Pacific Journal of Mathematics

M. Alfaro, M. Conger, K. Hodges, A. Levy, R. Kochar, L. Kuklinski, Z. Mahmood,	
and K. von Haam, The structure of singularities in Φ-minimizing networks in	
\mathbf{R}^2	201
W. Balser, Dependence of differential equations upon parameters in their Stokes'	
multipliers	211
E. Casadio Tarabusi and S. Trapani, Envelopes of holomorphy of Hartogs and	
circular domains	231
H. Flaschka and L. Haine, Torus orbits in G/P	251
G. T. Jin, The Cochran sequences of semi-boundary links	293
Y. Kawahigashi, Cohomology of actions of discrete groups on factors of type II ₁	303
K. H. Ko and L. Smolinsky, A combinatorial matrix in 3-manifold theory	319
W. B. R. Lickorish, Invariants for 3-manifolds from the combinatorics of the Jones	
polynomial	337
P. A. Linnell, Zero divisors and group von Neumann algebras	349
B. H. Wagner, Classification of essential commutants of abelian von Neumann	
algebras	365
H. Walum. Multiplication formulae for periodic functions	383

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

THOMAS ENRIGHT University of California, San Diego La Jolla, CA 92093 R. FINN Stanford University Stanford, CA 94305

HERMANN FLASCHKA University of Arizona Tucson, AZ 85721

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

K. Yoshida

(1904 - 1989)

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.