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Today's Editor: Matti Lassas University of Helsinki

Today's Topics:

1. AIP 2025 Conference - 2nd Call for Minisymposium Proposals
2. Inverse Problems and Deep Learning, University of Bath, UK, 7-9 July 2025
3. Computational Techniques and Imaging Innovations in the Age of AI, UCL, 1-2 April 2025
4. Post-doctoral and Ph.D. positions in Numerical Inverse Problems
5. Post-doc position at MaLGa, Genoa - imaging inverse problems, learning and optimization
6. Three-year postdoc position at the University of Graz
7. Contents, Electron. Trans. Numer. Anal., vol. 60, 2024
8. IPNet Digest table of contents submission (IPI 19-1)
9. IPNet Digest table of contents submission (IPI 19-2)

Submissions for IPNet Digest: [submit-ipnet@helsinki.fi](mailto:submit-ipnet@helsinki.fi)

Information about IPNet: <https://www.helsinki.fi/en/researchgroups/inverse-problems/ipnet-inverse-problems-network>

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**From:** Antonio Leitao [acgleitao@gmail.com](mailto:acgleitao@gmail.com)

**Date:** Friday, 20 December 2024

**Subject:** AIP 2025 Conference - 2nd Call for Minisymposium Proposals

The next AIP Conference will be held at FGV EMaP, Rio de Janeiro, Brazil from July 28 to August 1, 2025.

For detailed information see <https://eventos.fgv.br/aip2025/>

We invite proposals for Mini symposia containing the following information:

- Title (up to 100 characters)
- Names and affiliations of organizers
- Brief 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. Each talk is allocated 30 minutes, which includes time for discussion. Speakers should be contacted in advance. Please keep in mind that every participant may give at most two talks, preferably only one.

Minisymposium proposals should be submitted via email to [aip2025@fgv.br](mailto:aip2025@fgv.br) with the subject line: Minisymposium Proposal

There is also an option to submit posters (a limited number of posters will be showcased during a single 90-minute poster section). Poster proposals (including title, abstract, name, affiliation and link to webpage) should be submitted via email to [aip2025@fgv.br](mailto:aip2025@fgv.br) with the subject line: Poster Proposal

**The submission deadline is January 31, 2025.**

Contact: [aip2025@fgv.br](mailto:aip2025@fgv.br)

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**From:** Hok Shing Wong [hsw43@bath.ac.uk](mailto:hsw43@bath.ac.uk)

**Date:** Wednesday, 8 January, 2025

**Subject:** Inverse Problems and Deep Learning, University of Bath, UK, 7-9 July 2025

Dear all,

We are pleased to announce that we are now inviting submissions for short talks and posters for the Maths4DL conference on Inverse Problems and Deep Learning. The conference is taking place at the University of Bath, UK, from 7-9 July 2025.

Plenary speakers are:

- Youssef Marzouk, MIT AeroAstro
- Sebastian Neumayer, TU Chemnitz
- Ozan Öktem, KTH Royal Institute of Technology
- Audrey Repetti, Heriot Watt University
- Gabriele Steidl, Technische Universität Berlin
- Silvia Villa, Università degli Studi di Genova

You are invited to submit a proposal for a talk or poster that fits within the theme of the conference. Topics of interest are anything on the intersection of inverse problems and deep learning, such as learned regularisation schemes, generative priors, plug-and-play methods, unrolled networks and neural operators for solving PDEs. Additionally, we are interested in uncertainty quantification for such reconstruction methods, for instance via Bayesian methods. Applications include problems from medical and non-medical image and signal processing, physics and engineering.

Please visit our website to find out more about the conference and to access the submission form:

<https://maths4dl.ac.uk/newsevents/maths4dl-conference-on-inverse-problems-and-deep-learning>.

The deadline for contributions is **Friday 28 February 2025**.

Best wishes

Hok Shing

(on behalf of the Maths4DL Conference Team: Alexander Denker, Matthias Ehrhardt, Johannes Hertrich, Hok Shing Wong

.....  
**From:** Matthias Ehrhardt [me549@bath.ac.uk](mailto:me549@bath.ac.uk)

**Date:** Monday, 20 January, 2025

**Subject:** Computational Techniques and Imaging Innovations in the Age of AI, UCL, 1-2 April 2025

We are pleased to announce the workshop on “Computational Techniques and Imaging Innovations in the Age of AI” held at UCL on 1-2 April 2025. The workshop aims to explore the intersection of inverse problems and machine learning, highlighting the critical interplay between classical approaches and modern AI techniques. Topics will include linear and non-linear imaging, Bayesian inversion, mathematics of deep learning, data assimilation, and generative models. This integration is crucial for developing fast, accurate, and reliable solutions to contemporary challenges in theory and applications.

This workshop also celebrates the 65th birthday of Prof. Simon Arridge, a leading figure in the international inverse problems community. His pioneering efforts in linking inverse problems with machine learning make this event a fitting tribute to his contributions and ongoing influence in the field.

