# Journal of ALGEBRAIC GEOMETRY

Bert van Geemen and Yan Zhao, Genus three curves and 56 nodal sextic	
surfaces	583
Daniel Litt, Non-Abelian Lefschetz hyperplane theorems	593
Konstantin Ardakov and Simon Wadsley, $\widehat{\mathcal{D}}$ -modules on rigid analytic	
spaces II: Kashiwara's equivalence	647
Qile Chen and Yi Zhu, Strong approximation over function fields	703
Mohamed Saïdi, Étale fundamental groups of affinoid p-adic curves	727
Carlos Galindo, Francisco Monserrat, and Julio-José Moyano-Fernández,	
Minimal plane valuations	751

## JOURNAL OF ALGEBRAIC GEOMETRY

### **Editors**

C. BIRKAR

DPMMS

Centre for Mathematical Sciences University of Cambridge

Wilberforce Road

Cambridge, CB3 0WB, U.K.

A. BONDAL

Department of Algebraic Geometry Steklov Mathematical Institute Russian Academy of Sciences Gubkina Street 8

Moscow 119991, RUSSIA

M. GROSS

**DPMMS** 

Centre for Mathematical Sciences University of Cambridge

Wilberforce Road

Cambridge CB3 0WB, U.K.

C. HACON

Department of Mathematics University of Utah 155 South 1400 East, JWB 233 Salt Lake City, UT 84112, U.S.A.

J. LI

Department of Mathematics Stanford University Stanford, CA 94305, U.S.A.

K. OGUISO

Graduate School of Mathematical

Sciences

The University of Tokyo 3-8-1 Komaba Meguro-ku Tokyo 153-8914, JAPAN

T. SAITO

Department of Mathematical Sciences The University of Tokyo

Komaba, Tokyo 153-8914, 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

Simons Center for Geometry

and Physics State University of New York Stony Brook, NY 11794, U.S.A.

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\$458 for electronic + paper delivery, US\$424 for electronic only; the price for individuals is US\$190 for electronic + paper delivery, US\$168 for electronic only. If ordering the paper version, add US\$6 for delivery within the United States, US\$13 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 02904-2213 USA.

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

© 2018 by University Press, Inc. All rights reserved This journal is indexed in  $Science\ Citation\ Index^{TM}-Expanded,\ ISI\ Alerting\ Services^{SM},$ CompuMath Citation Index<sup>®</sup>, Current Contents<sup>®</sup>/Physical, Chemical & Earth Sciences.

ISSN 1056-3911 (print); ISSN 1534-7486 (online) Printed in the United States of America.

within the guidelines established to ensure permanence and durability.

# INDEX

Ardakov, Konstantin, and Simon Wadsley, $\widehat{\mathcal{D}}$ -modules on rigid analytic	
spaces II: Kashiwara's equivalence	647
Borisov, Lev A., The class of the affine line is a zero divisor in the	
Grothendieck ring	203
Burgos-Gil, José Ignacio, See Kerr, Matt	121
Casalaina-Martin, Sebastian, Mihnea Popa, and Stefan Schreieder,	
Generic vanishing and minimal cohomology classes on abelian	
$\it five folds$	553
Chen, Miaofen, and Eva Viehmann, Affine Deligne-Lusztig varieties and	000
the action of $J$	273
Chen, Qile, and Yi Zhu, Strong approximation over function fields	703
de Jong, Robin, Néron-Tate heights of cycles on jacobians	339
Dinh, Tien-Cuong, and Nessim Sibony, Density of positive closed cur-	000
rents, a theory of non-generic intersections	497
Duc, Nguyen Hong, See Thuong, Lê Quy	91
Fu, Baohua, and Jun-Muk Hwang, Special birational transformations of	01
type(2,1)	55
Galindo, Carlos, Francisco Monserrat, and Julio-José Moyano-Fernández,	00
Minimal plane valuations	751
Huber, Annette, and Guido Kings, Polylogarithm for families of commu-	.01
tative group schemes	449
Hwang, Jun-Muk, See Fu, Baohua	55
Katsura, Toshiyuki, and Shigeyuki Kondō, <i>Enriques surfaces in char-</i>	
acteristic 2 with a finite group of automorphisms	173
Kerr, Matt, James Lewis, and Patrick Lopatto, contributor José Ignacio	_,,
Burgos-Gil, Simplicial Abel-Jacobi maps and reciprocity laws	121
Kings, Guido, See Huber, Annette	449
Kondō, Shigeyuki, See Katsura, Toshiyuki	173
Lewis, James, See Kerr, Matt	121
Litt, Daniel, Non-Abelian Lefschetz hyperplane theorems	593
Lopatto, Patrick, See Kerr, Matt	121
Matsumura, Shin-ichi, An injectivity theorem with multiplier ideal sheaves	
of singular metrics with transcendental singularities	305
Monserrat, Francisco, See Galindo, Carlos	751
Moyano-Fernández, Julio-José, See Galindo, Carlos	751
Patakfalvi, Zsolt, On subadditivity of Kodaira dimension in positive char-	
acteristic over a general type base	21
Păun, Mihai, and Shigeharu Takayama, Positivity of twisted relative	
pluricanonical bundles and their direct images	211
Popa, Mihnea, See Casalaina-Martin, Sebastian	553
Saïdi, Mohamed, Étale fundamental groups of affinoid p-adic curves	727

ii INDEX

Saïdi, Mohamed, and Akio Tamagawa, A refined version of Grothendieck'	s
anabelian conjecture for hyperbolic curves over finite fields	383
Schreieder, Stefan, See Casalaina-Martin, Sebastian	553
Sibony, Nessim, See Dinh, Tien-Cuong	497
Takayama, Shigeharu, See Păun, Mihai	211
Tamagawa, Akio, See Saïdi, Mohamed	383
Thuong, Lê Quy, and Nguyen Hong Duc, Euler reflexion formulas for	
motivic multiple zeta functions	91
van Geemen, Bert, and Yan Zhao, Genus three curves and 56 nodal	
sextic surfaces	583
Varshavsky, Yakov, Intersection of a correspondence with a graph of	
Frobenius	1
Viehmann, Eva, See Chen, Miaofen	273
Wadsley, Simon, See Ardakov, Konstantin	647
Zhao, Yan, See van Geemen, Bert	583
Zhu, Yi, See Chen, Qile	703

### INFORMATION FOR AUTHORS

Submission of Manuscripts. All manuscripts should be electronically prepared in  $\mathcal{A}_{\mathcal{M}}\mathcal{S}$ -LATeX. 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  $\mathcal{A}_{\mathcal{M}}\mathcal{S}$ -LATeX.

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:

- 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 AMS-IATEX 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. The AMS Author Handbook is 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 02904-2213 USA. When requesting an author package, please specify AMS-IATEX 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/submitbook-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 02904-2213 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(201810)27:4\*;1-C