

**Pacific
Journal of
Mathematics**

VOLUME CI

1982

PACIFIC JOURNAL OF MATHEMATICS

EDITORS

DONALD BABBITT (Managing Editor)

University of California
Los Angeles, California 90024

HUGO ROSSI

University of Utah
Salt Lake City, UT 84112

C. C. MOORE and ARTHUR AGUS

University of California
Berkeley, CA 94720

J. DUGUNDJI

Department of Mathematics
University of Southern California
Los Angeles, California 90007

R. FINN and J. MILGRAM

Stanford University
Stanford, California 94305

ASSOCIATE EDITORS

R. ARNES

E. F. BECKENBACH

B. H. NEUMANN

F. WOLF

K. YOSHIDA

SUPPORTING INSTITUTIONS

UNIVERSITY OF ARIZONA
UNIVERSITY OF BRITISH COLUMBIA
CALIFORNIA INSTITUTE OF TECHNOLOGY
UNIVERSITY OF CALIFORNIA
MONTANA STATE UNIVERSITY
UNIVERSITY OF NEVADA, RENO
NEW MEXICO STATE UNIVERSITY
OREGON STATE UNIVERSITY

UNIVERSITY OF OREGON
UNIVERSITY OF SOUTHERN CALIFORNIA
STANFORD UNIVERSITY
UNIVERSITY OF HAWAII
UNIVERSITY OF TOKYO
UNIVERSITY OF UTAH
WASHINGTON STATE UNIVERSITY
UNIVERSITY OF WASHINGTON

CONTENTS

A — ALGEBRA AND NUMBER THEORY

N. Bebbiano, <i>On the evaluation of permanents</i>	1
J. L. Brenner and L. L. Foster, <i>Exponential diophantine equations</i>	263
L. G. Chouinard, II, <i>Hermite semigroup rings</i>	25
L. L. Foster, See J. L. Brenner and L. L. Foster	
C. J. Maxson, M. R. Pettet and K. C. Smith, <i>On semisimple rings that are centralizer near-rings</i>	451
M. R. Pettet, See C. J. Maxson, M. R. Pettet and K. C. Smith	
B. Seifert, <i>Combinatorial and geometric properties of weight systems of irreducible finite dimensional representations of simple split Lie algebras over fields of 0 characteristic</i> . .	163
K. C. Smith, See C. J. Maxson, M. R. Pettet and K. C. Smith	

B — ANALYSIS

D. Borwein and B. Watson, <i>Tauberian theorems between the logarithmic and Abel-type summability methods</i>	11
J. Bourgain, <i>A Hausdorff-Young inequality for B-convex Banach spaces</i>	255
K.-J. Chung, <i>Remarks on nonlinear contractions</i>	41
L. Corwin, <i>Representations of division algebras over local fields:</i> II	49
M. M. Day, <i>Left thick to left lumpy—a guided tour</i>	71
M. Embry-Wardrop, <i>Semi-groups of quasinormal operators</i> . . .	103
L. Hahn, <i>A note on stochastic methods in connection with approximation theorems for positive linear operators</i>	307
V. K. Jain, <i>Certain transformations of basic hypergeometric series and their applications</i>	333
C. D. Keys, <i>On the decomposition of reducible principal series representations of p-adic Chevalley groups</i>	351
N. Riedel, <i>Classification of the C*-algebras associated with minimal rotations</i>	153
J. E. Simpson, <i>Dilations on locally convex spaces</i>	185
P. M. Soardi, <i>Schauder bases and fixed points of nonexpansive mappings</i>	193
G. Talenti, <i>A note on the Gauss curvature of harmonic and minimal surfaces</i>	477
D. M. Terlinden, <i>A spectral containment theorem analogous to the semigroup theory result $e^{t\sigma(A)} \subseteq \sigma(e^{tA})$</i>	493
P. C. Trombi, <i>Invariant harmonic analysis on split rank one groups with applications</i>	223

- B. Watson, See D. Borwein and B. Watson
 S. Yamashita, *Non-normal Blaschke quotients*. 247

D — GEOMETRY

- W. M. Goldman and M. W. Hirsch, *Polynomial forms on affine manifolds*. 115
 M. W. Hirsch, See W. M. Goldman and M. W. Hirsch
 M. S. Klamkin and A. Meir, *Ptolemy's inequality, chordal metric, multiplicative metric*. 389
 R. F. Lax, *Independence of normal Weierstrass points under deformation*. 393
 A. Meir, See M. S. Klamkin and A. Meir
 F. A. Toranzos, *The points of local nonconvexity of starshaped sets*. 209

G — TOPOLOGY

- M. Edelstein and M. T. Kiang, *On ultimately nonexpansive semigroups*. 93
 H. H. Glover and W. D. Homer, *Fixed points on flag manifolds*. 303
 J. P. Henderson, *Approximating cellular maps between low dimensional polyhedra*. 321
 W. D. Homer, See H. H. Glover and W. D. Homer
 S. Janakiraman and T. Soundararajan, *Totally bounded group topologies and closed subgroups*. 123
 M. T. Kiang, See M. Edelstein and M. T. Kiang
 L. Luxemburg, *On compactifications of metric spaces with transfinite dimensions*. 399
 J. R. Martin, L. G. Oversteegen and E. D. Tymchatyn, *Fixed point sets of products and cones*. 133
 J. van Mill, *A homogeneous Eberlein compact space which is not metrizable*. 141
 L. G. Oversteegen, See J. R. Martin, L. G. Oversteegen and E. D. Tymchatyn
 S. Plotnick, *Embedding homology 3-spheres in S^5* 147
 T. C. Przymusiński, *Extending functions from products with a metric factor and absolutes*. 463
 T. Soundararajan, See S. Janakiraman and T. Soundararajan
 Y. Tanaka, *Point-countable k -systems and products of k -spaces*. 199
 L. Traldi, *The determinantal ideals of link modules, I*. 215
 E. D. Tymchatyn, See J. R. Martin, L. G. Oversteegen and E. D. Tymchatyn

