

# Applied Inverse Problems 2005

# AIP 2005

26-30 June 2005

Royal Agricultural College, Cirencester, UK

## 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  
Gunther Uhlmann

## Local Organising Committee

Slava Kurylev  
William Lionheart

## Invited Speakers

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

## Mini Symposia

**Title:** "Fundamental issues of uniqueness and stability in inverse problems"  
**Title:** "3D Electromagnetic Imaging"  
**Title:** "Microwave Imaging"  
**Title:** "Inverse Problems in Wave Propagation"  
**Title:** "Optical and Astronomical Imaging"  
**Title:** "Industrial and Financial Applications"  
**Title:** "New hybrid methods in medical imaging utilizing ultrasound data."  
**Title:** "Level Sets and Geometry Based Regularisation"  
**Title:** "Bayesian and statistical Methods"

*Organisers:* G. Alessandrini and S. Kurylev  
*Organisers:* M. Hanke and A. Kirsch  
*Organisers:* M. Cheney and F. Natterer  
*Organisers:* W. Symes and G. Uhlmann  
*Organisers:* M. Bertero and R. Pike  
*Organisers:* H. Engl and W.R.B. Lionheart  
*Organiser :* J. McLaughlin  
*Organisers:* T.Chan and X-C Tai  
*Organiser :* E. Somersalo



<http://www.cs.ucl.ac.uk/aip2005/>