# NOTRE DAME JOURNAL OF FORMAL LOGIC

VOLUME XVII, NUMBER 2 APRIL 1976



# PUBLISHED QUARTERLY BY THE UNIVERSITY OF NOTRE DAME, NOTRE DAME, INDIANA

# NOTRE DAME JOURNAL OF FORMAL LOGIC

## Bolesław Sobociński, Editor

### Ann W. Lauer, *Business Manager*

## Editorial Board

Ignacio Angelelli	Robert Bull	Marian B. Pour-El
F. Gonzalez Asenjo	John Thomas Canty	Luis Elpidio Sanchis
Nuel D. Belnap, Jr.	George Goe	Wilson E. Singletary
Ivan Boh	Hugues Leblanc	Vito F. Sinisi
William W. Boone	Gerald Massey	Ivo Thomas
Karel L. de Bouvère	Elliott Mendelson	J. Jay Zeman

### Volume XVII, Number 2, April 1976

CONTENTS

Significance logics. By Ross T. Brady	184 191
By Scott K. Lehmann	207
By Jekeri Okee	222
Temporal modalities and the future. By Vaughn R. McKim and Charles C. Davis	233
A further examination of Saccheri's use of the "consequentia mirabilis."	
By Cyril F. A. Hoormann, Jr	239
A note on the adequacy of translations. By William Frank	249
Three identities for ortholattices. By Ladislav Beran Pledger lemma and the modal system S3°. By Bolesław Sobociński	
Consistency of <i>n</i> -order logics. By William J. Thomas	
An Herbrand theorem for prenex formulas of LJ. By Kenneth A. Bowen	
Shortest single axioms for the classical equivalential calculus. By Jeremy George Peterson	267
Presupposition and entailment. By John A. Barker.	272
The distribution of terms. By Bernard D. Katz and A. P. Martinich.	<b>279</b>
A note on defining the Rudin-Keisler ordering of ultrafilters. By Donald H. Pelletier	284
Eternal existence and necessary existence. By William G. Lycan	287
Lambda-calculus terms that reduce to themselves. By Bruce Lercher	291
<b>NOR</b> logic: A system of natural deduction. By Laurence S. Gagnon A question about incompleteness. By Robert L. Armstrong	
Semantics for S4.04, S4.4 and S4.3.2. By $G_1$ , $N_2$ , $Georga carakos$	297
Effective density types. By <i>Harry Gonshor</i>	303
A short equational axiomatization of modular ortholattices.	
By Bôlesław Sobociński	311
A short equational axiomatization of orthomodular lattices. By <i>Bolesław Sobociński</i>	317
$\Sigma_{j}$ Decomes coordinate $\cdots$	

Notre Dame Journal of Formal Logic is published quarterly by the University of Notre Dame in January, April, July and October of each year. The Journal is composed by Beljan, Dexter, Michigan and printed by Cushing-Malloy, Inc., Ann Arbor, Michigan. Second-class postage paid at Notre Dame, Indiana 46556.

Authors should consult the "Guide to authors" for editorial information. Articles and editorial correspondence should be sent to *B. Sobociński*, *Editor*, *P.O. Box 28*, *Notre Dame*, *Indiana* 46556, U.S.A.

Subscriptions are \$20.00 per year for institutions and \$15.00 for individuals. All back volumes are available, prices supplied on request. Orders for subscriptions and back volumes (accompanied by payment), and changes of address should be sent to the *Business Manager*, P. O. Box 5, Notre Dame, Indiana 46556, U.S.A.

Copyright ©1976 by the University of Notre Dame. All rights reserved.