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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:
https://ipnet.math.msu.edu/

From: Matthias Ehrhardt <me549@bath.ac.uk>
Date: Thursday, October 21, 2021
Subject: Fully-funded PhD studentships in Statistical Applied Mathematics, Bath, UK

EPSRC Centre for Doctoral Training in Statistical Applied Mathematics (SAMBa)

The Centre for Doctoral Training in Statistical Applied Mathematics (go.bath.ac.uk/samba) offers a 4 year PhD programme, including an MRes qualification earned during the first year of training. Throughout the PhD you'll be working at the interface of statistics with applied and computational mathematics, and delivering high quality applied and applicable research.

SAMBa offers at least 10 fully-funded studentships starting in October each year.

SAMBa has a current cohort of 85 students whose thesis topics range from problems which are industrially motivated, to more abstract problems, and which use deterministic, probabilistic, statistical and computational mathematical tools. The department of Mathematical Sciences at Bath provides an excellent research environment and the SAMBa cohort offers invaluable peer support.

The first year of SAMBa will consist of courses, projects and symposia tailored to the individual student, together with Integrative Think Tanks. ITTs are intensive, week-long events where students work in collaboration with academics and industrialists to synthesise relevant mathematical formulations for solving industrial and cross-disciplinary

problems.

Each student will choose a supervisor or supervisory team and finalise a thesis proposal by the end of year 1. They will work on PhD research in years 2–4. Graduates from SAMBa will be ready to work in leading academic and industrial roles, collaborating with individuals from different backgrounds, and communicating effectively to both experts and nonexperts.

To find out if your application is likely to result in an interview, and to speed up the process, please send an expression of interest to the Centre Coordinator, Helena Lake, at samba@bath.ac.uk
Your expression of interest should include:
* a short statement (250 words) explaining your motivation for applying to SAMBa
* a 2-page CV which includes your academic and work experience, your nationality and country of residence (for the past three years, not including full-time education)
* scans of your academic transcript(s)
* information on where you heard about SAMBa

To apply formally to SAMBa, follow the process through our Doctoral College (https://www.bath.ac.uk/guides/how-to-apply-for-doctoral-study/).

All applications will be reviewed rapidly and promising applicants will be invited to an interview online. Successful applicants will hold, or will be expecting, a first or high upper second class honours degree (or equivalent) in mathematics, or in a subject with substantial mathematical content.

Submitted by: Matthias J Ehrhardt, PhD
Reader and Leverhulme Early Career Fellow
Department of Mathematical Sciences
Office: 6 West, 1.08, Tel: 0044 1225 38 6194
University of Bath, UK
https://mehrhardt.github.io

From: Yiqiu Dong <yido@dtu.dk>
Date: Wednesday, November 3, 2021
Subject: PhD Position on inverse problems with Besov prior, DTU, Denmark

PhD Position on inverse problems with Besov prior, DTU, Denmark

The Technical University of Denmark has an opening for a 3-year PhD position. The position is part of the research project
CUQI, Computational Uncertainty Quantification for Inverse Problems (https://www.compute.dtu.dk/english/cuqi).

This position focuses on handling inverse problems with Besov priors. In the

CUQI project we will use Besov priors that are suited for producing piecewise smooth reconstructions and for detection of edges and interfaces. This involves the use of linear combinations of wavelets/frames with random coefficients. The project requires knowledge of functional analysis and numerical computation and, preferably, harmonic analysis. Moreover, experience with inverse problems or Bayesian inference will be a plus.

For more details and to apply:
https://www.dtu.dk/english/About/JOB-and-CAREER/vacant-positions/job?id=d5c22773-a1c2-470e-9d04-e32aed78fafe .

The applicants will work in a team of PhD students, postdocs and faculty members in the Section for Scientific Computing, and they must contribute with research towards the overall goals of the CUQI
project. Applicants are expected to give limited contributions to teaching and training activities as well as supervision of students.

The deadline of applications is 15 December 2021 at 23:59 (Danish time).

