

**Pacific
Journal of
Mathematics**

VOLUME CLIV

1992

PACIFIC JOURNAL OF MATHEMATICS

EDITORS

V. S. VARADARAJAN
(Managing Editor)
University of California
Los Angeles, CA 90024-1555

HERBERT CLEMENS
University of Utah
Salt Lake City, UT 84112

F. MICHAEL CHRIST
University of California
Los Angeles, CA 90024-1555

THOMAS ENRIGHT
University of California, San Diego
La Jolla, CA 92093

NICHOLAS ERCOLANI
University of Arizona
Tucson, AZ 85721

R. FINN
Stanford University
Stanford, CA 94305

VAUGHAN F. R. JONES
University of California
Berkeley, CA 94720

STEVEN KERCKHOFF
Stanford University
Stanford, CA 94305

C. C. MOORE
University of California
Berkeley, CA 94720

MARTIN SCHARLEMANN
University of California
Santa Barbara, CA 93106

HAROLD STARK
University of California, San Diego
La Jolla, CA 92093

ASSOCIATE EDITORS

R. ARENS

E. F. BECKENBACH
(1906–1982)

B. H. NEUMANN

F. WOLF
(1904–1989)

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

E. Date, M. Jimbo, K. Miki, and T. Miwa, <i>Braid group representations arising from the generalized chiral Potts models</i>	37
Y. Z. Flicker, <i>The adjoint representation L-function for $GL(n)$</i> . .	231
T. Hibi, <i>Face number inequalities for matroid complexes and Cohen-Macaulay types of Stanley-Reisner rings of distributive lattices</i>	253
H. Jacquet and S. Rallis, <i>Kloosterman integrals for skew symmetric matrices</i>	265
M. Jimbo, See E. Date, M. Jimbo, K. Miki, and T. Miwa	
D. Joyner, <i>Simple local trace formulas for unramified p-adic groups</i>	103
S. Kaliman, <i>Two remarks on polynomials in two variables</i>	285
K. Miki, See E. Date, M. Jimbo, K. Miki, and T. Miwa	
T. Miwa, See E. Date, M. Jimbo, K. Miki, and T. Miwa	
S. Rallis, See H. Jacquet and S. Rallis	
G. Savin, <i>On the tensor product of theta representations of GL_3</i> .	369
G. Wagner, <i>On means of distances on the surface of a sphere. II (Upper bounds)</i>	381

B – ANALYSIS

R. F. Arens, <i>Pseudo regular elements in a normed ring</i>	1
E. A. González-Velasco and L. K. Jones, <i>On the range of an unbounded partly atomic vector-valued measure</i>	245
T. Hamachi, <i>A measure theoretical proof of the Connes-Woods theorem on AT-flows</i>	67
L. K. Jones, See E. A. González-Velasco and L. K. Jones	
K. E. Lancaster, <i>Qualitative behavior of solutions of elliptic free boundary problems</i>	297
H. Lin, <i>Injective Hilbert C^*-modules</i>	131
J. Marafino, <i>The boundary of a simply connected domain at an inner tangent point</i>	165

D – GEOMETRY

M. de León, J. A. Oubiña, P. R. Rodrigues, and M. Salgado, <i>Almost s-tangent manifolds of higher order</i>	201
M. Engman, <i>New spectral characterization theorems for S^2</i>	215

J. J. Madden and C. M. Stanton, *One-dimensional Nash groups*. 331
 J. A. Oubiña, See M. de León, J. A. Oubiña, P. R. Rodrigues, and
 M. Salgado
 G. Riera and R. E. Rodríguez, *The period matrix of Bring's curve* 179
 P. R. Rodrigues, See M. de León, J. A. Oubiña, P. R. Rodrigues,
 and M. Salgado
 R. E. Rodríguez, See G. Riera and R. E. Rodríguez
 M. Salgado, See M. de León, J. A. Oubiña, P. R. Rodrigues, and
 M. Salgado
 C. M. Stanton, See J. J. Madden and C. M. Stanton

G – TOPOLOGY

J. S. Birman and W. W. Menasco, *Studying links via closed braids*
 I: *A finiteness theorem* 17
 A. Hatcher and U. Oertel, *Affine lamination spaces for surfaces* . 87
 F. Luo, *Actions of finite groups on knot complements* 317
 C. K. McCord, *Estimating Nielsen numbers on infrasolvmanifolds* 345
 W. W. Menasco, See J. S. Birman and W. W. Menasco
 U. Oertel, See A. Hatcher and U. Oertel

Pacific Journal of Mathematics

R. F. Arens , Pseudo regular elements in a normed ring	1
J. S. Birman and W. W. Menasco , Studying links via closed braids I: A finiteness theorem	17
E. Date, M. Jimbo, K. Miki, and T. Miwa , Braid group representations arising from the generalized chiral Potts models	37
T. Hamachi , A measure theoretical proof of the Connes-Woods theorem on AT-flows	67
A. Hatcher and U. Oertel , Affine lamination spaces for surfaces	87
D. Joyner , Simple local trace formulas for unramified p -adic groups	103
H. Lin , Injective Hilbert C^* -modules	131
J. Marafino , The boundary of a simply connected domain at an inner tangent point	165
G. Riera and R. E. Rodríguez , The period matrix of Bring's curve	179

Subject listing on back cover

PACIFIC JOURNAL OF MATHEMATICS

EDITORS

V. S. VARADARAJAN
(Managing Editor)
University of California
Los Angeles, CA 90024-1555-05

HERBERT CLEMENS
University of Utah
Salt Lake City, UT 84112

F. MICHAEL CHRIST
University of California
Los Angeles, CA 90024-1555

THOMAS ENRIGHT
University of California, San Diego
La Jolla, CA 92093

NICHOLAS ERCOLANI
University of Arizona
Tucson, AZ 85721

R. FINN
Stanford University
Stanford, CA 94305

VAUGHAN F. R. JONES
University of California
Berkeley, CA 94720

STEVEN KERCKHOFF
Stanford University
Stanford, CA 94305

C. C. MOORE
University of California
Berkeley, CA 94720

MARTIN SCHARLEMANN
University of California
Santa Barbara, CA 93106

HAROLD STARK
University of California, San Diego
La Jolla, CA 92093

ASSOCIATE EDITORS

R. ARENS

E. F. BECKENBACH
(1906–1982)

B. H. NEUMANN

F. WOLF
(1904–1989)

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

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 must be capable of being used separately as a synopsis of the entire paper. In particular it should contain no bibliographic references. 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 1991 *Mathematics Subject Classification* scheme which can be found in the December index volumes of *Mathematical Reviews*. 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 90024-1555-05.

There are page-charges associated with articles appearing in the Pacific Journal of Mathematics. These charges are expected to be paid by the author's University, Government Agency or Company. If the author or authors do not have access to such Institutional support these charges are waived. Single authors will receive 50 free reprints; joint authors will receive a total of 100 free reprints. Additional copies may be obtained at cost in multiples of 50.

The *Pacific Journal of Mathematics* (ISSN 0030-8730) is published monthly except for July and August. Regular subscription rate: \$190.00 a year (10 issues). Special rate: \$95.00 a year to individual members of supporting institutions.

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.

The Pacific Journal of Mathematics at P.O. Box 969, Carmel Valley, CA 93924 (ISSN 0030-8730) is published monthly except for July and August. Second-class postage paid at Carmel Valley, California 93924, and additional mailing offices. Postmaster: send address changes to Pacific Journal of Mathematics, P.O. Box 969, Carmel Valley, CA 93924.

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

Copyright © 1992 by Pacific Journal of Mathematics