Today's Topics:

From: "McMasters, Robert L" <mcmastersrl@vmi.edu>
Subject: Inverse Problems Symposium Announcement
Date: December 21, 2015

Abstract submissions will accepted for the Inverse Problems Symposium for 2016
     http://inverseproblems2016.org
starting on 15 January 2016.

The conference will be held in Lexington Virginia at the Virginia Military Institute
5-7 June 2016.

Topics included in the conference are listed below:

A. Mathematical and Statistical Aspects of Inverse Problems
          1. Theory and Methods of Inverse Problems
          2. Stability and Error Analysis
B. Design of Experiments
          1. Optimal Design of Experiments
          2. Analysis of Actual Experimental Data
C. Applications
          1. Heat Transfer, Applied Mechanics, Controls, Other Engineering Disciplines
          2. Biology, Biochemistry, Genetics, and Medicine
          3. Nondestructive Evaluation
          4. Nanoengineering
          5. Tomography and Inverse Scattering
          6. Geology and Environmental Phenomena
          7. Economics
          8. Food and Bioprocessing
          9. Bioengineering
          10. Packaging

Submitted by: Bob McMasters

From: "Smith, Lynn" <L.Smith@hw.ac.uk>
Subject: 3 Yr PhD: LAkHsMI - Large Scale Hydrodynamic Imaging in the Ocean
Date: December 4, 2015

Immediately Available: 3 Yr PhD: LAkHsMI - Large Scale Hydrodynamic Imaging in the Ocean

3 year PhD Position: Ocean Systems Laboratory, Edinburgh Centre for Robotics, Heriot-Watt University

Immediate Start

LAkHsMI: Large Scale Hydrodynamic Imaging in the Ocean From An Artificial Lateral Line

A three-year PhD by research position is available based in the Ocean Systems Laboratory at Heriot-Watt University and affiliated to the Edinburgh Centre for Robotics, starting as soon as possible as part of the LAKSHMI EU H2020 Blue Growth 09 programme 2015-2019.

PROJECT:

LAkHsMI will develop a new bio-inspired technology to make continuous and cost-effective measurements of the near-field, large-scale hydrodynamic situation for environmental monitoring in cabled ocean observatories, performance and damage detection in marine renewable energy and unwanted ingress in port/harbor security. The project will design, manufacture, and field test prototype smart sensor cables that measure differential pressure and temperature on the ocean floor, enabling high resolution imaging of the surrounding volume in space and time through simple, inexpensive, very low power transduction. The cables can be connecting with existing cabled ocean observatories. The technology is inspired by the biophysics of fish hydrodynamic sensing and is scalable from meters to possibly hundreds of kilometers with a high sampling frequency. Software interfaces developed in the course of the project will be integrated with existing observatory systems (such as EUROGOOS). Tests will be conducted in a tank, a pool, and in an ocean observatory. The project involves a consortium of engineers, computer scientists, oceanographers, environmentalists and companies, from Tallinn, Groningen, Aberdeen, Orkney and Edinburgh.

The PhD:

The PhD will research novel signal processing techniques for imaging hydrodymanic activities in the water column at a variety of resolutions and ranges. It will also research suitable embedded detection and classification approaches for significant or relevant hydrodynamic events using the array data. These are intended to produce useful information products for interdisciplinary oceanography and seismic geophysics,

tracking fish and fish schools, (sub)surface traffic in harbours and marine renewable turbine performance.

Applications are sought from interested EU CITIZENS ONLY with MSc (Distinction) or 1st class honours degree (or equivalent) in electrical and electronic engineering, signal processing, applied mathematics or robotics, and with practical aptitudes/interests in field trials with sensors. Interests and skills in probabilistic methods, beamforming approaches and fluid dynamics would be an advantage. Some practical electrical engineering skills for data acquisition from the sensor array are also expected.

The position is of three years duration, starting as soon as possible, with all fees covered and an annual stipend of up to £15k.