Confirmed speakers are:

- [David Barber](#)
- [Teresa Correia](#)
- [Ben Cox](#)
- [Cosimo D'Andrea](#)
- [Marc Deisenroth](#)

- [Lior Horesh](#)
- [Bangti Jin](#)
- [Bill Lionheart](#)
- [Peter Maaß](#)
- [Ronny Ramlau](#)
- [Carola-Bibiane Schönlieb](#)
- [John Schotland](#)
- [Tanja Tarvainen](#)
- [Kris Thielemans](#)

While the workshop is free to attend, it is mandatory to register in advance to help us plan for the event. We invite early-career researchers to submit an abstract for a poster. Please visit <https://ctiai.github.io/> to find out more about the conference and registration.

Best wishes

Matthias

(on behalf of the organisers: Martin Benning, Marta Betcke, Matthias Ehrhardt, Zeljko Kereta)

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Matthias J Ehrhardt, PhD (he/him)  
 Reader, Department of Mathematical Sciences  
 University of Bath, UK  
<https://mehrhardt.github.io>

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**From:** Florian Faucher [florian.faucher@inria.fr](mailto:florian.faucher@inria.fr)

**Date:** Monday, 23 December, 2024

**Subject:** Post-doctoral and Ph.D. positions in Numerical Inverse Problems

Post-doctoral and Ph.D. positions in Numerical Inverse Problems.

The INCORWAVE project, funded by an ERC Starting Grant, invites applications for Postdoctoral and Ph.D. positions in computational inverse problems. These positions are part of the research team INRIA Makutu, at the University of Pau, located in the southwest of France.

Our project focuses on quantitative inverse methodologies in the context of passive imaging, with applications to helioseismology (solar imaging), and Earth seismology. The research encompasses both mathematical and numerical aspects of inversion. It includes convergence and stability analysis, which are essential for accurate reconstructions. In addition, the project aims to develop advanced quantitative imaging techniques for passive imaging. In particular for anisotropic media, where the multiple physical parameters of the mathematical model must be reconstructed. We are also investigating the integration of advanced regularization methods and data science approaches to enhance the performance of inversion algorithms.

Post-doctoral positions are two-years contracts renewable up to five years; Ph.D. positions are three-year contracts. Starting date is flexible.

More information at <https://ffaucher.gitlab.io/erc-incorwave/categories/position/>

To apply, please send your CV and cover letter to Florian Faucher at [florian.faucher@inria.fr](mailto:florian.faucher@inria.fr)

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**From:** Luca Calatroni [Luca.calatroni@unige.it](mailto:Luca.calatroni@unige.it)

**Date:** Friday, 10 January, 2025

**Subject:** Post-doc position at MaLGa, Genoa - imaging inverse problems, learning and optimization

Dear colleagues,

Applications are open for one post-doctoral position within the Computational Imaging and Learning (CIL) unit at the Machine Learning Genoa Center ([MaLGa](#)), Department of Computer Science.

**Self-supervised learning for non-linear image reconstruction problems in fluorescence microscopy:**

The project focuses on developing innovative reconstruction methods for partially unknown forward models with limited training data, with applications to fluorescence microscopy imaging. The work will be conducted in collaboration with the Italian Institute of Technology (IIT).

The position is funded by the ERC Starting Grant project MALIN.

Position Details:

- Start Date: May/June 2025 (flexible)
- Duration: 2 years (renewable)
- Location: Genova, Italy.

Interested candidates should apply by filling in the following [application form](#) before February 10, 2025.

For more details about the position and project, please contact Luca Calatroni ([luca.calatroni@unige.it](mailto:luca.calatroni@unige.it)) directly.

All the best,  
Luca Calatroni  
[Luca Calatroni](#)

Associate Professor, University of Genoa, IT  
PI at Machine Learning Genoa Center ([MaLGa](#))

.....  
**From:** Martin Holler [martin.holler@uni-graz.at](mailto:martin.holler@uni-graz.at)

**Date:** Friday, 17 January, 2025

**Subject:** Three-year postdoc position at the University of Graz

The University of Graz offers a

\*\*\* 3-year faculty position in the research group "Applied Mathematics and Machine Learning" \*\*\*

The research focus of this position is on mathematical foundations and interdisciplinary applications of machine learning and inverse problems.

Benefits of the position include:

- Close integration into a well-established, interdisciplinary collaborative network of several research groups in Graz working in the areas of inverse problems, machine learning, optimization and medical imaging

- High degree of autonomy; individual travel budget, possibility to conduct independent research, to apply for third-party funding, to teach courses, and to co-supervise PhD and Master students

- Part of an active research group (two PostDocs and three PhD students by the end of 2025) working on both mathematical foundations and concrete applications with interdisciplinary cooperation partners, e.g., from biomedical imaging or emergency care medicine

More details can be found at

<https://jobs.uni-graz.at/en/jobs/a0451eb9-518e-d9a7-f5b7-6756e9d72c44>

For more information, please contact Martin holler  
([imsc.uni-graz.at/hollerm](https://imsc.uni-graz.at/hollerm))

Application Deadline: February 13, 2025

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Martin Holler  
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Phone:+43 316 380 5156  
Web: [imsc.uni-graz.at/hollerm](https://imsc.uni-graz.at/hollerm)

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**From:** Lothar Reichel [reichel@math.kent.edu](mailto:reichel@math.kent.edu)  
**Date:** Monday, 6 January, 2025  
**Subject:** Contents, Electron. Trans. Numer. Anal., vol. 60, 2024

Contents, Electronic Transactions on Numerical Analysis (ETNA), vol. 60, 2024:  
Note: ETNA accepts software publications as well as historical papers.

