

**Applied Inverse Problems 2005 : Application to Attend**

MALE ... FEMALE ... (please tick) TITLE .....  
SURNAME:.....  
FORENAMES : .....

INSTITUTION AT WHICH EMPLOYED: (in full, including address):  
.....

ADDRESS FOR CORRESPONDENCE: (if different from above):  
.....

TELEPHONE NO: .....  
FAX NO: .....

EMAIL ADDRESS: .....  
MAIN RESEARCH AREAS: .....  
I intend to present a poster No... Yes ... (Please Tick)  
If Yes, title: .....

CONFERENCE FEE: Standard: £350.00 ..... Reduced\*: £250.00 ..... (Please tick)  
ACCOMMODATION: En-Suite : £250.00 ..... Standard: £200.00 .....  
TOTAL: £ .....  
\*LETTER OF SUPPORT INCLUDED YES./NO... (Please choose)  
DIETARY REQUIREMENTS.....

SIGNATURE ..... DATE .....

PAYMENT  
NAME and ADDRESS for INVOICE if different than given above:  
.....

Please charge my MasterCard/VISA/VISA Debit/Switch (delete as appropriate)

ACCOUNT NUMBER .....

EXPIRY DATE .....

Issue No: (Switch only) .....

All cheques should be made payable to: University College London

**KEY DATES:** Application to attend : **1<sup>st</sup> February 2005**  
Notification of acceptance : **1<sup>st</sup> March 2005**  
Payment Due : **1<sup>st</sup> April 2005**



**AIP 2005**

26-30 June 2005  
Royal Agricultural College, Cirencester, UK



**1<sup>st</sup> Announcement and Application to Attend**

## About AIP

The enormous increase in computing power and the development of powerful algorithms has made it possible to apply the techniques of Inverse Problems to real-world problems of growing complexity. Applications include a number of medical as well as other imaging techniques, location of oil and mineral deposits in the earth's substructure, creation of astrophysical images from telescope data, finding cracks and interfaces within materials, shape optimisation, model identification in growth processes and, more recently, modelling in the life sciences.

The series of AIP Conferences aim to provide a primary international forum for academic and industrial researchers working on all aspects of inverse problems, such as mathematical modelling, functional analytic methods, computational approaches, numerical algorithms etc. The success of the first conference in Montecatini in 2001 with more than 150 participants and several parallel sessions led to the proposal to have this Conference every two years, alternating between North or South America and Europe or a site outside the western hemisphere. A second equally successful conference was thus held in Lake Arrowhead, California in 2003 and a third will be held in Cirencester in the UK Cotswold region from June 26th -30th in 2005.

Each AIP Conference will follow the pattern of a number of invited talks from international experts and a set of minisymposia on topical themes. The venues will be chosen to encourage the maximum interaction between all participants.

**Chairs: Simon Arridge, Roy Pike, William Rundell**

**Steering Committee: Mario Bertero, Daniela Calvetti, Tony Chan, David Colton, Heinz Engl, Joyce McLaughlin, Pierre Sabatier, Erkki Somersalo, Gantner Uhlmann**

**Local Organising Committee: Slava Kurylev, William Lionheart**

## Conference Venue

The conference will take place at the **Royal Agricultural College**, Cirencester, UK. The College is located in a magnificent setting on the edge of the historic Roman town of Cirencester in the heart of the Cotswold Countryside - an area of outstanding natural beauty in rural Gloucestershire. For further details of the venue, please visit <http://www.rac.ac.uk/home.htm>

## Fees

To ensure admission all payments must be made before the conference. Payment may be made by credit card or cheque, which must be in pounds sterling. A limited source of funds for subsidising the cost of attendance will be available and can be applied for nearer to the conference date.

**Early Registration** ( please send payment by **1<sup>st</sup> of April 2005**)

**Applications to be sent to:**

**Dawn Bailey**

Department of Computer Science

University College London

Gower St, London

WC1E 6BT, UK

**Conference:** (including coffee, lunch and tea on 26,27,28,29 and 30 June, conference dinner and excursion)

Standard Reduced\*

£350.00 £250.00

**Accommodation:** (including dinner, bed and breakfast)

En-Suite Standard\*\*

£250.00 £200.00

\* Reduced rate applies to full-time students and must be accompanied by letter of support

\*\* Standard rooms have shared bathroom facilities. There are limited number of these

## AIP2005 Invited Speakers

<b>U. Ascher</b>	"Artificial time integration and inverse problems"
<b>J. Berryman</b>	"Time-reversal data processing and its relation to other linear focusing and imaging methods"
<b>L. Borcea</b>	"Theoretical and computational aspects of statistically stable imaging in random media"
<b>A. Grunbaum</b>	"Nonlinear inverse problems for multiterminal networks"
<b>V. Isakov</b>	"Increased stability in continuation of wave fields and in verse problems in acoustics"
<b>J. Kaipio</b>	"Recent results in the modelling of approximation errors in inverse problems"
<b>R. Kress</b>	"Conformal mapping and electrostatic imaging"
<b>M. Lassas</b>	"Anisotropic inverse problems"
<b>A. Nachman</b>	"Progress on analytic inversion methods"
<b>S. Osher</b>	"Using geometry and iterated refinement for inverse problems"
<b>L. Päivärinta</b>	"Calderon's inverse conductivity problem and quasiconformal maps"
<b>G. Papanicolaou</b>	"Interferometric array imaging"
<b>T. Poggio</b>	"Theory of learning"
<b>L. Reichel</b>	TBA
<b>O. Scherzer</b>	"Nonconvex regularization for inverse problems"
<b>J. Sylvester</b>	"Locating a time harmonic scatterer or source"
<b>R. Vogelius</b>	"Recent results concerning electromagnetic imaging for small inhomogeneities"
<b>M. Yamamoto</b>	"Mathematical analysis and numerical solutions of inverse problems by Carleman estimates"
<b>V. Yashin</b>	"Regularization and iterative approximation of non-smooth solutions for ill-posed problems"

## Mini Symposia

<b>Title:</b> "Fundamental issues of uniqueness and stability in inverse problems."	<i>Organisers:</i> G. Alessandrini and S. Kurylev
<b>Title:</b> "3D Electromagnetic Imaging."	<i>Organisers:</i> M. Hanke and A. Kirsch
<b>Title:</b> "Microwave Imaging."	<i>Organisers:</i> M. Cheney and F. Natterer
<b>Title:</b> "Inverse Problems in Wave Propagation."	<i>Organisers:</i> W. Symes and G. Uhlmann
<b>Title:</b> "Optical and Astronomical Imaging."	<i>Organisers:</i> M. Bertero and R. Pike
<b>Title:</b> "Industrial and Financial Applications."	<i>Organisers:</i> H. Engl and W.R.B. Lionheart
<b>Title:</b> "New hybrid methods in medical imaging utilizing ultrasound data."	<i>Organiser:</i> J. McLaughlin
<b>Title:</b> "Level Sets and Geometry Based Regularisation"	<i>Organisers:</i> T.Chan and X-C Tai
<b>Title:</b> "Bayesian and statistical Methods"	<i>Organiser:</i> E. Somersalo

## Posters

There will be two poster sessions for attendees. If you want to present a poster please give the title on the application form.