

Journal of ALGEBRAIC GEOMETRY

Hiromu Tanaka, <i>The X-method for klt surfaces in positive characteristic</i>	605
Cornelius Greither and Cristian D. Popescu, <i>An Equivariant Main Conjecture in Iwasawa theory and applications</i>	629
Hélène Esnault, Marc Levine, and Olivier Wittenberg, <i>Index of varieties over Henselian fields and Euler characteristic of coherent sheaves</i>	693
Andreas Holmstrom and Jakob Scholbach, <i>Arakelov motivic cohomology I</i>	719
Jakob Scholbach, <i>Arakelov motivic cohomology II</i>	755
José Luis González and Kalle Karu, <i>Descent for algebraic cobordism</i> .	787

JOURNAL OF ALGEBRAIC GEOMETRY

Editors

- M. BRION
Université de Grenoble I
UFR de Mathématiques
MR 5582 du CNRS
Institut Fourier, BP 74
38402 Saint-Martin d'Hères
FRANCE
- M. GROSS
DPMMS
Centre for Mathematical Sciences
Wilberforce Road
Cambridge CB3 0WB
UNITED KINGDOM
- C. HACON
Department of Mathematics
University of Utah
155 South 1400 East, JWB 233
Salt Lake City, UT 84112
U.S.A.
- B. HASSETT
Department of Mathematics
Brown University
Box 1917
151 Thayer Street
Providence, RI 02912
U.S.A.
- K. KATO
Department of Mathematics
University of Chicago
5734 University Avenue
Chicago, IL 60637
U.S.A.
- J. LI
Department of Mathematics
Stanford University
Stanford, CA 94305
U.S.A.
- K. OGUIISO
Department of Mathematics
Graduate School of Science
Osaka University, Toyonaka
Osaka 560-0043
JAPAN
- P. SCHNEIDER
Institute of Mathematics
Department of Mathematics and
Computer Science
University of Münster
Einsteinstr. 62
D-48149 Münster
GERMANY
- C. SOULÉ
Institut des Hautes Études Scientifiques
35 Route de Chartres
F-91440 Bures-sur-Yvette
FRANCE
- S. S.-T. YAU (Managing Editor)
Department of Mathematical Sciences
Tsinghua University
Beijing 100084
P. R. CHINA

Associate Editors

- S. K. DONALDSON
Department of Mathematics
Huxley Building
Imperial College of Science,
Technology and Medicine
180 Queen's Gate
London SW7 2BZ
ENGLAND
- G. FALTINGS
Max Planck Institute for Mathematics
Vivatsgasse 7
53111 Bonn, GERMANY
- J. HARRIS
Department of Mathematics
Harvard University
Cambridge, MA 02138
U.S.A.
- I. M. SINGER
Department of Mathematics 2-174
Massachusetts Institute of Technology
Cambridge, MA 02139
U.S.A.

The *Journal of Algebraic Geometry*, published quarterly by University Press, Inc., is devoted to the publication of research papers in algebraic geometry, singularity theory, and related subjects such as number theory, commutative algebra, projective geometry, complex geometry, and geometric topology.

Starting with the 2002 subscription, the *Journal of Algebraic Geometry* is available in both electronic and paper delivery. List price is US\$412 for electronic + paper delivery, US\$380 for electronic only; the price for individuals is US\$170 for electronic + paper delivery, US\$150 for electronic only. If ordering the paper version, add US\$5 for delivery within the United States; US\$12 for delivery outside the United States. Subscription renewals are subject to late fees. See www.ams.org/journal-faq for more information.

Subscriptions and orders should be addressed to the American Mathematical Society, P.O. Box 845904, Boston, MA 02284-5904 USA. Telephone 1-800-321-4267, Fax (401)-331-3842. All orders must be accompanied by payment, and checks should be made payable to the American Mathematical Society. General correspondence and changes of address should be sent to the American Mathematical Society, 201 Charles Street, Providence, RI 02904-2294 USA.

Instructions for submission of manuscripts are given on the inside back cover of this issue.

© 2015 by University Press, Inc. All rights reserved

This journal is indexed in *Science Citation Index™-Expanded*, *ISI Alerting ServicesSM*, *CompuMath Citation Index®*, *Current Contents®/Physical, Chemical & Earth Sciences*.

ISSN 1056-3911 (print); ISSN 1534-7486 (online)

Printed in the United States of America.

⊗ The paper used in this issue is acid-free and falls within the guidelines established to ensure permanence and durability.