H. Hakula, M. M. S. Nasser, and M. Vuorinen, Mobile disks in hyperbolic space and minimization of conformal capacity, pp. 1-19

J. Haug and R. Treinen, Multi-scale spectral methods for bounded radially symmetric capillary surfaces, pp. 20-39

E. Carson and I. Dauszickaite, The stability of split-preconditioned FGMRES in four precisions, pp. 40-58

C. M. Cuesta, F. de la Hoz, and I. Girona, Numerical computation of the half Laplacian by means of a fast convolution algorithm, pp. 59-98

T. Linss, N. Kopteva, G. Radojev, and M. Ossadnik, A review of maximum-norm a posteriori error bounds for time-semidiscretisations of parabolic equations, pp. 99-122

M. Errachid, A. Essanhaji, and A. Messaoudi, Dimensional reduction for multivariate Lagrange polynomial interpolation problems, pp. 123-135

B. Rester, A. Vasilyeva, and J. V. Lambers, Convergence analysis of a Krylov subspace spectral method for the 1D wave equation in an inhomogeneous medium, pp. 136-168

L. Gouarin and N. Spillane, Fully algebraic domain decomposition preconditioners with adaptive spectral bounds, pp. 169-196

J. M. Tabcart and J. W. Pearson, Saddle point preconditioners for weak-constraint 4D-Var, pp. 197-220

- Susanne Bradley and Chen Greif, Augmentation-based preconditioners for saddle-point systems with singular leading blocks, pp. 221-237
- E. B. Kovac and A. Perkovic, Convergence of the Eberlein diagonalization method under generalized serial pivot strategies, pp. 238-255
- R. Altmann and M. Deiml, A novel iterative time integration scheme for linear poroelasticity, pp. 256-275
- J. Liesen and J. Ramme, Spectral properties of certain nonsymmetric saddle point matrices, pp. 276-291
- S. Pozza and N. Van Buggenhout, A new Legendre polynomial-based approach for non-autonomous linear ODEs, pp. 292-326
- S. Kindermann and W. Zellinger, A short-term rational Krylov method for linear inverse problems, pp. 327-350
- K. Atkinson, D. Chien, and O. Hansen, Constructing diffeomorphisms between simply connected plane domains-part 2, pp. 351-363
- S. Miodragovic, N. Truhar, and I. Kuzmanovic Ivicic, Relative perturbation  $\tan(\theta)$ -theorems for definite matrix pairs, pp. 364-380
- A. Frommer, G. Ramirez-Hidalgo, M. Schweitzer, and M. Tsolakis, Polynomial preconditioning for the action of the matrix square root and inverse square root, pp. 381-404
- N. Bazzarra, J. R. Fernandez, and R. Quintanilla, Analysis of a one-dimensional nonlocal thermoelastic problem, pp. 405-420
- T. Chen and G. Meurant, Near-optimal convergence of the full orthogonalization method, pp. 421-427
- L. Bialas-Ciez, D. J. Kenne, A. Sommariva, and M. Vianello, Evaluating Lebesgue constants by Chebyshev polynomial meshes on cube, simplex, and ball, pp. 428-445
- H. Bouda, C. Allouch, K. Kant, and Z. El Allali, Error analysis of a Jacobi modified projection-type method for weakly singular Volterra-Hammerstein integral equations, pp. 446-470
- Sk. Safique Ahmad and P. Khatun, Structured condition numbers for a linear function of the solution of the generalized saddle point problem, pp. 471-500
- Marco Sutti, A single shooting method with approximate Frechet derivative for computing geodesics on the Stiefel manifold, pp. 501-519
- F. Cassini, Efficient third-order tensor-oriented directional splitting for exponential integrators, pp. 520-540
- P. Junghanns and C. Laurita, A stable BIE method for the Laplace equation with Neumann boundary conditions in domains with piecewise smooth boundaries, pp. 541-588
- V. Kaarnioja and A. Rupp, Quasi-Monte Carlo and discontinuous Galerkin, pp. 589-617

K. Kan, J. G. Nagy, and L. Ruthotto, LSEMINK: a modified Newton-Krylov method for log-sum-exp minimization, pp. 618-635

A. Hadjidimos, X. Li, and R. S. Varga, Application of the Schur-Cohn Theorem to the precise convergence domain for a p-cyclic SOR iteration matrix, pp. A1-A14

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**From:** Charley Denton [cdenton@aimsciences.org](mailto:cdenton@aimsciences.org)  
**Date:** Thursday, 19 December, 2024  
**Subject:** IPNet Digest table of contents submission (IPI 19-1)

IPI February 2025 Vol. 19, No. 1 articles:

1. [Interior transmission problems with coefficients of low regularity](#)  
Georgi Vodev
  
2. [Superiorized iteration algorithm for CT image simultaneous reconstruction and segmentation](#)  
Shousheng Luo, Zhiting Liu, Yaofei Lu and Xue-Cheng Tai
  
