THE JOURNAL OF SYMBOLIC LOGIC

Edited by

Peter Cholak, *Coordinating Editor* Toshiyasu Arai Alessandro Berarducci Elisabeth Bouscaren Erich Grädel Justin Moore Ralf Schindler Frank Stephan Alasdair Urguhart

VOLUME 74 • NUMBER 4 • DECEMBER 2009 • ISSN 0022-4812

Copyright © 2009 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

Forbidden intervals, by MATTHEW FOREMAN	1081
Functional interpretation and inductive definitions, by JEREMY AVIGAD	1100
and Henry Towsner	1100
Almost everywhere elimination of probability quantifiers, by H. JEROME	
KEISLER and WAFIK BOULOS LOTFALLAH	1121
Some remarks on generic structures, by DAVID M. EVANS and MARK WING	
Ho Wong	1143
Incompatible Ω -complete theories, by PETER KOELLNER and W. HUGH	
WOODIN	
Canonical rules, by EMIL JEŘÁBEK	1171
A note on defining transcendentals in function fields, by ARNO FEHM	
and Wulf-Dieter Geyer	1206
Approachability at the second successor of a singular cardinal, by MOTI	
GITIK and JOHN KRUEGER	1211
Heirs of box types in polynomially bounded structures, by MARCUS TRESSL	1225
Promptness does not imply superlow cuppability, by DAVID DIAMONDSTONE.	1264
Independently axiomatizable $\mathscr{L}_{\omega_{1},\omega}$ theories, by GREG HJORTH and IOANNIS	
A. Souldatos	1273
Successors of singular cardinals and coloring theorems II, by TODD	
EISWORTH and SAHARON SHELAH	1287
The strength of the rainbow Ramsey Theorem, by BARBARA F. CSIMA	
and JOSEPH R. MILETI	1310
<i>d</i> -computable categoricity for algebraic fields, by RUSSELL MILLER	1325
On computable self-embeddings of computable linear orderings, by RODNEY	10-00
G. DOWNEY, BART KASTERMANS, and STEFFEN LEMPP	1352
The modal μ -calculus hierarchy over restricted classes of transition systems,	1002
by Luca Alberucci and Alessandro Facchini	1367
•	1007
Logical aspects of rates of convergence in metric spaces, by EYVIND MARTOL	1401
BRISEID	1401
First-order characterization of the radical of a finite group, by JOHN S.	1 400
WILSON	1429

(Continued on inside back cover)

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 2009 annual subscription price for the two journals is US\$575. Online subscription is available from Project Euclid; visit http://projecteuclid.org/jsl. 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.

The JOURNAL invites submission of original scholarly work in mathematical logic and its applications.

Continued on inside back cover

10 9 8 7 6 5 4 3 2 1 14 13 12 11 10 09