Pacific Journal of Mathematics

N. Bebiano, On the evaluation of permanents	1
D. Borwein and B. Watson, Tauberian theorems between the logarithmic and Abel-type summability methods	11
L. G. Chouinard, II, Hermite semigroup rings	25
K.-J. Chung, Remarks on nonlinear contractions	41
L. Corwin, Representations of division algebras over local fields: II	49
M. M. Day, Left thick to left lumpy—a guided tour	71
M. Edelstein and M. T. Kiang, On ultimately nonexpansive semigroups ...	93
M. Embry-Wardrop, Semi-groups of quasinormal operators	103
W. M. Goldman and M. W. Hirsch, Polynomial forms on affine manifolds ..	115
S. Janakiraman and T. Soundararajan, Totally bounded group topologies and closed subgroups	123
J. R. Martin, L. G. Oversteegen and E. D. Tymchatyn, Fixed point sets of products and cones	133
J. van Mill, A homogeneous Eberlein compact space which is not metrizable.	141
S. Plotnick, Embedding homology 3-spheres in S^5	147
N. Riedel, Classification of the C^* -algebras associated with minimal rotations	153
B. Seifert, Combinatorial and geometric properties of weight systems of irreducible finite dimensional representations of simple split Lie algebras over fields of 0 characteristic	163
J. E. Simpson, Dilations on locally convex spaces	185
P. M. Sordi, Schauder bases and fixed points of nonexpansive mappings ..	193
Y. Tanaka, Point-countable k -systems and products of k -spaces	199
F. A. Toranzos, The points of local nonconvexity of starshaped sets	209
L. Traldi, The determinantal ideals of link modules, I	215
P. C. Trombi, Invariant harmonic analysis on split rank one groups with applications	223
S. Yamashita, Non-normal Blaschke quotients	247

Subject listing on back cover

PACIFIC JOURNAL OF MATHEMATICS

EDITORS

DONALD BABBITT (Managing Editor)

University of California
Los Angeles, CA 90024

HUGO ROSSI

University of Utah
Salt Lake City, UT 84112

C. C. MOORE and ARTHUR AGUS

University of California
Berkeley, CA 94720

J. DUGUNDJI

Department of Mathematics
University of Southern California
Los Angeles, CA 90007

R. FINN and J. MILGRAM

Stanford University
Stanford, CA 94305

ASSOCIATE EDITORS

R. ARENS

E. F. BECKENBACH

B. H. NEUMANN

F. WOLF

K. YOSHIDA

SUPPORTING INSTITUTIONS

UNIVERSITY OF ARIZONA

UNIVERSITY OF BRITISH COLUMBIA

CALIFORNIA INSTITUTE OF TECHNOLOGY

UNIVERSITY OF CALIFORNIA

MONTANA STATE UNIVERSITY

UNIVERSITY OF NEVADA, RENO

NEW MEXICO STATE UNIVERSITY

OREGON STATE UNIVERSITY

UNIVERSITY OF OREGON

UNIVERSITY OF SOUTHERN CALIFORNIA

STANFORD UNIVERSITY

UNIVERSITY OF AAWAII

UNIVERSITY OF TOKYO

UNIVERSITY OF UTAH

WASHINGTON STATE UNIVERSITY

UNIVERSITY OF WASHINGTON

The Supporting Institutions listed above contribute to the cost of publication of this Journal, but they are not owners or publishers and have no responsibility for its content or policies,

Mathematical papers intended for publication in the *Pacific Journal of Mathematics* should be in typed form or offset-reproduced, (not dittoed), double spaced with large margins. Please do not use built up fractions in the text of the manuscript. However, you may use them in the displayed equations. Underline Greek letters in red, German in green, and script in blue. The first paragraph or two must be capable of being used separately as a synopsis of the entire paper. Please propose a heading for the odd numbered pages of less than 35 characters. Manuscripts, in triplicate, may be sent to any one of the editors. Please classify according to the scheme of Math. Reviews, Index to Vol. 39. Supply name and address of author to whom proofs should be sent. All other communications should be addressed to the managing editor, or Elaine Barth, University of California, Los Angeles, California, 90024.

50 reprints to each author are provided free for each article, only if page charges have been substantially paid. Additional copies may be obtained at cost in multiples of 50.

The *Pacific Journal of Mathematics* is issued monthly as of January 1966, Regular subscription rate: \$114.00 a year (6 Vol., 12 issues). Special rate: \$57.00 a year to individual members of supporting institution.

Subscriptions, orders for numbers issued in the last three calendar years, and changes of address should be sent to Pacific Journal of Mathematics, P.O. Box 969, Carmel Valley, CA 93924, U.S.A. Old back numbers obtainable from Kraus Periodicals Co., Route 100, Millwood, NY 10546.

PUBLISHED BY PACIFIC JOURNAL OF MATHEMATICS, A NON-PROFIT CORPORATION

Printed at Kokusai Bunken Insatsusha (International Academic Printing Co., Ltd.).
8-8, 3-chome, Takadanobaba, Shinjuku-ku, Tokyo 160, Japan.

Copyright © 1982 by Pacific Journal of Mathematics
Manufactured and first issued in Japan