3. [Fully-connected tensor network decomposition and group sparsity for multitemporal images cloud removal](#)  
Zihui Tu, Jian Lu, Hong Zhu, Wenyu Hu, Qingtang Jiang and Michael K. Ng
  
4. [Denoising of sphere- and SO\(3\)-valued data by relaxed tikhonov regularization](#)  
Robert Beinert, Jonas Bresch and Gabriele Steidl
  
5. [Direct imaging of inhomogeneities in a 3D shallow ocean waveguide with an elastic seabed](#)  
Keji Liu
  
6. [Stability estimates for the inverse source problem with passive measurements](#)  
Faouzi Triki, Kristoffer Linder-Steinlein and Mirza Karamehmedović
  
7. [Simultaneously identifying piecewise smooth conductivity and initial value for a heat conduction equation](#)  
Shuli Chen, Gen Nakamura and Haibing Wang
  
8. [An inverse problem with partial Neumann data and  \$\ln/2\$  potentials](#)  
Leonard Busch and Leo Tzou

Charley Denton  
Communications Specialist  
American Institute of Mathematical Sciences  
Email: [cdenton@aimsciences.org](mailto:cdenton@aimsciences.org)

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**From:** Charley Denton [cdenton@aimsciences.org](mailto:cdenton@aimsciences.org)  
**Date:** Thursday, 19 December, 2024



**Subject:** IPNet Digest table of contents submission (IPI 19-2)

IPI April 2025 Vol. 19, No. 2 articles:

1. [Convexification numerical method for a coefficient inverse problem for the system of nonlinear parabolic equations governing mean field games](#)  
Michael V. Klibanov, Jingzhi Li and Zhipeng Yang
  
2. [A variational model to remove multiplicative noise based on SAR image feature preservation](#)  
Yamei Zhou, Zhichang Guo, Yao Li, Wenjuan Yao and Boying Wu
  
3. [Quantum inverse scattering for time-decaying harmonic oscillators](#)  
Atsuhide Ishida
  
4. [Reciprocal transformation based convex variational image restoration with multiplicative noise](#)  
Yu Gan, Zhifang Liu and Huibin Chang
  
5. [Variational image dehazing with a novel underwater dark channel prior](#)  
Zhengmeng Jin, Yue Ma, Lihua Min and Minling Zheng
  
6. [Distribution of resonances and inverse resonance problems with the mixed given data for the massless Dirac operator on the real line](#)  
Ting-Ting Zuo and Xiao-Chuan Xu
  
7. [Texture Edge detection by Patch consensus \(TEP\)](#)  
Guangyu Cui and Sung Ha Kang
  
8. [Numerical method for inverse scattering by random penetrable periodic structures](#)  
Yi Wang, Junliang Lv and Shuxin Li
  
9. [Fractional optimal control for deep convolutional neural networks exploring ODE-based solutions for image denoising](#)  
Fakhr-eddine Limami, Aissam Hadri, Amine Laghrib and Lekbir Afraites

Best regards,  
Charley Denton  
Communications Specialist  
American Institute of Mathematical Sciences  
Email: [cdenton@aimsciences.org](mailto:cdenton@aimsciences.org)

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.....end:.....

Today's Editor:      Matti Lassas      University of Helsinki

Today's Topics:

1. Postdoc opportunity at UCL in Maths for Deep Learning
2. Inverse Problems Symposium June 1-3, 2025 at Michigan State University
3. Online training Core Imaging Library, March 2025
4. AIP 2025 Conference - Updated Deadline for Minisymposium Proposals

Submissions for IPNet Digest: [submit-ipnet@helsinki.fi](mailto:submit-ipnet@helsinki.fi)

Information about IPNet: <https://www.helsinki.fi/en/researchgroups/inverse-problems/ipnet-inverse-problems-network>

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**From:** Simon Arridge [<s.arridge@ucl.ac.uk>](mailto:s.arridge@ucl.ac.uk)

**Date:** Thursday, 13 February 2025

**Subject:** Post doc opportunity at UCL in Maths for Deep Learning

We have an opportunity for a 18-month postdoc position at UCL on our programme grant "Maths for Deep Learning" <https://maths4dl.ac.uk/>

For more information and to apply, please visit the UCL jobs site: [Job details: Research Fellow in the Mathematics of Deep Learning](#)

Informal enquires can be made to Simon Arridge [<s.arridge@ucl.ac.uk>](mailto:s.arridge@ucl.ac.uk)

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**From:** Kirk Dolan, [dolank@msu.edu](mailto:dolank@msu.edu)

**Date:** Thursday, 23 January, 2025

**Subject:** Inverse Problems Symposium June 1-3, 2025 at Michigan State University

Inverse Problems Symposium 2025 registration and abstract submission are open!

The IPS 2025 is a continuation of 31 successful US and international symposia since 1991. The purpose of this conference is to bring together researchers and practitioners in inverse problems to exchange ideas, methods, and latest developments.

Early Registration (available until April 13th): \$375

Regular Registration (begins April 14th): \$425

Student Early Registration (available until April 13th): \$150

Student Regular Registration (begins April 14th): \$200

Sunday, June 1, is a tutorial on Machine Learning. Monday, June 2, will be oral presentations, Student Poster Competition, and evening banquet. Tuesday will be oral presentations finishing after lunch.

