CODEN IJMTAW
VOLUME 19
NUMBER 4

PAGES 483–635
DECEMBER 1975
ISSUE 77

ILLINOIS JOURNAL OF MATHEMATICS

a quarterly journal published by the
UNIVERSITY OF ILLINOIS, URBANA

edited by

FELIX ALBRECHT
HARRY KESTEN
MARVIN I. KNOPP
CALVIN C. MOORE
LEE A. RUBEL
JOHN H. WALTER

ILLINOIS JOURNAL OF MATHEMATICS

Manuscripts

Original research papers in pure and applied mathematics intended for publication in this journal may be written in English, French, German, or Italian. They should be addressed to the Illinois Journal of Mathematics, University of Illinois, Urbana, Illinois 61801, or to one of the editors:

FELIX ALBRECHT, Department of Mathematics, University of Illinois, Urbana, Illinois 61801.

HARRY KESTEN, Department of Mathematics, Cornell University, Ithaca, New York 14850.

MARVIN I. KNOPP, Department of Mathematics, University of Illinois at Chicago Circle, Chicago, Illinois 60680.

CALVIN C. MOORE, Department of Mathematics, University of California, Berkeley, Berkeley, California 94720.

LEE A. RUBEL, Department of Mathematics, University of Illinois, Urbana, Illinois 61801.

JOHN H. WALTER, Department of Mathematics, University of Illinois, Urbana, Illinois 61801.

All papers should be typewritten, double spaced, and the author should keep a complete copy. Bibliography and footnotes should be typed, double-spaced, on separate sheets of paper. Figures should be drawn separately in black ink on white paper suitable for being photographed and reduced (lettering included) to half size.

Proof

Authors will receive only galley proof. Proof sent to North American addresses will be accompanied by manuscript and sent by first class mail. To other addresses, proof will be sent by airmail, and manuscript will be sent only if requested. Authors are asked to return proof (and manuscript if sent) by the same class of mail that was used in sending it to them.

Page charges

To cover a part of the cost of production, the author's institution will be billed for $40 per page.

Reprints

One hundred free reprints are supplied to the sole author of a paper; fifty free reprints are supplied to each author of a joint paper. Additional reprints may be purchased.

The ILLINOIS JOURNAL OF MATHEMATICS is published quarterly by the University of Illinois. Entered as second-class matter June 4, 1957 at the post office at Urbana, Illinois, under the act of August 24, 1912. Office of publication, University of Illinois Press, Urbana. Ill.

Copyright © 1975, Board Trustees, University of Illinois
Made in U.S.A.

VOLUME 19 *1975*

ILLINOIS JOURNAL OF MATHEMATICS

a quarterly journal published by the
UNIVERSITY OF ILLINOIS, URBANA

edited by

FELIX ALBRECHT
HARRY KESTEN
MARVIN I. KNOPP
CALVIN C. MOORE
LEE A. RUBEL
JOHN H. WALTER

CONTENTS

Vol. 19. 1975

Pages

AKST, GEORGE, L^1-algebras on semigroups 454–466

ANTONELLI, P. and VARADARAJAN, K., A characterization of projective spaces in terms of h-enclosability. 433–439

ASCHBACHER, MICHAEL, On finite groups of component type . . . 87–115

AUSLANDER, M., GREEN, E. L., and REITEN, I. Modules with waists 467–478

BANCHOFF, THOMAS and TAKENS, FLORIS, Height functions on surfaces with three critical points 325–335

BLAIR, D. E. and OGIUE, K., Geometry of integral submanifolds of a contact distribution 269–276

———, Positively curved integral submanifolds of a contact distribution 628–631

BLAU, HARVEY I., On finite linear groups of degree 16 344–353

BOGDANOWICZ, W. M. and OBERLE, R. A., Decompositions of finitely additive vector measures generated by bands of finitely additive scalar measures 370–377

CAVANAUGH, JOSEPH M., Algebraic vector bundles over the l-hole torus 336–343

COHEN, PAUL F. and JOCKUSCH, CARL G., JR., A lattice property of Post's simple set 450–453

COLLINO, ALBERTO, The rational equivalence ring of symmetric products of curves 567–583

CONNES, A., On the hierarchy of W. Krieger. 428–432

CURTIS, EDWARD B., The Dyer-Lashof algebra and the Λ-algebra . 231–246

DELEEUW, KAREL, An harmonic analysis for operators I: Formal properties 593–606

DENNIN, JOSEPH B., JR., The automorphisms and conjugacy classes of $LF(2, 2^n)$ 542–552

DRAKE, DAVID A., More new integer pairs for finite Hjelmslev planes 618–627

DWYER, WILLIAM G., Exotic convergence of the Eilenberg-Moore spectral sequence 607–617

ERDÖS, P. and SELFRIDGE, J. L., The product of consecutive integers is never a power 292–301