From: "Moser, Melanie (melanie.moser@uni-graz.at)" <melanie.moser@uni-graz.at>
Date: Tuesday, November 9, 2021
Subject: University Assistant with doctorate, Graz, Austria

At the University of Graz, researchers and students work across a broad disciplinary spectrum to enlarge our knowledge, and find strategies to deal with challenges our society is confronted with and to shape tomorrow’s world. The University of Graz is a place which combines high quality academic research and teaching, where achievement is rewarded, careers are promoted, and social diversity is encouraged – all within a modern, award-winning working environment. Our motto: We work for tomorrow. Join us!

The Institute of Mathematics and Scientific Computing is looking for a

University Assistant with doctorate (m/f/d)

(https://uni-graz.jobbase.io/job/zji7cui1u9jhuokv9srmvy37x8ze8m)

40 hours a week
fixed-term employment for 6 years
position to be filled as of now)

Your duties

- Research in the field of applied mathematics with emphasis on the analysis and the numerics of problems in mathematical image processing, inverse problems and data sciences
- Collaboration in interdisciplinary cooperation projects and third-party funded projects
- Independent teaching of courses in the field of

applied mathematics, supervision of students and holding of examinations
- Independent implementation of courses and proportionate holding of examinations
- Support of students
- Participation in organizational and administrative tasks as well as in evaluation measures

Your Profile
- Doctoral degree in a mathematical branch of study
- Solid knowledge of one of the following fields: mathematical methods in image processing, inverse problems, numerical algorithms for imaging and inverse problems
- Knowledge in one or more of the following fields: functional analysis, continuous mathematical optimization, algorithmic solution of minimization problems, mathematical foundations of machine learning, mathematical data sciences (desirable)
- Ability for integration into the institute’s research profile and in particular into interdisciplinary cooperation projects
- Ability to teach in german language
- Capacity for teamwork, organizational talent and ability to communicate
- Scientific publication activity according to academic age
- Didactic aptitude for participation in teaching
- Excellent command of written and spoken English

Our Offer

Classification
Salary scheme of the Universitäten-KV (University Collective Agreement): B1

Minimum Salary
The minimum salary as stated in the collective agreement and according to the classification scheme is EUR 3.945,90 gross/month (for full-time employment). This minimum salary may be higher due to previous employment periods eligible for inclusion and other earnings and remunerations.

We offer you a job with a lot of responsibility and variety. You can expect an enjoyable work climate, flexible work hours and numerous possibilities for further education and personal development. Take advantage of the chance to enter into a challenging work environment full of team spirit and enthusiasm for your job.

Application deadline: 08.12.2021

The University of Graz strives to increase the proportion of women in particular in management and faculty positions and therefore encourages qualified women to apply. Especially with regard to academic staff, we welcome applications from persons with disabilities who meet the requirements of the advertised position. Applicants with proof of COVID-19 vaccination will be given preference if

equally qualified. For further information, please refer to our general application regulations.

From: Matthias Ehrhardt <me549@bath.ac.uk>
Date: Wednesday, November 10, 2021
Subject: Fully-funded PhD studentship in Inverse Problems+Machine Learning, Bath, UK

The UKRI Centre for Doctoral Training in Accountable, Responsible and Transparent AI (ART-AI https://cdt-art-ai.ac.uk/) at the University of Bath is inviting applications for a fully funded PhD studentship based in the Department of Computer Science and under the joint supervision of Dr Mohammad Golbabaee (Computer Science dep, https://mgolbabaee.wordpress.com/) and Dr Matthias Ehrhardt (Mathematics dept., https://mehrhardt.github.io/). The position is an opportunity to conduct cutting-edge research at the intersection of computational medical imaging, machine learning and mathematical analysis, with the possibility of collaboration with world leading healthcare industries.

This project is concerned with the development of interpretable and transparent machine/deep learning algorithms for image reconstruction in medical imaging.

