ5IsnQB7Hq0j83D24SZimIx95XHLzWkMeMlMaHiU&s=xsm7I6dxnd7krfmBRFunxVPPzSvPL_6ik8yjp42tC-U&e=

From: Naoki Saito <saito@math.ucdavis.edu>
Subject: Arthur J. Krener Assistant Professor / UCD4IDS research postdoc position, UC Davis
Date: Monday, September 30, 2019

The Department of Mathematics at the University of California, Davis, and the UC Davis TETRAPODS Institute of Data Science (UCD4IDS), funded by the NSF HDR--TRIPODS grant, are soliciting applications for the Arthur J. Krener Assistant Professor / UCD4IDS research postdoc position starting July 1, 2020.

The Department and the Institute seek applicants who demonstrate promise and the capability of developing cutting edge computational, mathematical, and/or statistical methodology pertaining to modern areas of data science that involve large and complex data, as well as effective teaching skills. In particular, those candidates whose research interests are in the following three broad themes of the Institute are strongly encouraged to apply:

1) Fundamentals of machine learning directed toward biological and medical applications;
2) Optimization theory and algorithms for machine learning including numerical solvers for large-scale nontrivial learning problems;
3) High--dimensional data analysis on graphs and networks.

Applicants are required to have completed their Ph.D. by the time of their appointment, but no earlier than July 1, 2016. The annual salary is $70,100. Appointments are renewable for a total of up to three years, upon demonstration of satisfactory performance in research and teaching. The teaching load is 2 quarter-long courses for

the first two years, and 4 quarter-long - courses for the final third year. Applications include: Cover Letter, CV, Research Statement, Teaching Statement, Letters of Reference including a letter which addresses teaching, and an optional Statement of Contributions to Diversity.
Additional information about the department may be found at http://www.math.ucdavis.edu

Applications will be accepted until the position is filled. To guarantee full consideration, the application should be received by November 30, 2019. The application is available through UCRecruit at https://recruit.ucdavis.edu/JPF03186/

The University of California, Davis, is an affirmative action/equal opportunity employer with a strong institutional commitment to the achievement of diversity among its faculty and staff.

From: C.B. Schoenlieb <cbs31@cam.ac.uk>
Subject: Two PostDoc positions in deep learning for inverse problems available at the University of Cambridge
Date: Wednesday, October 16

Dear All,

We are currently advertising two Post-Doctoral Research positions in the Department of Applied Mathematics and Theoretical Physics to work on the development of image reconstruction and image analysis methods for a novel end-to-end pipeline for cancer imaging diagnosis and treatment planning, within the Wellcome Trust project 'All in one cancer imaging optimisation using an integrated mathematical and deep learning approach'. The successful candidates will be part of the Cambridge Image Analysis (CIA) Group.

This project is a collaborative project between mathematicians in Cambridge and the Alan Turing Institute, medical researchers and clinicians from Addenbrookes hospital and Siemens. The role of this position will be to design and implement novel, cutting-edge image reconstruction and image analysis methods for Computed Tomography, to develop an end-to-end pipeline for cancer imaging diagnosis and treatment planning. This is an exceptional opportunity to conduct ambitious research whilst collaborating with an international and interdisciplinary team for designing novel developments in machine learning and inverse problems for cancer imaging.

We are looking for two excellent and ambitious postdoctoral researchers who want to join this research endeavour. The successful candidates will have:

a. A PhD degree in mathematics or a closely related subject;

b. Experience in one or more of the following: inverse imaging problems, variational reconstruction approaches, deep learning and (bio-) medical imaging;

c. Substantial experience in programming languages e.g. Python, C, R or MATLAB;

d. Strong communication skills, team player and organisation skills.

The post carries no teaching or administrative duties. There are generous funds available under the project for attending conferences and conducting research visits.

Fixed-term: The funds for this post are available for 2 years in the first instance.

The application deadline is the 15th of November 2019.

More details can be found here: https://urldefense.proofpoint.com/v2/url?u=http-3A__www.jobs.cam.ac.uk_job_23464_&d=DwIFaQ&c=nE__W8dFE-shTxStwXtp0A&r=d_ce0_mh_PXvtyDkkix951B_s_t7QYc8Dtq82B52K8I&m=9ihIsTDEpsdAAw04AdW050b8ofyyzk7F6mfDSvjxuA4&s=yo4avVcOm9zV_jEEDwT1GtE3RGAnDSBZ1t_WED2SY0o&e=

Informal inquiries can be made by contacting Prof Carola-Bibiane Schönlieb (LE20923@maths.cam.ac.uk).