Further reading:

Yingchen Yang et al, Distant touch hydrodynamic imaging with an artificial lateral line. Proc Natl Acad Sci U S A. 2006 Dec 12; 103(50): 18891–
 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1748147/

Curcic-Blake B and Netten S M v 2006 Source localization encoding in the fish lateral line J. Exp. Biol. 209 1548–59

Institution:

The Edinburgh Centre for Robotics (ECR) is a £35M joint venture between Heriot-Watt University and the University of Edinburgh, supported by EPSRC, Industry and the Universities. It captures the expertise of over 30 principle investigators of international standing from 12 cross-disciplinary research groups and institutes across the Schools of Engineering and Physical Sciences, Informatics and the Department of Computer Science The Centre includes an EPSRC Centre for Doctoral Training in Robotics and Autonomous Systems which trains innovation–ready postgraduates, and ROBOTARIUM, a £7.2M national capital equipment facility. This studentship will be affiliated with the Centre.

Annual Report:
https://www.dropbox.com/s/7k1ro8y7xkue8oq/2015.10.12%20ECR%20Annual%20Review14-15%20%28final%29.pdf?dl=0

The Ocean Systems Laboratory at Heriot-Watt University, Edinburgh is a multidisciplinary science and engineering research centre that innovates, applies and teaches world class advances in autonomous systems, sensor modelling/processing, and underwater acoustic system theory/design for offshore, marine science, renewable energy and security applications. It has a world class reputation, spinning out companies of the calibre of http://www.seebyte.com http://www.codaoctopus.com and http://www.hydrason.com

Further information:

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Centre for Robotics: www.edinburgh-robotics.org Ocean Systems Laboratory:
 http://www.oceansystemslab-heriotwatt.com
https://www.youtube.com/user/oceanslabheriotwatt

From: Mathematics HR Office <HR-Office@maths.cam.ac.uk>
Subject: Vacancy: University Lectureship in the Mathematics of Information, University
of Cambridge
Date: December 22, 2015

Applications are invited for a University Lectureship in the Mathematics of
Information at the University of Cambridge in the Department of Applied Mathematics
and Theoretical Physics (DAMTP) to commence on 1 September 2016 or by agreement.
 Appointment will be made at an appropriate point on the University scale
(£38,896-£49,230) and will be for a probationary period of five years with appointment
to the retiring age thereafter, subject to satisfactory performance.

Candidates should hold a PhD or equivalent in mathematics or a closely related
subject, and have an outstanding record of research in the mathematics of data
science. Preference will be given to experts in applied and computational analysis.
Willingness to engage in an interdisciplinary and cross-cutting research is very
desirable.

This Lectureship is affiliated with the new Cantab Capital Institute for Mathematics
of Information which is hosted within the Faculty of Mathematics. It accommodates
research activity on fundamental mathematical problems and methodology for
understanding, analysing, processing and simulating data. Data science research
performed in the Institute is at the highest international level, aiming to extract
the relevant information from large- and high-dimensional data with a predictable
certainty.

For further information on the position as well as instructions on how to apply please
go to the Cambridge University Job Opportunities page at
http://www.jobs.cam.ac.uk/job/8736/

Submitted by: Tracey Flack, HR Office Administrator (Mornings Only)
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From: <noreply@degruyter.com>
Subject: Contents,'Journal of Inverse and Ill-posed Problems'
Date: December 1, 2015

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http://www.degruyter.com/view/j/jiip.2015.23.issue-6/issue-files/jiip.2015.23.issue-6.
xml

From: Romas Baronas <romas.baronas@mif.vu.lt>
Subject: Table of Contents, Nonlinear Analysis: Modelling and Control 21:1
Date: December 1, 2015 at 11:49:41 AM PST
To: <ipnet-digest@math.msu.edu>

Nonlinear Analysis: Modelling and Control   2016   Volume 21, Number 1

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A free on-line edition is available at: http://www.mii.lt/NA/
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