

THE JOURNAL OF SYMBOLIC LOGIC

Edited by

Justin Moore, *Coordinating Editor*

Alessandro Berarducci

Erich Grädel

Bradd Hart

Denis Hirschfeldt

Ralf Schindler

Frank Stephan

Alasdair Urquhart

Andreas Weiermann

VOLUME 77 • NUMBER 4 • DECEMBER 2012 • ISSN 0022-4812

Copyright © 2012 by the Association for Symbolic Logic. All rights reserved.
Reproduction by photostat, photo-print, microfilm, or like process by permission only.



PUBLISHED QUARTERLY BY THE ASSOCIATION FOR SYMBOLIC LOGIC
WITH SUPPORT FROM INSTITUTIONAL MEMBERS.

TABLE OF CONTENTS

On algebraic closure in pseudofinite fields, by ÖZLEM BEYARSLAN and EHUD HRUSHOVSKI	1057
Jump degrees of torsion-free abelian groups, by BROOKE M. ANDERSEN, ASHER M. KACH, ALEXANDER G. MELNIKOV, and REED SOLOMON	1067
Definable well-orders of $H(\omega_2)$ and GCH, by DAVID ASPERÓ and SY-DAVID FRIEDMAN	1101
Homogeneously Suslin sets in tame mice, by FARMER SCHLUTZENBERG	1122
Topological differential fields and dimension functions, by NICOLAS GUZY and FRANÇOISE POINT	1147
A generalization of Sierpiński's paradoxical decompositions: Coloring semialgebraic grids, by JAMES H. SCHMERL	1165
Interpreting true arithmetic in the local structure of the enumeration degrees, by HRISTO GANCHEV and MARIYA SOSKOVA	1184
The range property fails for H, by ANDREW POLONSKY	1195
Undecidability of representability as binary relations, by ROBIN HIRSCH and MARCEL JACKSON	1211
On Kueker's conjecture, by PREDRAG TANOVIĆ	1245
Forking in VC-minimal theories, by SARAH COTTER and SERGEI STARCHENKO	1257
Reverse mathematics and a Ramsey-type König's Lemma, by STEPHEN FLOOD	1272
Kurepa trees and Namba forcing, by BERNHARD KÖNIG and YASUO YOSHINOBU	1281
Finitely generated free Heyting algebras: the well-founded initial segment, by R. ELAGEILI and J. K. TRUSS	1291
A constructive Galois connection between closure and interior, by FRANCESCO CIRAULO and GIOVANNI SAMBIN	1308
Simultaneous reflection and impossible ideals, by TODD EISWORTH	1325

THE JOURNAL OF SYMBOLIC LOGIC (ISSN print: 0022-4812, ISSN online: 1943-5886) is published quarterly, in the months of March, June, September, and December, by the Association for Symbolic Logic, Inc., 124 Raymond Avenue, Poughkeepsie, NY 12604-0001, USA. Periodicals postage is paid at Poughkeepsie NY and at additional mailing offices. The JOURNAL is distributed with THE BULLETIN OF SYMBOLIC LOGIC. The 2012 annual subscription price for the two journals, in either print or electronic form, is US\$625; visit <http://www.aslonline.org/Journals-subscription.html> for more information. **Postmaster:** Send address changes to *The Journal of Symbolic Logic, c/o American Mathematical Society, 201 Charles Street, Providence, RI 02904-2294, USA*. Business correspondence should be sent to the Secretary-Treasurer of the Association, Charles Steinhorn (address on inside back cover).

The BULLETIN, the JOURNAL, and the REVIEW OF SYMBOLIC LOGIC are the official organs of the Association for Symbolic Logic, an international organization for furthering research in symbolic logic and the exchange of ideas among mathematicians, philosophers, computer scientists, linguists, and others interested in this field.

Continued on inside back cover

10 9 8 7 6 5 4 3 2 1 17 16 15 14 13 12