<https://www.canr.msu.edu/inverse-problems/>

Kirk Dolan, Ph.D.  
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**From:** Jakob Sauer Jørgensen, DTU, [jakj@dtu.dk](mailto:jakj@dtu.dk)  
**Date:** Tuesday, 28 January 2025  
**Subject:** Online training Core Imaging Library, March 2025

We're hosting 3 online training sessions, where you can dive into the Core Imaging Library (CIL) - a python package for tomographic imaging and other inverse problems. Sessions are hands-on using Jupyter notebooks and Python on our cloud platform, no installation needed.

Day 1 - 25 March, 13-17 GMT: Getting started with CIL  
Day 2 - 26 March, 13-17 GMT: Iterative reconstruction with CIL  
Day 3 - 27 March, 13-17 GMT: Advanced topics in CIL

This training is ideal for students and researchers working with CT data or inverse problems. Whether you're conducting research, building algorithms, or analysing imaging data, this is your chance to enhance your skills.

You're welcome to join one or all of the sessions, but if you're new to CIL or CT, we recommend kicking off with Day 1 to get familiar with the basics. If you have been to one of our CIL trainings before, Day 3 has some new notebooks and content to check out!

There are limited places available, so fill in the registration form as soon as possible!

More details and sign-up (free of charge but mandatory) at <https://ccpi.ac.uk/events/cil-online-training-march-2025/>

Post event (and in general) support is available on our Discord: <https://discord.gg/kmBcU2kebB>

Hope to see you there, and feel free to forward the invitation,

Jakob Sauer Jørgensen, DTU ([jakj@dtu.dk](mailto:jakj@dtu.dk))  
- on behalf of the CIL team

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**From:** Antonio Leitao [acgleitao@gmail.com](mailto:acgleitao@gmail.com)  
**Date:** Monday, 3 February, 2025  
**Subject:** AIP 2025 Conference - Updated Deadline for Minisymposium Proposals

We are pleased to announce that the submission deadline has been extended to February 14, 2025. The next AIP Conference will be held at FGV EMAp, Rio de Janeiro, Brazil, from July 28 to August 1, 2025.

For detailed information, please visit: <https://eventos.fgv.br/aip2025/>

We invite proposals for Minisymposia containing the following information:

- Title (up to 100 characters)
- Names and affiliations of organizers
- Brief 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. Each talk is allocated 30 minutes, which includes time for discussion.

Please ensure that speakers are contacted in advance.

Kindly note that each participant may give at most two talks, preferably only one.

Minisymposium proposals should be submitted via email to [aip2025@fgv.br](mailto:aip2025@fgv.br) with the subject line: Minisymposium Proposal.

We look forward to receiving your proposals. For any questions or further details, please contact us at [aip2025@fgv.br](mailto:aip2025@fgv.br).

Kind regards,  
AIP 2025 Organizing Committee

.....end:.....

Today's Editor: Matti Lassas University of Helsinki

Today's Topics:

1. 8 PhD and 7 Postdoc Positions in a New Special Research Area
2. Associate professor (non-tenure track) at LUT University - DL 3.4.2025
3. Professor / Associate Professor (tenure track) position in Scientific Computing: UEF
4. Helsinki Speech Challenge 2024 AMMC special issue
5. Summer school 2025: University of Jyväskylä
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Information about IPNet: <https://www.helsinki.fi/en/researchgroups/inverse-problems/ipnet-inverse-problems-network>

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**From:** Martin Holler [martin.holler@uni-graz.at](mailto:martin.holler@uni-graz.at)

**Date:** Friday, 07 March, 2025

**Subject:** 8 PhD and 7 Postdoc Positions in a New Special Research Area

Dear Colleagues,

In our new special research area (SFB) on "Mathematics of Reconstruction in Dynamical and Active Models", teams at the University of Graz, TU Graz, TU Vienna, and University of Klagenfurt are collaborating on a comprehensive, joint, interdisciplinary research effort to advance the mathematics of reconstruction for dynamical and active model, in particular in view of applications in magnetic resonance imaging (MRI).

Towards this aim, we will develop a comprehensive mathematical and computational framework for quantitative imaging, including physical modeling and optimization of the data acquisition process, identification of parameters, variational modeling, and generative machine learning methods; see <https://imsc.uni-graz.at/mr-dynamo>

for further details. As part of this research effort, we invite applications for in total 8 PhD and 7 PostDoc positions within our research area, see

<https://imsc.uni-graz.at/mr-dynamo/jobs>

To receive full consideration, applications should be submitted before March 21, 2025, but the call will remain open until all positions are filled.

Best regards,

Martin Holler on behalf of the SFB

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Martin Holler

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Phone:+43 316 380 1645

Web: [imsc.uni-graz.at/hollerm](https://imsc.uni-graz.at/hollerm)

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**From:** Toni Karvonen [Toni.Karvonen@lut.fi](mailto:Toni.Karvonen@lut.fi)

**Date:** Thursday, 13 March 2025

**Subject:** Associate professor (non-tenure track) at LUT University - DL 3.4.2025

The [Department of Computational Engineering](#) at LUT University in Lappeenranta, Finland, is seeking an associate professor (non-tenure track) to develop education in, for example, mathematics within our computational science and artificial intelligence degree programmes.

