IPNet Digest Volume 26, Number 04 May 13, 2019

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

Today's Topics:
    Conference: Modern Challenges in Imaging in the Footsteps of Allan MacLeod Cormack
    PostDoc: Inverse Problems, PET Imaging and Optimisation, at Bath, UK
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Submissions for IPNet Digest:
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Information about IPNet:
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From: Todd Quinto <Todd.Quinto@tufts.edu>
Subject: Conference on Modern Challenges in Imaging in the Footsteps of Allan MacLeod Cormack
Date: Friday, April 26, 2019

Dear Colleagues,

Registration is now open for the Conference on Modern Challenges in Imaging
In the Footsteps of Allan MacLeod Cormack, On the Fortieth Anniversary of
his Nobel Prize, August 5-9, 2019, at Tufts University, Medford, MA, USA.

For info and to register, go to
https://urldefense.proofpoint.com/v2/url?u=http-3A__go.tufts.edu_Cormack2019_&d=DwIGaQ&c=nE__W8dFE-shTxStwXtp0A&r=d_ce0_mh_PXvtyDkkix951B_s_t7QYc8Dtq82B52K8I&m=sDUp16PYwie6cTJFSJOKxZRNbK7Ng7oS2ksftpjC7r0&s=7Yf8pgUNkF6YwG95WHZNCyQoyyCBYAFRzalFEJpjRbE&e=

The deadline for abstracts is June 1 and the deadline for discounted registration is June 10.

The conference will gather top international researchers in mathematics, engineering, science, and medicine. A range of modalities will be represented, such as X-ray CT, dynamic tomography, optical tomography, photo/thermoacoustic CT, spectral imaging, and ultrasound. Limited view geometries including microlocal reconstruction of singularities, sparse sampling, regularization, dictionary learning, and related approaches will be represented. Underpinnings of the field, including algorithmic issues, machine learning, integral geometry and generalized Radon transforms will be discussed, and a range of applications in medicine, security, industry, and science will be considered. A few historical talks will be given.

Besides minisymposia and plenary talks, we will offer a poster session for students and others who are not speaking. Students and beginners will be invited to a networking lunch.

Please encourage your students and others to register at
https://urldefense.proofpoint.com/v2/url?u=http-3A__math.tufts.
edu_faculty_equinto_Cormack2019_registration.html&d=DwIGaQ&c=nE__W8dFE-shTxStwXtp0A&r=
d_ce0_mh_PXvtyDkkix951B_s_t7QYc8Dtq82B52K8I&m=
sDUp16PYwie6cTJFSJOKxZRNbK7Ng7oS2ksftpjC7r0&s=
NiB7QXWv3AFr5BNy47cXGCUZ0nToYH0HKWPG3sFKO4k&e=
and go to the Student Application Section.

NSF funding has been recommended by the program officer and we might have other external support, too. Students, researchers from underrepresented groups, and beginning researchers will have the highest priority for funding.

We hope to see you in Medford this August!

Sincerely,

Todd Quinto
on behalf of the organizers Fulton Gonzalez, Bernadette Hahn, Misha Kilmer, Eric Miller, Gaël Rigaud, and myself

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From: Matthias Ehrhardt <me549@bath.ac.uk>
Subject: 3-year PostDoc on inverse problems, PET imaging and optimisation, Bath, UK
Date: Monday, April 29, 2019

Research Associate in Randomised Optimisation for Large-Scale Tomographic Image Reconstruction (fixed-term role)

A position exists for a Research Associate to work on the development of stochastic optimisation methods for large-scale tomographic image reconstruction, within the EPSRC project PET++: Improving Localisation, Diagnosis and Quantification in Clinical and Medical PET Imaging with Randomised Optimisation
https://gow.epsrc.ukri.org/NGBOViewGrant.aspx?GrantRef=EP/S026045/1.

This project is a collaborative project between mathematicians in Bath and Cambridge, medical researchers and clinicians from Addenbrookes' hospital and GE Healthcare, with support from advisors from UCL, Oxford, Kings College London, University of Helsinki and KTH Stockholm. We build on the insights from our previous research and continue to develop advanced image reconstruction techniques directly tailored to PET imaging applications, putting a strategy in place to ensure that successful methods are adopted widely in healthcare.

For more details, see https://www.bath.ac.uk/jobs/Vacancy.aspx?ref=CC6696

Submitted by: Matthias J Ehrhardt, PhD, Prize Fellow
Institute for Mathematical Innovation, University of Bath, UK
https://mehrhardt.github.io

From: "noreply@iopscience.org" <noreply@iopscience.org>

Subject: Contents, Inverse Problems, Volume 35, Number 5, May 2019
Date: Friday, May 3, 2019 at 12:00 AM

Inverse Problems May 2019 Volume 35, Number 5

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Special Issue Papers:

Anisotropic osmosis filtering for shadow removal in images
Simone Parisotto, Luca Calatroni, Marco Caliari, Carola-Bibiane Schönlieb and Joachim Weickert
Special Issue on Variational Methods and Effective Algorithms for Imaging and Vision

Analysis of new direct sampling indicators for far-field measurements
Isaac Harris and Andreas Kleefeld
Special Issue in Memory of Professor Armin Lechleiter

Phase retrieval with background information
Ziyang Yuan and Hongxia Wang
Inverse wave propagation problems without phase information

A least-squares functional for joint exit wave reconstruction and image registration
Christian Doberstein and Benjamin Berkels
Special Issue on Variational Methods and Effective Algorithms for Imaging and Vision

Compton scatter tomography in annular domains
T T Truong and M K Nguyen
Special Issue on Generalized Radon Transforms and Applications in Tomography

Papers:

Enhancing joint reconstruction and segmentation with non-convex Bregman iteration
Veronica Corona, Martin Benning, Matthias J Ehrhardt, Lynn F Gladden, Richard Mair, Andi Reci, Andrew J Sederman, Stefanie Reichelt and Carola-Bibiane Schönlieb

Error estimates for Arnoldi–Tikhonov regularization for ill-posed operator equations
Ronny Ramlau and Lothar Reichel

Theory of the linear sampling method for time-dependent fields
Aaron C Prunty and Roel K Snieder

A new Kaczmarz-type method and its acceleration for nonlinear ill-posed problems
Haie Long, Bo Han and Shanshan Tong

Regularization of inverse problems via time discrete geodesics in image spaces
Sebastian Neumayer, Johannes Persch and Gabriele Steidl

Inverse source problem in a forced network
J G Caputo, A Hamdi and A Knippel

https://iopscience.iop.org/issue/0266-5611/35/5

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