Submitted by:
Carola-Bibiane Schoenlieb
DAMTP,
Centre for Mathematical Sciences,
Wilberforce Road,
Cambridge CB3 0WA,
United Kingdom.

email: c.b.schoenlieb@damtp.cam.ac.uk
web: https://urldefense.proofpoint.com/v2/url?u=http-3A__www.damtp.cam.ac.uk_user_cbs31&d=DwIFaQ&c=nE__W8dFE-shTxStwXtp0A&r=d_ce0_mh_PXvtyDkkix951B_s_t7QYc8Dtq82B52K8I&m=9ihIsTDEpsdAAw04AdW050b8ofyyzk7F6mfDSvjxuA4&s=FNLf5lMu4YJIY7yJwSO-zYuOuXHBNgJyqLtJlXnKlBA&e=

From: Jodi Mead <jmead@boisestate.edu>
Subject: Assistant Prof., Computational Applied Statistics/Mathematics, Boise State
Date: Tuesday, October 1, 2019

The Department of Mathematics at Boise State University invites applications for a tenure-track position in computational applied statistics or mathematics at the rank of assistant professor starting in fall 2020. Applicants should have strong research potential in statistical computing, optimization, numerical linear algebra or related field with connections to data-driven applications.

Boise State’s innovative transdisciplinary approach to research and education has driven its success as a metropolitan research university of distinction. Mathematics in particular leads data science efforts at both the undergraduate and graduate levels. Boise, Idaho is ranked by US News as the 4th safest city in the United States. It has a vibrant downtown, abundant recreational opportunities, pleasant weather, and the Milken Institute ranks it as the 12th best performing economy in the US.
If you are interested in this position, materials must be submitted electronically via https://www.mathjobs.org and Boise State’s application

system https://tinyurl.com/y53qhmj9 by November 30th.

Submitted by:
Jodi Mead
Professor, Department of Mathematics
co-Director, PhD in Computing
Associate Dean in Residence, Graduate College
Boise State University
http://math.boisestate.edu/~mead

From: Naoki Saito <saito@math.ucdavis.edu>
Subject: Tenure-track position on the mathematics of data science at UC Davis
Date: Thursday, October 17, 2019

The Department of Mathematics at the University of California, Davis invites applications for one Assistant Professor (tenure-track) faculty position starting July 1, 2020. This position is in the area of the mathematics of data science. Minimum qualifications for the position include a Ph.D. or its equivalent in the Mathematical Sciences or a related field and demonstrated potential for performance in teaching and research. The Ph.D. should be obtained by the beginning of Fall quarter. Duties include mathematical research, undergraduate and graduate teaching, and departmental, university and professional service.

Applications include: Cover Letter, CV, Research Statement, Teaching Statement, Letters of Reference and a Statement of Contributions to Diversity. Additional information about the Department may be found at http://www.math.ucdavis.edu .

Applications will be accepted until the position is filled. To guarantee full consideration, the application should be received by November 15, 2019. The application is available through UCRecruit @ https://recruit.ucdavis.edu/JPF02958 .

The University of California, Davis, is an affirmative action/equal opportunity employer with a strong institutional commitment to the achievement of diversity among its faculty and staff.

From: "noreply@degruyter.com" <noreply@degruyter.com>
Subject: Contents, 'Journal of Inverse and Ill-posed Problems'
Date: Tuesday, October 1, 2019

Journal of Inverse and Ill-posed Problems October 2019 Volume 27, Issue 5
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A quasi-boundary regularization method for identifying the initial value of time-fractional diffusion equation on spherically symmetric domain
Yang, Fan / Wang, Ni / Li, Xiao-Xiao / Huang, Can-Yun

Identification of an unknown spatial load distribution in a vibrating beam or plate from the final state
Van Bockstal, Karel

Reconstruction of a crack with the incident waves and measurements inside a penetrable cavity
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Learning solutions to the source inverse problem of wave equations using LS-SVM
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Solvability of interior transmission problem for the diffusion equation by constructing its Green function
Nakamura, Gen / Wang, Haibing

Comparing a distributed parameter model-based system identification technique with more conventional methods for inverse problems
Li, Jian / Luczak, Susan E. / Rosen, I. G.

