Volume 29, Number 14 IPNet Digest October 20, 2022 Today's Editor: Patricia (Patti) K. Lamm, Michigan State University Today's Topics: Call for Nominations: Calderón Prizes 2021 and 2023 Hausdorff School: Data-driven Inverse Problems in Biomedical Imaging, April 2023 Conference: 11th Applied Inverse Problems Conference, September 2023 Asst Prof: Mathematics of Data Science at UC Davis Faculty Position: Data Science and Machine Learning, UC Davis Univ. Asst: Image Processing, Inverse Problems & Data Sciences, U Graz Postdoc: Deep Learning for Structural Health Monitoring, Basque Center Table of Contents: Inverse Problems Submissions for IPNet Digest: Mail to ipnet-digest@math.msu.edu Information about IPNet: https://ipnet.math.msu.edu/ From: IPIA office <ipia@gwdg.de>

Sent: Wednesday, October 12, 2022 Subject: Call for nominations of Calderón prizes 2021 and 2023

The Inverse Problems International Association (IPIA) invites nominations for the Calderón Prizes of the years 2021 and 2023. The prize is awarded biannually for exceptional contributions to the field of Inverse Problems. Nominees must be under the age of 40 at the time the prize is awarded. Both prizes will be awarded at AIP 2023, which will take place in Göttingen from September 4–8, 2023. Nominees for the Calderón Prize 2021 must be born after 09–04–1981. There will be a joint committee for both prizes, and persons born after 09–04–1983 may be nominated for both prizes.

Nominations including a CV, a list of publications, and a laudation in .pdf format may be sent to ipia@gwdg.de before 02-28-2023.

From: Martin Benning <mb941@cam.ac.uk> Sent: Monday, October 10, 2022 Subject: Hausdorff School, Data-driven Inverse Problems in Biomedical Imaging, Apr 2023

Hausdorff School, Data-driven Inverse Problems in Biomedical Imaging, Apr 2023 Organizers; Martin Benning (Queen Mary University of London), Alexander Effland (University of Bonn), Erich Kobler (University of Bonn)

Various key problems in biomedical imaging can be modeled as inverse problems (e.g. single image super-resolution, undersampling in magnetic resonance

imaging, limited angle tomography, registration, segmentation). Numerous deep learning-inspired methods to tackle these inverse problems have been developed in recent years, often redefining the state of the art.

The Hausdorff School on Data-driven Inverse Problems in Biomedical Imaging focuses on several mini-courses that explore this topic from both theoretical and applied perspectives.

The school is aimed at PhD students and postdocs and takes place between April 11 – 14, 2023, at the Lipschitz lecture hall, Mathematics Center, Endenicher Allee 60, 53115 Bonn, Germany.

List of speakers:

Tatiana Bubba Jan Modersitzki Marcelo Pereyra Thomas Pock

Please send applications via https://www.hsm.uni-bonn.de/events/hausdorff-schools/biomedical-imaging2023/ biomed-2023-app/. Limited financial support for travel and accommodation expenses may be available for PhD students and postdocs. There are no participation fees.

To be considered for participation, a CV and Letter of Intent (1 page) are required, as well as the name and contact information of a potential reference. (At this time, we do not request a letter of recommendation.) Only one document can be uploaded, so please combine all documentation into one PDF.

Please note: Everyone interested in participating – disregarding whether there is need for financial support or not – has to register so that the participation may be administered. Everyone will be notified in due time about whether participation and partial financial support is possible.

The deadline for applications is January 1, 2023. In case of questions, please contact the organizers at sek-effland(at)iam.uni-bonn.de

Submitted by: Dr Martin Benning (he/him/his) Senior Lecturer (Associate Professor) in Inverse Problems and Machine Learning Turing Fellow at the Alan Turing Institute Academic Fellow of the Digital Environment Research Institute (DERI) School of Mathematical Sciences Queen Mary University of London Mile End Road London E14NS United Kingdom email: m.benning@qmul.ac.uk

From: Hohage, Thorsten <hohage@math.uni-goettingen.de> Sent: Wednesday, October 12, 2022 Subject: 2023: Applied Inverse Problems Conference (AIP) 11th Applied Inverse Problems Conference Date: September 4-8, 2023 Place: Goettingen, Germany URL: http://www.aip2023.de Call for minisymposium proposals: We invite proposals for minisymposia containing the following information: Title (up to 100 characters) • Names and affiliations of organizers Description of the topic (about half a page) List of speakers including affiliations and links to webpages if available. A minisymposium may have either 4, 8 or 12 speakers, possibly including the organizers. The speakers should be contacted in advance. Please keep in mind that every participant may give at most two talks, preferably only one. Proposals should be sent to office@aip2023.de by December 16, 2022. Deadline for abstract submission of contributed talks: March 10, 2023 Plenary Speakers * Giovanni Alberti (U. Genoa) * Laurent Gizon (MPS Goettingen) * Colin Guillarmou (U. Paris-Saclay) * Houssem Haddar (INRIA Paris) * Peter Hintz (ETH Zuerich) * Richard Nickl (U. Cambridge) * Gabriel Paternain (U. Cambridge) * Angkana R³land (U. Heidelberg) * Jingni Xiao (Drexel U.) * Xiang Xu (Zhejiang U.) Scientific Committee * H. Ammari (ETH Zurich) * S. Arridge (UCL London) * E. Beretta (NYU Abu Dhabi) * F. Cakoni (Rutgers U., USA) * J. Cheng (Fudan U. Shanghai) * T. Hohage (U. Goettingen) * K. Krupchyk (U. California, Irvine) * G. Nakamura (Hokkaido U.) * L. Oksanen (U. Helsinki) * G. Uhlmann (U. Washington) * A. Yagola (Lomonosov Moscow State U)