The main duties will include:

- developing education at the national and international levels and coordinating administrative tasks in the degree programmes;
- teaching basic and intermediate courses; and
- contributing to the department's research activities.

The department hosts the Flagship of Advanced Mathematics for Sensing, Imaging and Modelling (FAME), funded by the Research Council of Finland and a research unit on [Applied Mathematics](#). Current research areas of the department include inverse problems, numerical analysis, computational statistics, computer vision and pattern recognition.

The position is part of LUT University's non-tenure track. The employment relationship is fixed-term for four years with a six-month trial period. At the end of the four-year term, the position may be made permanent after a successful promotion review.

The deadline for applications is **3 April 2025**. More information and instructions for applying: [Associate professor \(non-tenure track\)](#)

For further information, please contact Lassi Roininen ([lassi.roininen@lut.fi](mailto:lassi.roininen@lut.fi)) or Toni Karvonen ([toni.karvonen@lut.fi](mailto:toni.karvonen@lut.fi))

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**From:** Tanja Tarvainen [tanja.tarvainen@uef.fi](mailto:tanja.tarvainen@uef.fi)

**Date:** Friday, 21 March 2025

**Subject:** Professor / Associate Professor (tenure track) position in Scientific Computing

The University of Eastern Finland is inviting applications for the post of Professor/Associate Professor (Tenure Track) of Artificial Intelligence in Scientific Computing at the Department of Technical Physics of the Faculty of Science, Forestry and Technology on the Kuopio campus. The position will be filled from 1 September 2025 (or as agreed).

Please find more information and submit your application: [Professor/Associate Professor \(Tenure Track\), Artificial Intelligence in Scientific Computing](#)

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**From:** Hjørdis Schlüter [hjordis.schluter@helsinki.fi](mailto:hjordis.schluter@helsinki.fi)

**Date:** Friday, 14 March 2025

**Subject:** Helsinki Speech Challenge 2024 AMMC special issue

Dear all,

The journal Applied Mathematics for Modern Challenges (AMMC) is running a special issue on the Helsinki Speech Challenge 2024. The special issue is open for submissions from anyone and welcomes papers detailing reconstruction methods for the dataset <https://blogs.helsinki.fi/helsinki-speech-challenge/data/>.

The submission deadline for this is August 15, 2025, and the aim is to publish the special issue in the December volume of AMMC. Submission should be done via the journal's homepage <https://www.aims sciences.org/AMMC/> using EditFlow.

For reference, the link below is a previous special issue on the Kuopio Tomography Challenge (KTC2023):<https://www.aims sciences.org/AMMC/article/2024/2/2>.

Please let us know if you have questions regarding the special issue.

With kindest regards,

Kim Knudsen and Hjørdis Schlüter (guest editors of the special issue)

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**From:** Janne Nurminen [janne.s.nurminen@jyu.fi](mailto:janne.s.nurminen@jyu.fi)

**Date:** Thursday, 20 March, 2025

**Subject:** Jyväskylä Summer school 2025

Dear colleague,

Greetings from the University of Jyväskylä!

The application period for the Jyväskylä Summer School is now open! ☀️

Read more & apply not later than 30 April here: [www.jyu.fi/jss](http://www.jyu.fi/jss)

The 34th Jyväskylä Summer School will take place on **4-15 August 2025 at the University of Jyväskylä**. One of the largest and oldest summer schools in Finland is organised by the Faculty of Mathematics and Science and the Faculty of Information Technology. Jyväskylä Summer School welcomes students from all over the world and offers a chance to take part in courses and get international experience.

This year's Summer School courses fall mostly under the themes of *Quantum Science and Probability Theory* and *Advanced Approaches for Secure and Intelligent Technologies*. Courses are offered in the following subjects:

- Chemistry
- Cognitive Science
- Computational Sciences
- Cyber Security
- **Inverse Problems**
- Mathematics
- Nanoscience
- Physics
- Biological and Environmental Sciences

All courses are taught in English by distinguished researchers from different parts of the world. **Participation in all Summer School courses is free of charge.**

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**From:** [noreply@iopscience.org](mailto:noreply@iopscience.org)

**Date:** Thursday, 13 March 2025

**Subject:** Inverse Problems, Volume 41, Number 3, March 2025

Papers

**[A constructible conductivity cloak via homogenisation\\*](#)**

Yves Capdeboscq and Eleanor Gemida

**[Convergence of Poisson point processes and of optimal transport regularization with application in variational analysis of PET reconstruction](#)**

Marco Mauritz and Benedikt Wirth

**Imaging sound-soft targets in waveguides using the topological derivative**

Umid Karimov, Peter Monk and Virginia Selgas

**Microlocal properties of the Radon transform on V-lines: a framework to reduce artifacts due to intrinsic missing data in linear Compton cameras**

