

THE  
JOURNAL  
OF  
SYMBOLIC LOGIC

EDITED BY

MARTIN GROHE, Coordinating Editor  
TOSHIYASU ARAI    ELISABETH BÓUSCAREN  
PETER CHOLAK    GREG HJORTH    MICHAEL C. LASKOWSKI  
JUSTIN MOORE    STEWART SHAPIRO

VOLUME 72 · NUMBER 4 · DECEMBER 2007  
ISSN 0022-4812

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

---

*Copyright ©2007 by the Association for Symbolic Logic. All rights reserved.  
Reproduction by photostat, photo-print, microfilm, or like process by permission only.*

## TABLE OF CONTENTS

Classifying Borel automorphisms, by JOHN D. CLEMENS .....	1081
Cellularity and the structure of pseudo-trees, by JENNIFER BROWN .....	1093
Groups definable in ordered vector spaces over ordered division rings, by PANTELOS E. ELEFThERIOU and SERGEI STARCHENKO .....	1108
Fondements de la logique positive, by ITAÏ BEN YAACOV and BRUNO POIZAT ..	1141
Stable definability and generic relations, by BYUNGHAN KIM and RAHIM MOOSA .....	1163
O-minimal spectra, infinitesimal subgroups and cohomology, by ALESSANDRO BERARDUCCI .....	1177
$QL(\mathbb{C}^n)$ determines $n$ , by TOBIAS J. HAGGE .....	1194
On the complexity of alpha conversion, by RICK STATMAN .....	1197
Intuitionistic logic freed of all metarules, by GIOVANNA CORSI and GABRIELE TASSI .....	1204
Maximal chains in the Turing degrees, by C. T. CHONG and LIANG YU .....	1219
There may be infinitely many near-coherence classes under $u < \delta$ , by HEIKE MILDENBERGER .....	1228
Flag algebras, by ALEXANDER A. RAZBOROV .....	1239
Relational structures constructible by quantifier free definable operations, by SAHARON SHELAH and MOR DORON .....	1283
The ground axiom, by JONAS REITZ .....	1299
A note on subsystems of open induction, by SHAHRAM MOHSENIPOUR .....	1318
Winning the pressing down game but not Banach-Mazur, by JAKOB KELLNER, MATTI PAUNA, and SAHARON SHELAH .....	1323
The complexity of resolution refinements, by JOSHUA BURESH-OPPENHEIM and TONIANN PITASSI .....	1336
Consequences of the provability of $NP \subseteq P/poly$ , by STEPHEN COOK and JAN KRAJÍČEK .....	1353
Increasing $\delta_2^1$ and Namba-style forcing, by RICHARD KETCHERSID, PAUL LARSON, and JINDŘICH ZAPLETAL .....	1372
The pseudocompactness of $[0, 1]$ is equivalent to the uniform continuity theorem, by DOUGLAS BRIDGES and HANNES DIENER .....	1379
An untyped higher order logic with Y combinator, by JAMES H. ANDREWS ...	1385

(Continued on inside back cover)

---

THE JOURNAL OF SYMBOLIC LOGIC (ISSN 0022-4812) 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 2007 annual subscription price for the two journals is US\$540. 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 and the JOURNAL 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 12 11 10 09 08 07