INDEX

Abramovich, Dan, Martin Olsson, and Angelo Vistoli, <i>Correction to “Twisted stable maps to tame Artin stacks”</i>	399
Alzati, Alberto, and Michele Bognesi, <i>A structure theorem for $SU_C(2)$ and the moduli of pointed rational curves</i>	283
Balaji, V., and C. S. Seshadri, <i>Moduli of parahoric \mathcal{G}-torsors on a compact Riemann surface</i>	1
Bertolini, Massimo, Henri Darmon, and Victor Rotger, <i>Beilinson-Flach elements and Euler systems I: Syntomic regulators and p-adic Rankin L-series</i>	355
———, <i>Beilinson-Flach elements and Euler systems II: The Birch-Swinnerton-Dyer conjecture for Hasse-Weil-Artin L-series</i>	569
Bognesi, Michele, <i>See</i> Alzati, Alberto	283
Borne, Niels, and Angelo Vistoli, <i>The Nori fundamental gerbe of a fibered category</i>	311
Borodzik, Maciej, András Némethi, and Andrew Ranicki, <i>On the semi-continuity of the mod 2 spectrum of hypersurface singularities</i>	379
Bryan, Jim, and Andrew Morrison, <i>Motivic classes of commuting varieties via power structures</i>	183
Darmon, Henri, <i>See</i> Bertolini, Massimo	355
———, <i>See</i> Bertolini, Massimo	569
Duncan, Alexander, and Zinovy Reichstein, <i>Versality of algebraic group actions and rational points on twisted varieties</i>	499
Esnault, Hélène, Marc Levine, and Olivier Wittenberg, <i>Index of varieties over Henselian fields and Euler characteristic of coherent sheaves</i>	693
Gongyo, Yoshinori, Shinnosuke Okawa, Akiyoshi Sannai, and Shunsuke Takagi, <i>Characterization of varieties of Fano type via singularities of Cox rings</i>	159
González, José Luis, and Kalle Karu, <i>Descent for algebraic cobordism</i>	787
Greither, Cornelius, and Cristian D. Popescu, <i>An Equivariant Main Conjecture in Iwasawa theory and applications</i>	629
Holmstrom, Andreas, and Jakob Scholbach, <i>Arakelov motivic cohomology I</i>	719
Karu, Kalle, <i>See</i> González, José Luis	787
Krämer, Thomas, and Rainer Weissauer, <i>Vanishing theorems for constructible sheaves on abelian varieties</i>	531
Levine, Marc, <i>See</i> Esnault, Hélène	693
Ma, Shouhei, <i>Rationality of the moduli spaces of 2-elementary K3 surfaces</i>	81
Morrison, Andrew, <i>See</i> Bryan, Jim	183
Némethi, András, <i>See</i> Borodzik, Maciej	379

Okawa, Shinnosuke, <i>See</i> Gongyo, Yoshinori	159
Olsson, Martin, <i>Fujiwara's theorem for equivariant correspondences</i>	401
———, <i>See</i> Abramovich, Dan	399
Popescu, Cristian D., <i>See</i> Greither, Cornelius	629
Ranicki, Andrew, <i>See</i> Borodzik, Maciej	379
Reichelt, Thomas, and Christian Sevenheck, <i>Logarithmic Frobenius manifolds, hypergeometric systems and quantum \mathcal{D}-modules</i>	201
Reichstein, Zinovy, <i>See</i> Duncan, Alexander	499
Rotger, Victor, <i>See</i> Bertolini, Massimo	355
———, <i>See</i> Bertolini, Massimo	569
Sannai, Akiyoshi, <i>See</i> Gongyo, Yoshinori	159
Scholbach, Jakob, <i>Arakelov motivic cohomology II</i>	755
———, <i>See</i> Holmstrom, Andreas	719
Seshadri, C. S., <i>See</i> Balaji, V.	1
Sevenheck, Christian, <i>See</i> Reichelt, Thomas	201
Takagi, Shunsuke, <i>See</i> Gongyo, Yoshinori	159
Tanaka, Hiromu, <i>The X-method for klt surfaces in positive characteristic</i>	605
Vial, Charles, <i>Chow–Künneth decomposition for 3- and 4-folds fibred by varieties with trivial Chow group of zero-cycles</i>	51
Vistoli, Angelo, <i>See</i> Abramovich, Dan	399
———, <i>See</i> Borne, Niels	311
Weissauer, Rainer, <i>See</i> Krämer, Thomas	531
Wittenberg, Olivier, <i>See</i> Esnault, Hélène	693