Mariel Rosenblatt, Marcela Morvidone and Javier Cebeiro

**Half-time range description for the free space wave operator and the spherical means transform**

P Kuchment and L Kunyansky

**Spatially-distributed parameter identification by physics-informed neural networks illustrated on the 2D shallow-water equations**

Hugo Boulenc, Robin Bouclier, Pierre-André Garambois and Jérôme Monnier

**Solving the acousto-electric tomography by the adaptive Nesterov method of Kaczmarz type**

Kai Zhu and Min Zhong

**A three-stage method for reconstructing multiple coefficients in coupled photoacoustic and diffuse optical imaging**

Yinxi Pan, Kui Ren and Shanyin

**Stability analysis of inverse problems for coupled magnetic Schrödinger equations**

Mohamed Hamrouni, Moez Khenissi and Éric Soccorsi

**Iterative regularization in classification via hinge loss diagonal descent**

Vassilis Apidopoulos, Tomaso Poggio, Lorenzo Rosasco and Silvia Villa

**On projective stochastic-gradient type methods for solving large scale systems of nonlinear ill-posed equations: applications to machine learning**

J C Rabelo, Y Saporito, A Leitão and A L Madureira

**Randomized block coordinate descent method for linear ill-posed problems**

Qinian Jin and Duo Liu

**Direct sampling for recovering a clamped cavity from the biharmonic far-field data**

Isaac Harris, Heejin Lee and Peijun Li

**PALADIN: a novel plug-and-play 3D CS-MRI reconstruction method**

Jia-Mian Wu, Shi-Bai Yin, Tai-Xiang Jiang, Gui-Song Liu and Xi-Le Zhao

**Simultaneous estimation of electrical conductivity and permittivity in quantitative thermoacoustic tomography**

Teemu Sahlström, Timo Lähivaara and Tanja Tarvainen

[Issue 3 - Volume 41 - Inverse Problems - IOPscience](#)

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**From:** Charley Denton [cdenton@aimsciences.org](mailto:cdenton@aimsciences.org)

**Date:** Friday 14 March 2025

**Subject:** IPNet Digest table of contents submission (IPI 19-3)



IPI June 2025 Vol. 19, No. 3 articles:

1. [Linearization-based direct reconstruction for EIT using triangular Zernike decompositions](#)  
Antti Autio, Henrik Garde, Markus Hirvensalo and Nuutti Hyvönen
2. [Minimizing quotient regularization model](#)  
Chao Wang, Jean-Francois Aujol, Guy Gilboa and Yifei Lou
3. [Uniqueness and numerical resolution via iterated sensitivity equation of an inverse electromagnetic coefficient problem with partial boundary data](#)  
Jérémy Heleine
4. [A fundamental sequences method for an inverse boundary value problem for the heat equation in double-connected domains](#)  
Ihor Borachok and Roman Chapko
5. [Dynamic MRI reconstruction via weighted nuclear norm and total variation regularization](#)  
Bao-Li Shi, Li-Wen Fu, Meng Yuan, Hao-Hui Zhu and Zhi-Feng Pang
6. [Subspace-based coupled tensor decomposition for hyperspectral blind fusion](#)  
Kunjing Yang, Minru Bai, Renwei Dian and Ting Lu
7. [Sampling strategies in Bayesian inversion: A study of RTO and Langevin methods](#)  
Rémi Laumont, Yiqiu Dong and Martin Skovgaard Andersen
8. [Diffusion posterior sampling for magnetic resonance imaging](#)  
Ji Li and Chao Wang

[Inverse Problems and Imaging](#)

Best regards,  
Charley Denton  
Communications Specialist  
American Institute of Mathematical Sciences  
Email: [cdenton@aimsciences.org](mailto:cdenton@aimsciences.org)

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Today's Editor:      Matti Lassas      University of Helsinki

Today's Topics:

1. Inverse Problems Symposium 2025 registration and abstract submission are open!
2. News item for IPNet Digest from IOPP Inverse Problems journal
3. a new book: Carleman Estimates in Mean Field Games
4. table of contents

Submissions for IPNet Digest: [submit-ipnet@helsinki.fi](mailto:submit-ipnet@helsinki.fi)

Information about IPNet: <https://www.helsinki.fi/en/researchgroups/inverse-problems/ipnet-inverse-problems-network>

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**From:** Dolan, Kirk [dolank@msu.edu](mailto:dolank@msu.edu)

**Date:** Monday 24 March, 2025

**Subject:** Inverse Problems Symposium 2025 registration and abstract submission

Inverse Problems Symposium 2025 registration and abstract submission are open!

The IPS 2025 is a continuation of 31 successful US and international symposia since 1991. The purpose of this conference is to bring together researchers and practitioners in inverse problems to exchange ideas, methods, and latest developments.

Abstracts are due May 11, 2025.

Early Registration (available until May 4<sup>th</sup>): \$375

Regular Registration (begins April 14<sup>th</sup>): \$425

Student Early Registration (available until April 13<sup>th</sup>): \$150

Student Regular Registration (begins April 14<sup>th</sup>): \$200

Sunday, June 1, is a tutorial on Machine Learning. The keynote talk on Monday, June 2 will be on Autonomous Vehicles, followed by oral presentations, Student Poster Competition, and evening banquet. Tuesday will be oral presentations finishing after lunch.

