

THE
JOURNAL
OF
SYMBOLIC LOGIC

EDITED BY

PETER ACZEL

GEORGE BOOLOS

JOHN P. BURGESS

HERBERT B. ENDERTON

MATTHEW FOREMAN

SY D. FRIEDMAN

GERHARD JÄGER

JULIA KNIGHT

MICHAEL MAKKAÏ

ANDRE SCEDROV

RICHARD A. SHORE

A. S. TROELSTRA

JOHAN VAN BENTHEM

VOLUME 56 • NUMBER 3 • SEPTEMBER 1991

ISSN 0022-4812

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

*Copyright © 1991 by the Association for Symbolic Logic, Inc. All rights reserved.
Reproduction by photostat, photo-print, microfilm, or like process by permission only.*

TABLE OF CONTENTS

Forcing minimal degree of constructibility. By HAIM JUDAH and SAHARON SHELAH	769
Définissabilité dans les corps de fonctions p -adiques. By LUC BÉLAIR and JEAN-LOUIS DURET	783
Concerning n -tactics in the countable-finite game. By MARION SCHEEPERS	786
Larger cardinals in Cichoń's diagram. By JÖRG BRENDLE	795
Corrigendum. By MARGARITA OTERO	811
A generalization of forking. By SIU-AH NG	813
Definable FN bases. By SIU-AH NG	823
A structure theorem for strongly abelian varieties with few models. By BRADD HART and MATTHEW VALERIOTE	832
XVII ^{ème} problème de Hilbert sur les corps chaîne-clos. By FRANÇOISE DELON and DANIELLE GONDARD	853
On the strong Martin conjecture. By M. VICTORIA MARSHALL and DANIELLE GONDARD	853
Countably many nonisomorphic sub-	862
ANORI ITAI	862
uncountably many nonisomorphic sub-	876
N and JAMES H. SCHMERL	876
ICZ	885
By LEONARD M. ADLEMAN and	891
By KEES DOETS	901
coinitiality of U are uncountable.	906
By ALI NESIN	915
properties preserved under isomorphisms.	932
ANDO CHUAQUI	932
Peano arithmetic. By RICHARD	949
By MICHAEL SCANLAN	981
order arithmetic, and a solution	1003
AP VAN OOSTEN	1012
sa clôture réelle. By FRANÇOISE	1016
By MICHAEL SCANLAN	1016
By ANAND PILLAY	1026
's partial type theory with one uni-	1026
By H. JEROME	1026
and complete. By H. JEROME	1026
By H. JEROME	1026
ANK O. WAGNER	1026

Continued on inside back cover

022-4812) is published quarterly, in the months of March, June, September, and December, by the Association for Symbolic Logic, Inc., at 54 East Gregory Drive, Champaign, IL 61820, U.S.A. Second class postage is paid at Champaign, IL and additional offices. The 1991 annual subscription price is \$165. Postmaster: Send address changes to *The Journal of Symbolic Logic*, Journals Division UIP, 54 East Gregory Drive, Champaign, IL 61820, U.S.A. Business correspondence should be sent to the Secretary-Treasurer of the Association, C. Ward Henson (address 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., at 54 East Gregory Drive, Champaign, IL 61820, U.S.A. Second class postage is paid at Champaign, IL and additional offices. The 1991 annual subscription price is \$165. Postmaster: Send address changes to *The Journal of Symbolic Logic*, Journals Division UIP, 54 East Gregory Drive, Champaign, IL 61820, U.S.A. Business correspondence should be sent to the Secretary-Treasurer of the Association, C. Ward Henson (address inside back cover).

10 9 8 7 6 5 4 3 2 1 95 94 93 92 91