INFORMATION FOR AUTHORS

Submission of Manuscripts. All manuscripts should be electronically prepared in $\mathcal{A}\mathcal{M}\mathcal{S}\text{-}\mathcal{L}\mathcal{A}\mathcal{T}\mathcal{E}\mathcal{X}$. A PDF file of the manuscript should be sent via email to the Managing Editor or to any member of the Editorial Board. Authors are encouraged to submit manuscripts written in English. An abstract of at least one complete sentence and at most 300 words is required for every paper. The *Journal of Algebraic Geometry* offers free worldwide access to the electronic abstracts. All author names must be in First-Middle-Surname order. A manuscript accepted for publication must be typeset by the author(s) in $\mathcal{A}\mathcal{M}\mathcal{S}\text{-}\mathcal{L}\mathcal{A}\mathcal{T}\mathcal{E}\mathcal{X}$.

Authors should supply email addresses if available and current postal addresses, along with their affiliations, on the last page of the manuscript. To help avoid delays in publication, authors are encouraged to send changes in postal and email addresses to jag-query@ams.org, especially before proof has been sent to authors. Articles are electronically published after proof is returned from authors and before appearing in an issue. Once an article is published electronically, author information, such as postal and email addresses, cannot be updated.

To eliminate unnecessary delay or difficulties in printing, authors may be guided by the book *Mathematics into Type*, updated edition, Amer. Math. Soc., 1999.

Footnotes, except a possible acknowledgment of assistance or financial support on the first page, should be avoided by being incorporated into the text, perhaps parenthetically.

References will be published as submitted. For the best presentation, the list of references must be submitted in alphabetical-chronological order; abbreviations of names of journals and references to books should follow the standard form established by Mathematical Reviews. Abbreviations used in bibliographies are accessible from www.ams.org/msnhtml/serials.pdf. The following references are two typical examples:

- [1] R. Hartshorne, *Algebraic geometry*, Graduate Texts in Mathematics 52, Springer-Verlag, New York, Heidelberg, Berlin, 1977.
- [2] N. Hochster and J. L. Roberts, *Rings of invariants of reductive groups acting on regular rings are Cohen-Macaulay*, Adv. Math. **13** (1974) 115–175.

An $\mathcal{A}\mathcal{M}\mathcal{S}\text{-}\mathcal{L}\mathcal{A}\mathcal{T}\mathcal{E}\mathcal{X}$ author package has been prepared for the convenience of the author. The author package includes instructions for preparing electronic manuscripts, the *AMS Author Handbook*, samples, and a style file. Authors who make use of these style files from the beginning of the writing process will reduce their own effort. Comprehensive instructions on preparing graphics are available starting from www.ams.org/jourhtml/authors.html.

Authors may retrieve an author package for *Journal of Algebraic Geometry* from www.ams.org/jag/jagauthorpac.html or via FTP to [ftp.ams.org](ftp://ftp.ams.org) (login as `anonymous`, enter your complete email address as password, and type `cd pub/author-info`). The *AMS Author Handbook* and the *Instruction Manual* are available in PDF format from the author package link. The author package can also be obtained free of charge by sending email to tech-support@ams.org or from the Publication Division, American Mathematical Society, 201 Charles Street, Providence, RI 02904-2294 USA. When requesting an author package, please specify $\mathcal{A}\mathcal{M}\mathcal{S}\text{-}\mathcal{L}\mathcal{A}\mathcal{T}\mathcal{E}\mathcal{X}$ and the publication in which your paper will appear. Please be sure to include your complete email address.

Immediately after a paper has been accepted for publication, the electronically prepared manuscripts (.tex files) should be submitted via the web at www.ams.org/submit-book-journal/, sent via email to pub-submit@ams.org, or sent on CD to the Electronic Prepress Department, American Mathematical Society, 201 Charles Street, Providence, RI 02904-2294 USA. When submitting electronic manuscripts via email or CD, please include a message indicating that the paper has been accepted for publication in the *Journal of Algebraic Geometry*. The author should also send one hard copy of the final version of the paper to the Managing Editor.

Proofs. Authors receive only one set of proofs for corrections and will be responsible for the expense of making excessive alterations to the original manuscript during the proof-reading. Authors will be responsible for adjustments made to artwork not provided in camera-ready form.

Offprints. Offprints are provided free of charge in electronic format. A downloadable and printable PDF version of the published article will be available on the AMS website at www.ams.org/myoffprints immediately following each issue's publication date.



1056-3911(201510)24:4*;1-0