<https://www.canr.msu.edu/inverse-problems/>

Kirk Dolan, Ph.D.

Professor

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Michigan State University

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[dolank@msu.edu](mailto:dolank@msu.edu)

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**From:** Iain Trotter [iain.trotter@ioppublishing.org](mailto:iain.trotter@ioppublishing.org)  
**Date:** Tuesday, 25 March ,2025  
**Subject:** News item for IPNet Digest from IOPP Inverse Problems journal

**Editor-in-Chief Vacancy for *Inverse Problems***

[Inverse Problems](#), published by IOP Publishing, is currently seeking an enthusiastic and experienced Editor-in-Chief.

The Editor-in-Chief is the journal's scientific advisor, providing community insight and acting as a strong advocate for the journal in the community, with a view to increasing the status and visibility of the journal. The Editor-in-Chief works with the Institute of Physics Publishing journal team to set the vision for the journal and develop the journal to achieve agreed aims. They will provide leadership of the Editorial Board, collaborating to provide ideas for editorial initiatives and commissioning suggestions.

The deadline for applications is 27th April 2025. For more details and to apply please visit [Inverse Problems - IOPscience](#). For any queries, please email [ip@ioppublishing.org](mailto:ip@ioppublishing.org)

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[iopublishing.org](http://iopublishing.org)

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**From:** Mikhail Klibanov [mklibanv@charlotte.edu](mailto:mklibanv@charlotte.edu)  
**Date:** Sunday, 23 March ,2025  
**Subject:** a new book: Carleman Estimates in Mean Field Games

Dear Colleagues,

This is to draw your attention to a recently published book:

Title: Carleman Estimates in Mean Field Games

Subtitle: Stability and Uniqueness for Nonlinear PDEs and Inverse Problems

Authors: Michael V. Klibanov and Jingzhi Li

Publisher: De Gruyter, 2025

<https://www.degruyter.com/document/isbn/9783111723198/html>

A truly attractive feature of the Mean Field Games Theory is that this theory can govern a wide variety of societal phenomena via a system of two coupled nonlinear parabolic Partial Differential Equations with opposite directions of time. Although a proper mathematical modeling is required for each such phenomenon. The price to pay, however, is a complicated structure of this system. Nevertheless, Carleman estimates can handle at least some difficult questions for this system, although far not all, of course.

Best regards, Michael V. Klibanov and Jingzhi Li

Mikhail V. Klibanov  
Ph.D. and Doctor of Science in Mathematics

Professor  
Department of Mathematics and Statistics  
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[mklibanv@charlotte.edu](mailto:mklibanv@charlotte.edu)  
<https://clas-math.charlotte.edu/mlkhail-klibanov/>  
Links to my two books:

<https://www.degruyter.com/document/doi/10.1515/9783110745481/html>  
<https://www.degruyter.com/document/isbn/9783111723198/html>

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**From:** [noreply@iopscience.org](mailto:noreply@iopscience.org)  
**Date:** Friday, 18 April 2025  
**Subject:** Inverse Problems, Volume 41, Number 4, April 2025

Papers

[ASPIRE: iterative amortized posterior inference for Bayesian inverse problems](#)  
Rafael Orozco, Ali Siahkoohi, Mathias Louboutin and Felix J Herrmann

[An accelerated preconditioned proximal gradient algorithm with a generalized Nesterov momentum for PET image reconstruction](#)  
Yizun Lin, Yongxin He, C Ross Schmidlein and Deren Han

[An inverse Cauchy problem of a stochastic hyperbolic equation](#)  
Fangfang Dou and Peimin Lü

[Discrete inverse problems with internal functionals](#)  
Marcus Corbett, Fernando Guevara Vasquez, Alexander Royzman and Guang Yang

[Convergence analysis of regularised Nyström method for functional linear regression](#)  
Naveen Gupta and S Sivanathan

[Distributed learning with discretely observed functional data](#)  
Jiading Liu and Lei Shi

[Lipschitz stability of an inverse problem of transmission waves with variable jumps](#)  
L Baudouin, A Imba, A Mercado and A Osses

[Convergence analysis of the discretization of continuous-domain inverse problems](#)  
Vincent Guillemet, Julien Fageot and Michael Unser

[On inverse problems for mean field games with common noise via Carleman estimate](#)  
Zhonghua Liao and Qi Lü

[Unique reconstruction for discretized inverse problems: a random sketching approach via subsampling](#)  
Ruhui Jin, Qin Li, Anjali Nair and Samuel N Stechmann

[Convergence rates of Landweber-type methods for inverse problems in Banach spaces](#)  
Qinian Jin

[A mixed finite element scheme for three-dimensional Maxwell's transmission eigenvalue problems](#)

Qing Liu, Tiexiang Li, Wen-Wei Lin and Shuo Zhang

[Subgradient-based Lavrentiev regularisation of monotone ill-posed problems](#)

Markus Grasmair and Fredrik Hildrum

[Crack identification in a multi-layer inhomogeneous domain using the Reciprocity Gap-Linear Sampling Method](#)

Yosra Boukari and Nouha Jenhani

[Issue 4 - Volume 41 - Inverse Problems - IOPscience](#)

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