

ISSN: 0025-5793 (print) 2041-7942 (online)

# Mathematika

VOLUME 57 PART 2 JULY 2011

The London  
Mathematical  
Society



**UCL**

# Mathematika

A JOURNAL OF PURE AND APPLIED MATHEMATICS

## Editorial Board

Managing Editor

ALEX SOBOLEV, University College London  
Analysis, spectral theory, PDEs

KEITH BALL, University College London  
Discrete geometry, functional analysis,  
information theory

IMRE BÁRÁNY, University College London  
Convex geometry with applications

MARIANNA CSÖRNYEI, University College London  
Real analysis, geometric measure theory

TIMOTHY GOWERS, University of Cambridge  
Analysis, combinatorics

FRANCIS JOHNSON, University College London  
Algebra, geometric group theory and topology

MINHYONG KIM, University College London  
Number theory, algebraic geometry

YAROSLAV KURYLEV, University College London  
Inverse problems

IMRE LEADER, University of Cambridge  
Combinatorics, graphs

FRANK SMITH, University College London  
Industrial and biomedical modelling

JEAN-MARC VANDEN-BROECK,  
University College London  
Fluid mechanics, free boundary problems,  
scientific computing and asymptotics

ROBERT VAUGHAN, Pennsylvania State University  
Analytic number theory

GÜNTER ZIEGLER, Technische Universität Berlin  
Discrete geometry, polytopes, topological methods

## Subscriptions

*Mathematika* is published in two issues in 2011. Subscription prices for 2011 are £115 (\$184 in USA, Canada and Mexico) which includes print and electronic access. The electronic-only access price for 2011 is £104 (\$167 in USA, Canada and Mexico). Single parts cost £58 (\$92 in USA, Canada and Mexico). Prices include delivery by air where appropriate. EU subscribers who are not registered for VAT should add VAT at their country's rate. VAT-registered subscribers should provide their VAT registration number.

Orders, which must be accompanied by payment, should be sent to a subscription agent, book-seller, or direct to the publishers: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, UK or, in the USA, Canada and Mexico, Cambridge University Press, Journals Fulfillment Department, 100 Brook Hill Drive, West Nyack, NY 10994-2133. Japanese prices are available from Kinokuniya Company Ltd, PO Box 55, Chitose, Tokyo 156, Japan. Periodicals postage is paid at New York, NY and additional mailing offices. POSTMASTER: send address changes in the USA, Canada and Mexico to *Mathematika*, Cambridge University Press, Journals Fulfillment Department, 100 Brook Hill Drive, West Nyack, NY 10994-2133.

This journal is included in the Cambridge Journals Online service. Further information, and online access for subscribers, is available at <http://journals.cambridge.org/mtk>.

© University College London, 2011