



# JOURNAL OF ALGEBRA

## Editor-in-Chief

Michel Broué

## Editor of the section on Computational Algebra

Gerhard Hiss

## Founding Editor

G. Higman, 1964–1984

## Editor-in-Chief

W. Feit, 1985–2000

## Editorial Board

Nicolás Andruskiewitsch

Luchezar L. Avramov

Paul Balmer

Eva Bayer-Fluckiger

Steven Dale Cutkosky

Alberto Elduque

Dihua Jiang

Masaki Kashiwara

E.I. Khukhro

Shrawan Kumar

Kazuhiko Kurano

Gus I. Lehrer

Martin Liebeck

Volodymyr Mazorchuk

Louis Rowen

Leonard L. Scott, Jr.

Vera Serganova

Aner Shalev

Ronald Solomon

V. Srinivas

J.T. Stafford

Gernot Stroth

Bernd Ulrich

Michel Van den Bergh

Changchang Xi

Efim Zelmanov

## Section on Computational Algebra

Jon Carlson

John Cremona

Patrick Dehornoy

Harm Derksen

Derek Holt

William M. Kantor

Reinhard Laubenbacher

Gunter Malle

Eamonn O'Brien

Bruno Salvy

Seth Sullivan

Jean-Yves Thibon

Abstracted/indexed in Mathematical Reviews, Science Citation Index (ISI), Compumath Citation Index, Zentralblatt MATH, Current Contents: (PC & ES). Also covered in the abstract and citation database SciVerse Scopus®. Full text available on SciVerse ScienceDirect®.

## CONTENTS

### *General Section*

<b>Sets of lengths in maximal orders in central simple algebras</b>	<b>1</b>
Daniel Smertnig	
<b>Finite generation of the cohomology of quotients of PBW algebras</b>	<b>44</b>
Piyush Shroff	
<b>Trivial central extensions of Lie bialgebras</b>	<b>56</b>
Marco A. Farinati and Alejandra Patricia Jancsa	
<b>New simple modules for the Heisenberg–Virasoro algebra</b>	<b>77</b>
Hongjia Chen and Xiangqian Guo	
<b>Embeddings between partially commutative groups: Two counterexamples</b>	<b>87</b>
Montserrat Casals-Ruiz, Andrew Duncan, and Ilya Kazachkov	
<b>Self-similar associative algebras</b>	<b>100</b>
V.M. Petrogradsky and I.P. Shestakov	
<b>Bosonization for dual quasi-bialgebras and preantipode</b>	<b>126</b>
Alessandro Ardizzoni and Alice Pavarin	
<b>Verma modules over <math>p</math>-adic Arens–Michael envelopes of reductive Lie algebras</b>	<b>160</b>
Tobias Schmidt	
<b>On the topology of relative and geometric orbits for actions of algebraic groups over complete fields</b>	<b>181</b>
Dao Phuong Bac and Nguyen Quoc Thang	
<b>Normal coverings and pairwise generation of finite alternating and symmetric groups</b>	<b>199</b>
Daniela Bubboloni, Cheryl E. Praeger, and Pablo Spiga	
<b>Cohomological finite generation for the group scheme <math>SL_2</math></b>	<b>216</b>
Wilberd van der Kallen	
<b>Fat lines in <math>\mathbb{P}^3</math>: Powers versus symbolic powers</b>	<b>221</b>
Elena Guardo, Brian Harbourne, and Adam Van Tuyl	
<b>Skew polynomial algebras with coefficients in Koszul Artin–Schelter regular algebras</b>	<b>231</b>
Ji-Wei He, Fred Van Oystaeyen, and Yinhuo Zhang	
<b>Polynomial extensions of semistar operations</b>	<b>250</b>
Gyu Whan Chang, Marco Fontana, and Mi Hee Park	

*Continued on inside back cover*

The Guide for Authors appears online on the journal homepage at <http://www.elsevier.com/locate/jalgebra>



*Continued from outside back cover*

<b>Licci squarefree monomial ideals generated in degree two or with deviation two</b>	<b>264</b>
Kyouko Kimura, Naoki Terai, and Ken-ichi Yoshida	
<b>On the affineness of distinguished Deligne–Lusztig varieties</b>	<b>290</b>
Shushi Harashita	
<b>Formal functions on prevalued domains</b>	<b>298</b>
S.B. Mulay	