Journal of the Institute of Mathematics of Jussieu Journal de l'Institut de Mathématiques de Jussieu



APRIL 2012 | VOLUME 11 | ISSUE 2 | ISSN 1474-7480



Editors Editorial Board

Isabelle Gallagher D. Auroux (University of California, Berkeley)

Institut Mathématique de Jussieu
Université Paris Diderot (Paris 7)
Case 7012
T. C. Dinh (Paris 6)
T. Graber (Caltech)

75205 Paris Cedex 13 F. Hélein (Institut Mathématique de Jussieu)

France B. Kleiner (Courant Institute)

gallagher@math.jussieu.fr

M. Kontsevitch (IHES)

J.-E Le Gall (Orsay)

N. Lerner (Institut Mathématique de Jussieu)

M. Levine (Northeastern) F. Loeser (Paris, ENS)

Institut Mathématique de Jussieu H. Miller (MIT)
Université Pierre et Marie Curie N. Mok (Hong Kong)

François Loeser

4 place Jussieu J. Nekovář (Institut Mathématique de Jussieu)

75005 Paris N. Nikolski (Bordeaux 1) France P. Ozsvath (Columbia)

loeser@math.jussieu.fr

A. Skorobogatov (Imperial College London)

T. Tanisaki (Osaka City University)

R. Taylor (Harvard) E. Vasserot (Paris 7) A. Venkatesh (Stanford)

A. Zuk (Paris 7)

Subscriptions. Journal of the Institute of Mathematics of Jussieu (ISSN 1474-7480) is published in January, April, July and October. Four parts form a volume. The subscription price which includes electronic access of volume 11 (2012) (including postage) is £270 net (USA, Canada and Mexico US\$480). Prices include delivery by air where appropriate. Single parts cost £70 (USA, Canada and Mexico US\$125) plus postage. The electronic-only price available to institutional subscribers is £240 (US\$434 in USA, Canada and Mexico). The print-only price available to institutional subscribers is £260 (US\$470 in USA, Canada and Mexico).

Orders, which must be accompanied by payment, may be sent to any bookseller, subscription agent or direct to the publisher: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU; or in the USA, Canada and Mexico: Cambridge University Press, Journals Fulfillment Department, 100 Brook Hill Drive, West Nyack, New York 10994–2133. EU subscribers (outside the UK) who are not registered for VAT should add VAT at their country's rate. VAT registered subscribers should provide their VAT registration number. Japanese prices for institutions are available from Kinokuniya Company Ltd., P.O. Box 55, Chitose, Tokyo 156, Japan.

Copying. This journal is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, USA. Organisations in the USA who are also registered with C.C.C. may therefore copy material (beyond the limits permitted by sections 107 and 108 of U.S. Copyright law) subject to payment to C.C.C. of the per-copy fee of \$16.00. This consent does not extend to multiple copying for promotional or commercial purposes. Code 1474-7480/12 \$16.00.

 $ISI\ Tear\ Sheet\ Service,\ 3501\ Market\ Street,\ Philadelphia,\ PA\ 19104,\ USA,\ is\ authorised\ to\ supply\ single\ copies\ of\ separate\ articles\ for\ private\ use\ only.$

Organizations authorised by the Copyright Licensing Agency may also copy material subject to the usual conditions.

For all other use, permission should be sought from Cambridge University Press.

For further information on Journal of the Institute of Mathematics of Jussieu or other Cambridge titles access www.journals.cambridge.org or www.cambridge.org.

This journal issue has been printed on FSC-certified paper and cover board. FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. Please see www.fsc.org for information.

© Cambridge University Press 2012