On a non-stationary, non-Newtonian lubrication problem with Tresca fluid-solid law
Benterki, Djamila / Benseridi, Hamid / Dilmi, Mourad

Prescribing a heat flux coming from a wave equation
Ikehata, Masaru

Asymptotic analysis of solving an inverse boundary value problem for a nonlinear singularly perturbed time-periodic reaction-diffusion-advection equation
Lukyanenko, Dmitry V. / Shishlenin, Maxim A. / Volkov, Vladimir T.

https://www.degruyter.com/view/j/jiip.2019.27.issue-5/issue-files/jiip.2019.27.issue-5.xml

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From: "noreply@iopscience.org" <noreply@iopscience.org>
Subject: Inverse Problems, Volume 35, Number 10, October 2019
Date: Friday, October 4, 2019

Inverse Problems October 2019 Volume 35, Number 10
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Special Issue Papers:

How to solve inverse scattering problems without knowing the source term: a three-step strategy
Marie Graff, Marcus J Grote, Frédéric Nataf and Franck Assous

Generalized linear sampling method for the inverse elastic scattering of fractures in finite bodies
Thi-Phong Nguyen and Bojan B Guzina

Multi-target detection with application to cryo-electron microscopy
Tamir Bendory, Nicolas Boumal, William Leeb, Eitan Levin and Amit Singer

Scattering by a periodic tube in R^3: part i. The limiting absorption principle

Andreas Kirsch

Scattering by a periodic tube in R^3: part ii. A radiation condition
Andreas Kirsch

Pocket guide to solve inverse problems with GlobalBioIm
Emmanuel Soubies, Ferréol Soulez, Michael T McCann, Thanh-an Pham, Laurène Donati, Thomas Debarre, Daniel Sage and Michael Unser

Analysis of topological derivative as a tool for qualitative identification
Marc Bonnet and Fioralba Cakoni

Inside–outside duality with artificial backgrounds
Lorenzo Audibert, Lucas Chesnel and Houssem Haddar

Elastic energy regularization for inverse obstacle scattering problems
J Eckhardt, R Hiptmair, T Hohage, H Schumacher and M Wardetzky

Papers:

Photo-acoustic tomography in the rotating setting
Guillaume Bal and Adrian Kirkeby

Partially functional linear regression with quadratic regularization
Fode Zhang and Heng Lian

Topological sensitivity analysis for identification of voids under Navier’s boundary conditions in linear elasticity
Amel Ben Abda and Bochra Méjri

Probabilistic approach to limited-data computed tomography reconstruction
Zenith Purisha, Carl Jidling, Niklas Wahlström, Thomas B Schön and Simo Särkkä

Identification of a temporal load in a cantilever beam from measured boundary bending moment
Alemdar Hasanov and Onur Baysal

Variance-stabilization-based compressive inversion under Poisson or Poisson–Gaussian noise with analytical bounds
Pakshal Bohra, Deepak Garg, Karthik S Gurumoorthy and Ajit Rajwade

Uniqueness in phaseless inverse scattering problems with known superposition of incident point sources
Fenglin Sun, Deyue Zhang and Yukun Guo

First arrival traveltime tomography using supervised descent learning technique
Rui Guo, Maokun Li, Fan Yang, Shengheng Xu and Aria Abubakar

Relaxation algorithms for matrix completion, with applications to seismic travel-time data interpolation
Robert Baraldi, Carl Ulberg, Rajiv Kumar, Kenneth Creager and Aleksandr Aravkin

Inverse scattering in the Stark effect
Atsuhide Ishida

A scalable estimator of sets of integral operators
Valentin Debarnot, Paul Escande and Pierre Weiss

Solution paths of variational regularization methods for inverse problems
Leon Bungert and Martin Burger

Inverse coefficient problems for a transport equation by local Carleman estimate
P Cannarsa, G Floridia, F Gölgeleyen and M Yamamoto

https://iopscience.iop.org/issue/0266-5611/35/10
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