In this project you will bridge this gap by developing new algorithms and analysis techniques for computational medical imaging towards transparent and reliable solutions. You are expected to further advance current developments within this theme including (but not limited to) reliable generative models to capture prior knowledge about data and their transparent and inspectable integration within model-based image reconstruction algorithms.

For more information, see
https://www.findaphd.com/phds/project/interpretable-and-transparent-machine-learning-algorithms-for-medical-image-computing/?p107106

Submitted by: Matthias J Ehrhardt, PhD
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From: Idoia Hernandez recruitment@bcamath.org [via NADIGEST]
Date: November 04, 2021
Subject: Postdoc Fellowship Position, Deep Data-Driven Computing

Deep Learning, Data-Driven Computing, Partial Differential Equations, Inverse Problems

Deadline for application: 29th November 2021 at 14:00 (CET)
Applications must be submitted on-line at:

https://urldefense.com/v3/__http://www.bcamath.org/en/research/job__;!!HXCxUKc!mNizOnS64E7iv9j1GAHaTnyscKIOh2wcyRV_3qdarVnB0XRt9CNqhlrRWM6Vec3a$

Requirements: Applicants must have their PhD completed before the contract starts.

Skils: Good interpersonal skills. A proven track record in quality research, as evidenced by research publications in top scientific journals and conferences. Demonstrated ability to work independently and as part of a collaborative research team. Ability to present and publish research outcomes in spoken (talks) and written (papers) form. Ability to effectively communicate and present research ideas to researchers and stakeholders with different backgrounds. Fluency in spoken and written English. The preferred candidate will have: Strong background in the numerical solution of Partial Differential Equations and/or Deep Learning techniques. Background in Inverse Problems. Good programming skills in Python and preferably, also Tensorflow. Interest and disposition to work in interdisciplinary groups.

From: Isabel Figueiredo isabelf@mat.uc.pt [via NADIGEST]
Date: October 28, 2021
Subject: Postdoc Position, Computational Mathematics, Univ of Coimbra

Postdoctoral position in computational mathematics at University of Coimbra (focusing on image processing and analysis - with applications in medicine) in the framework of the interdisciplinary research project "Multi-Cam Capsule Endoscopy Imagery: 3d Capsule Location and Detection of Abnormalities", with reference POCI-01-0145-FEDER-028960, of FCT - Portuguese national funding agency for science, research and technology (https://urldefense.com/v3/__https://www.fct.pt/index.phtml.en__;!!HXCxUKc!mNizOnS64E7iv9j1GAHaTnyscKIOh2wcyRV_3qdarVnB0XRt9CNqhlrRWKHEybOf$).

Applicants should have a PhD in Mathematics or Computational Sciences and Engineering (degree obtained until the end of May 2020).

Applications : October 29 - November 30, 2021.
Duration : 7 months (possibility of renewal).

Starting date : January 2022.

Location : Department of Mathematics of the Faculty of Sciences and Technology at the University of Coimbra.

Official announcement: https://urldefense.com/v3/__https://euraxess.ec.europa.eu/jobs/702310__;!!HXCxUKc!mNizOnS64E7iv9j1GAHaTnyscKIOh2wcyRV_3qdarVnB0XRt9CNqhlrRWHhGsTTQ$
Contact for further information: Isabel M. Narra Figueiredo

https://urldefense.com/v3/__http://www.mat.uc.pt/*isabelf/Postdoccall2021.html__;fg!!HXCxUKc!mNizOnS64E7iv9j1GAHaTnyscKIOh2wcyRV_3qdarVnB0XRt9CNqhlrRWN_xQTYM$

From: "alerts@tandfonline.com" <alerts@tandfonline.com>
Date: Friday, October 29, 2021
Subject: Inverse Problems in Science and Engineering, Volume 29, Issue 11, November 2021 is now available online on Taylor & Francis Online

Inverse Problems in Science and Engineering November 2021 Volume 29, Issue 11

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https://www.tandfonline.com/toc/gipe20/29/11
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