THE

JOURNAL OF SYMBOLIC LOGIC

EDITED BY

WILLIAM CRAIG

KIT FINE

YIANNIS MOSCHOVAKIS

HERBERT ENDERTON

DAGFINN FØLLESDAL

ANIL NERODE

WILFRID HODGES

Managing Editor: ALFONS BORGERS

Consulting Editors:

PETER ACZEL
JIŘÍ BEČVÁŘ
JOAN BRESNAN
M. J. CRESSWELL
MARTIN D. DAVIS
SOLOMON FEFERMAN
FREDERIC B. FITCH

DAVID KAPLAN
SAUL A. KRIPKE
MICHAEL MAKKAI
RUTH BARCAN MARCUS
DONALD A. MARTIN
J. DONALD MONK
GERT H. MÜLLER
CHARLES D. PARSONS

GABRIEL SABBAGH
GERALD SACKS
ARTO SALOMAA
DANA S. SCOTT
JOSEPH R. SHOENFIELD
RICHARD A. SHORE
BAS VAN FRAASSEN

Volume 45 · Number 3 · September 1980

ISSN 0022-4812

Published quarterly by the Association for Symbolic Logic, Inc. with support from ICSU and from institutional and corporate members

Copyright © 1980 by the Association for Symbolic Logic, Inc.

Reproduction by photostat, photo-print, microfilm, or like process by permission only

TABLE OF CONTENTS

Recursively enumerable complexity sequences and measure independence. By Vic-	
TOR L. BENNISON	7
Model constructions in stationary logic. Part I. Forcing. By KIM B. BRUCE 43	•
Model theory of strictly upper triangular matrix rings. By WILLIAM H. WHEELER 45	
Models and reality. By HILARY PUTNAM	4
A result of relative consistency about the predicate WO(δ, x). By RENÉ DAVID 48	3
Ordinal analysis of terms of finite type. By W. A. HOWARD	
Independence of strong partition relation for small cardinals, and the free-subset	Y
problem. By Saharon Shelah	5
Degree problems for modular machines. By DANIEL E. COHEN	0
A consistent combinatory logic with an inverse to equality. By FREDERIC B.	
FITCH 52	9
Constructing pure injective hulls. By WILFRID HODGES	4
The 1-section of a countable functional. By DAG NORMANN and STAN S. WAINER 54	9
Independence results. By SAHARON SHELAH	3
Cardinalities of ultraproducts of finite sets. By SABINE KOPPELBERG 57	4
Decidability and No-categoricity of theories of partially ordered sets. By JAMES H.	
SCHMERI. 58	5
On a problem of MacDowell and Specker. By MARK NADEL	2
A measurable cardinal with a nonwellfounded ultraproduct. By MITCHELL	
SPECTOR 62	3
Reviews 62	9
Notices 63	9

THE JOURNAL OF SYMBOLIC LOGIC is published quarterly, in the months of March, June, September, and December. The JOURNAL is the official organ of the Association for Symbolic Logic, Inc., an international organization for furthering research in symbolic logic and exchange of ideas among mathematicians, philosophers, and others interested in this field.

Individual membership in the Association is open to anyone interested in its work. Annual dues for students are \$9.00. Dues for other individual members are \$18.00 per year. Dues include subscription to the current volume of the Journal. For their personal use, members may purchase back volumes at 25% discount

Institutional membership in the Association is available to any academic institution or department. Annual dues are \$120.00. Membership privileges include choices of current subscriptions, of back volumes, and of student memberships; a detailed description is available from the Association. Information on corporate membership is also available from the Association.

For nonmembers, the current annual subscription price is \$48.00 for a volume in paper form, and \$64.00 for a combination of paper and microform (microfiche or microfilm). Microfiche of each issue is sent by fast mail before the camera copy is sent to the printer. Microfilm copy of a volume is sent at the end of the year. It is available in 16mm positive or negative form, and may be ordered on spools or in Kodak or 3M cartridges.

Continued on inside back cover

Second-class postage rates paid at Providence, RI, and additional offices