# NOTRE DAME JOURNAL OF FORMAL LOGIC

VOLUME XIX, NUMBER 3

JULY 1978



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

# NOTRE DAME JOURNAL OF FORMAL LOGIC

Bolesław Sobociński, Editor

Business Manager Michele Daugherty

### Editorial Board

Ignacio Angelelli F. Gonzalez Asenjo Nuel D. Belnap, Jr. Ivan Boh William W. Boone Karel L. de Bouvère Robert Bull
John Thomas Canty
George Goe
Hugues Leblanc
Gerald Massey
Elliott Mendelson

Marian B. Pour-El Jean E. Rubin Luis Elpidio Sanchis Wilson E. Singletary Vito F. Sinisi J. Jay Zeman

## VOLUME XIX, NUMBER 3, JULY 1978

### **CONTENTS**

The adequacy of material dialogue-games. By Erik C. W. Krabbe	321
Three substitution-instance interpretations. By John T. Kearns	331
Primitivity in mereology. II. By Paul J. Welsh, Jr	355
Doubly transitive sets. By John L. Hickman	386
Some observations on a method of McKinsey. By Herbert E. Hendry	
and Allan M. Hart	395
Buridan: 'Every proposition is false' is false. By Mary Sirridge	397
Hyperenumeration reducibility. By Luis E. Sanchis	405
On certain incapacities claimed for logicians. By Benjamin S. Hawkins	416
A note concerning a sole sufficient operator. By J. C. Muzio	419
Binomial pairs, semi-Brouwerian and Brouwerian semilattices. By Jürgen Schmidt	421
Classifications for inconsistent theories. By John Grant	435
Proofs of the normalization and Church-Rosser theorems for the typed $\lambda$ -calculus.	
By Garrel Pottinger	445
Passages between finite and infinite. By Alexander Abian	452
Note about Łukasiewicz's theorem concerning the system of axioms of the	
implicational propositional calculus. By Bolesław Sobociński	457
Semantics for S4.1.2. By Dolph Ulrich	461
S4.1.4 = S4.1.2 and S4.021 = S4.04. By Wolfgang Lenzen	465
A new axiomatization of the mixed associative Newman algebras.	
By Bolesław Sobociński	467
An ambiguity in modal logic. By John Williamson	475
The minimal modal logic: A cautionary tale about primitives and definitions.	
By Marilyn Milberger	486
Truth in constructive metamathematics. By John Staples	489
Relative strength of Malitz quantifiers. By Steven Garavaglia	495
Self-conjugate functions on Boolean algebras. By Thomas A. Sudkamp	504

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.

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. Back volumes are \$10.00 each for Volumes 1-9, \$16.00 for Volumes 10-16, and \$20.00 for Volumes 17-18. 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 ©1978 by the University of Notre Dame. All rights reserved.