

The

Michigan Mathematical Journal

EDITORIAL BOARD

Lipman Bers
Lamberto Cesari
Wilfred Kaplan
Irving Kaplansky
Edwin E. Moise
George Y. Rainich
Raymond L. Wilder

MANAGING EDITOR

Nicholas Kazarinoff
George Piranian

THE UNIVERSITY OF MICHIGAN PRESS

ANN ARBOR, MICHIGAN, U.S.A.

INDEX

VOLUME 9, 1962

	Page
F. Bagemihl The Lindelöf theorem and the real and imaginary parts of normal functions	15
I. D. Berg and Albert Wilansky Periodic, almost-periodic, and semiperiodic sequences	363
B. J. Birch and D. J. Lewis On p-adic forms	53
Fred Brauer Asymptotic equivalence and asymptotic behaviour of linear systems	33
Glen F. Bredon On a certain class of transformation groups	385
Morton Brown On a theorem of Fisher concerning the homeomorphism group of a manifold	403
Eckford Cohen Arithmetical notes, VI. Simultaneous binary compositions involving coprime pairs of integers .	277
M. L. Curtis and D. R. McMillan Cellularity of sets in products	299
P. Erdös Representations of real numbers as sums and products of Liouville numbers	59
Paul Erdös and Haim Hanani On C_1 -summability of series	1
Tudor Ganea A note on ε -maps onto manifolds	213
F. W. Gehring Extremal length definitions for the conformal capacity of rings in space	137
Gunnar af Hällström A new approach to the first fundamental theorem on value distribution	241
Haim Hanani, see Paul Erdös	
J. G. Horne One-parameter subgroups in semigroups in the plane	177
J. W. Jaworowski A generalization of a continuous choice function theorem	29
James A. Jenkins On a conjecture of Goodman concerning meromorphic univalent functions	25
Bjarni Jónsson Defining relations for full semigroups of finite transformations	77
Wilfred Kaplan The singularities of continuous functions and vector fields	151
J. H. B. Kemperman An analytical approach to the differential equations of the birth-and-death process	321
J. M. Kister and L. N. Mann Isotropy structure of compact Lie groups on complexes	93

INDEX

	Page	
Tilla Klotz	The geometry of extremal quasiconformal mappings	129
H. W. Knobloch	An existence theorem for periodic solutions of nonlinear ordinary differential equations	303
Yukihiro Kodama	Some characterizations of homological dimension .	167
Kyung Whan Kwun	Factors of N-space	207
V. Lakshmikantham	Uniqueness theorems for ordinary and hyperbolic differential equations	161
	Differential systems and extension of Lyapunov's method	311
Heinrich Larcher	Solutions of a geometric problem by Fejes Tóth . .	45
D. J. Lewis, see B. J. Birch		
R. C. Lyndon and M. P. Schützenberger	The equation $a^M = b^N c^P$ in a free group	289
G. R. MacLane	Holomorphic functions of arbitrarily slow growth, without radial limits	21
L. N. Mann	Finite orbit structure on locally compact manifolds	87
	, see J. M. Kister	
Byron H. McCandless	Retracts and extension spaces for perfectly normal spaces	193
D. R. McMillan, see M. L. Curtis		
Z. A. Melzak	On the algebraic closure of a plane set	61
Dragiša Mitrović	The signs of some constants associated with the Riemann zeta-function	395
D. J. Newman	A simplified proof of the partition formula	283
D. J. Newman and Harold S. Shapiro	The Taylor coefficients of inner functions	249
M. Newman	Some free products of cyclic groups	369
Albert Nijenhuis and R. W. Richardson	A theorem on maps with non-negative Jacobians	173
Togo Nishiura	On an invariant property of surface integrals	271
Ivan Niven	On asymmetric Diophantine approximations	121
Barrett O'Neill	Isometric immersion of flat Riemannian manifolds in Euclidean space	199
D. S. Passman	Nil ideals in group rings	375
G. Piranian	Jordan domains and absolute convergence of power series	125
Ch. Pommerenke	Images of convex domains under convex conformal mappings	257

INDEX

	Page
Ch. Pommerenke	On the coefficients of close-to-convex functions 259
Irving Reiner	Indecomposable representations of non-cyclic groups 187
	<hr/>
	Failure of the Krull-Schmidt theorem for integral representations 225
R. W. Richardson, see Albert Nijenhuis	
Emilio Roxin	The existence of optimal controls 109
M. P. Schützenberger, see R. C. Lyndon	
Harold S. Shapiro, see D. J. Newman	
John Roderick Smart	On modular forms of levels two and three 233
S. K. Stein	The intersection of Fibonacci sequences 399
Earl J. Taft	Invariant Levi factors 65
John Thomas	A note on the homology groups of relations 217
Albert Wilansky, see I. D. Berg	
R. L. Wilder	Partially free subsets of euclidean n-space 97
Kenneth G. Wolfson	Isomorphisms of the endomorphism ring of a free module over a principal left ideal domain 69

CONTENTS

	Page
R. C. Lyndon and M. P. Schützenberger The equation $a^M = b^N c^P$ in a free group	289
M. L. Curtis and D. R. McMillan Cellularity of sets in products	299
H. W. Knobloch An existence theorem for periodic solutions of nonlinear ordinary differential equations	303
V. Lakshmikantham Differential systems and extension of Lyapunov's method	311
J. H. B. Kemperman An analytical approach to the differential equations of the birth-and-death process	321
I. D. Berg and Albert Wilansky Periodic, almost-periodic, and semiperiodic sequences	363
M. Newman Some free products of cyclic groups	369
D. S. Passman Nil ideals in group rings	375
Glen F. Bredon On a certain class of transformation groups	385
Dragiša Mitrović The signs of some constants associated with the Riemann zeta-function . .	395
S. K. Stein The intersection of Fibonacci sequences	399
Morton Brown On a theorem of Fisher concerning the homeomorphism group of a manifold	403

The Michigan Mathematical Journal is published by the University of Michigan Press, with support from the Horace H. Rackham School of Graduate Studies of The University of Michigan and from the National Science Foundation. Each volume consists of four issues of about 100 pages each. The price per issue is \$1 on orders for personal use, \$3 on orders for institutional use.

Manuscripts should be sent to the Managing Editors, Michigan Mathematical Journal, Department of Mathematics, The University of Michigan, Ann Arbor, Michigan.

LITHOPRINTED IN THE UNITED STATES OF AMERICA BY
CUSHING - MALLOY, INC., ANN ARBOR, MICHIGAN, 1962

MICHIGAN MATHEMATICAL JOURNAL
Department of Mathematics
University of Michigan
Ann Arbor, Michigan 48109