* T. Zhou (Zhejiang U) Organizing Committee * D. Fournier * M. Halla * B. Harrach (U. Frankfurt) * E. Hetzel * T. Hohage * S. Huckemann * H. Li * J. Mathias * G. Plonka-Hoch * D. Sieber * M. Uecker (TU Graz) * A. Wald * F. Werner (U. Wuerzburg) Organized by: * Inverse Problems International Association (IPIA) * CRC 1456 Mathematics of Experiment: The challenge of indirect measurements in the natural sciences * RTG 2088: Discovering Structure in Complex Data Submitted by: Thorsten Hohage Georg-August University Goettingen From: Naoki Saito <saito@math.ucdavis.edu> Sent: Monday, October 10, 2022 Subject: Assistant Professor (tenure-track) in mathematics of data science at UC Davis

The Department of Mathematics at the University of California, Davis invites applications for one Assistant Professor (tenure-track) faculty position starting July 1, 2023. This position is in the area of the mathematics of data science.

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 1, 2022. The application is available through UCRecruit @ https://recruit.ucdavis.edu/JPF05108.

The University of California is committed to creating and maintaining a community dedicated to the advancement, application, and transmission of knowledge and creative endeavors through academic excellence, where all

individuals who participate in University programs and activities can work and learn together in a safe and secure environment, free of violence, harassment, discrimination, exploitation, or intimidation. With this commitment, UC Davis conducts a reference check on all first choice candidates for Academic Senate Assistant Professor or Lecturer with Potential for Security of Employment, Steps 4, 5, or 6, or Acting Professor of Law positions. The reference check involves contacting the administration of the applicant's previous institution(s) to ask whether there have been substantiated findings of misconduct that would violate the University's Faculty Code of Conduct. To implement this process, UC Davis requires all applicants for any open search for assistant professor to complete, sign, and upload the form entitled "Authorization to Release Information" into RECRUIT as part of their application. If an applicant does not include the signed authorization with the application materials, the application will be considered incomplete, and as with any incomplete application, will not receive further consideration. Although all applicants for faculty recruitments must complete the entire application, only finalists considered for Academic Senate Assistant Professor or Lecturer with Potential for Security of Employment, Steps 4, 5, or 6, or Acting Professor of Law positions will be subject to reference checks.

Department: https://math.ucdavis.edu

From: Naoki Saito <saito@math.ucdavis.edu> Sent: Monday, October 10, 2022 Subject: Data Science/ML Faculty Position, ECE Dept., UC Davis

The Department of Electrical and Computer Engineering (ECE) at the University of California, Davis, has a faculty opening in Data Science and Machine Learning. Candidates with strong interest and leadership skills to bridge data science research with multiple technical disciplines as well as application domains such as health and connected and autonomous systems are encouraged to apply for this position. The full description of the position can be found at our recruitment page:

https://recruit.ucdavis.edu/JPF05160

For full consideration, applicants should apply by December 1, 2022. Applications from members of under-represented groups are particularly welcomed.

From: Moser, Melanie (melanie.moser@uni-graz.at) <melanie.moser@uni-graz.at>
Sent: Wednesday, October 19, 2022
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://jobs.uni-graz.at/ausschreibung/en/?jh=4835admw2kc0d4ax0iqs8h3nok3g91c
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

• Participation in organizational and administrative matters 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, regularization theory, parameter identification with partial differential equations, geometric measure theory, mathematical data science (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

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 4.061,50 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: 09.11.2022

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, at https://jobs.uni-graz.at/en/FAQ/

* Please note the limitations of § 109 UG (university act), especially in the case of short contract terms. For further information, please refer to our general application regulations, at https://jobs.uni-graz.at/en/FAQ/

For further information or questions, please contact: Iva Matijevic iva.matijevic@uni-graz.at +43 316 / 380 - 1196

Please note that in order to comply with the applicable data protection regulations, we can only accept applications via our web-based applicant tool for this vacant position.

From: Idoia Hernandez recruitment@bcamath.org [via NADIGEST] Date: October 13, 2022 Subject: Postdoc Position, DL for Structural Health Monitoring, IA4TES

Basque Center for Applied Mathematics is offering a Postdoctoral position to work in Deep Learning for Structural Health Monitoring in the framework of IA4TES project (Inteligencia Artificial para la Transicion Energetica Sostenible) with Dr David Pardo and Dr Vincenzo Nava in MATHDES group at BCAM. The researcher will work in Deep Learning, Structural Health Monitoring and Inverse Problems.

Deadline: 27 October 2022 Applications at: https://urldefense.com/v3/__http://www.bcamath.org/en/research/job/ic2022-09postdoctoral-fellow-on-deep-learning-for-structural-health-monitoring__;!! HXCxUKc!wP_E2KTmDdEZg12j6wTvap0uc3yjaDbRCf-d0ncE28PUADfK11ipSGFkkYr-9gmKu-HyJicF0eFtUujqLDZK0Pt5S7Bputk3VDA\$ Contract: 1 year with possible extension

Requirements: Applicants must have their Ph.D. completed or defended

in an area of sciences before the contract starts

Skills: Good interpersonal skills. Fluency in spoken and written English. 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, including industrial partners. Project proposal writing skills.

The preferred candidate will have: Strong background in Deep Learning techniques for Structural Health Monitoring. Understanding on the existing works on using Deep Learning techniques for Structural Health Monitoring. Background in Inverse Problems. Good programming skills in Python and preferably, also Tensorflow. Interest and disposition to work in interdisciplinary groups.

From: noreply@iopscience.org <noreply@iopscience.org>
Sent: Thursday, October 13, 2022
Subject: Inverse Problems, Volume 38, Number 8, August 2022

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