FLESNER, DAVID, Finite symplectic geometry in dimension four and characteristic two 41–47

FLESNER, DAVID, The geometry of subgroups of $PSp_4(2^n)$ 48–70

———, Maximal subgroups of $PSp_4(2^n)$ containing central elations or noncentered skew elations 247–268

FORELLI, FRANK, Measures whose poisson integrals are pluriharmonic II 584–592

GARNETT, JOHN B., An estimate for line integrals and an application to distinguished homomorphisms 537–541

GLICK, NOEL, Perturbation of a self adjoint differential operator . . 71–76

GREEN, E. L., AUSLANDER, M. and REITEN, I., Modules with waists . 467–478

GRÜNBAUM, F. ALBERTO, Cubic forms in Gaussian variables . . . 405–411

HADWIN, DONALD W., Invariant subspaces of linear transformations. 560–566

HAVER, WILLIAM E., Topological description of the space of homeomorphisms on closed 2-manifolds 632–635

HOCHSCHILD, G., Algebraic automorphism groups 131–144

HOPENWASSER, ALAN, On the norm of the sum of certain operators . 302–307

JENKINS, JAMES A. and SUITA, NOBUYUKI, On regular functions on Riemann surfaces II 122–126

JOCKUSCH, CARL G., JR. and COHEN, PAUL F., A lattice property of Post's simple set 450–453

KALLMAN, ROBERT R., Certain quotient spaces are countably separated 378–388

KUTZKO, PHILIP C., The cyclotomy of finite commutative P.I.R.'s . 1–17

LANDROCK, PETER, Finite groups with a quasisimple component of type $PSU(3, 2^n)$ on elementary abelian form 198–230

LAX, R. F., On the dimension of varieties of special divisors, II . . 318–324

LEHNER, JOSEPH, Uniqueness of a class of Fuchsian groups . . . 308–315

LIULEVICIUS, ARUNAS, Immersions up to cobordism 149–164

LUBIN, ARTHUR, Isometries induced by composition operators and invariant subspaces. 424–427

LUECKE, GLENN R., Essentially (G_1) operators and essentially convexoid operators on Hilbert space 389–399

LUSK, E. L., A spectral sequence approach to embedding spaces . . 483–490

MARSDEN, M. and MUREIKA, R., Cardinal spline interpolation in L_2. 145–147

MAULDIN, DANIEL, The continuum hypothesis, integration, and duals of measure spaces 33–40

METIVIER, MICHEL and PELLAUMAIL, JEAN, On Doleans-Föllmer's measure for quasi-martingales 491–504

MILLETT, KENNETH C., Piecewise linear embeddings of manifolds. . 354–369

MUKHERJEE, N. P., A note on normal index and maximal subgroups in finite groups 173–178

MUREIKA, R. and MARSDEN, M., Cardinal spline interpolation in L_2 . 145–148

NAVEIRA, A. M., On the higher order sectional curvatures 165–172

NIEBUR, DOUGLAS, A formula for Ramanujan's τ-function. . . . 448–449

OBERLE, R. A. and BOGDANOWICZ, W. M., Decompositions of finitely additive vector measures generated by bands of finitely additive scalar measures 370–377

OGIUE, K. and BLAIR, D. E., Geometry of integral submanifolds of a contact distribution 269–276

———, Positively curved integral submanifolds of a contact distribution 628–631

PARSON, L. ALAYNE, Non-congruence subgroups for the Hecke groups $G(\sqrt{2})$ and $G(\sqrt{3})$ 79–86

PEDERSEN, ERIK KJAER, Embeddings of topological manifolds. . . 440–447

PELLAUMAIL, JEAN and METIVIER, MICHEL, On Doleans-Föllmer's measure for quasi-martingales 491–504

PIGNO, LOUIS, Convolution products with small Fourier-Stieltjes transforms 77–78

REITEN, I., AUSLANDER, M. and GREEN, E. L., Modules with waists . 467–478

ROBERTS, JAMES W., Representing measures in compact groupoids . 277–291

———, The component of the origin in the Nevanlinna class . . . 553–559

ROSAY, JEAN PIERRE, Sur la non factorisation des elements de l'espace de Hardy $H^1(U^2)$ 479–482

SAEKI, SADAHIRO, On the sum of two Kronecker sets 127–130

SCHMIDT, BRIAN K., Quotients of the augmentation ideal of a group ring by powers of itself 18–26

SELFRIDGE, J. L. and ERDÖS, P., The product of consecutive integers is never a power 292–301

SHAPIRO, DANIEL B. and WOLF, JOSEPH A., On isoclinic closure: Correction to "Elliptic spaces in Grassmann manifolds" . . . 316–317

SLAGLE, JOHNNIE G., Combinatorial theory of local complexes . . 179–197

STARK, BETTY SALZBERG, Rank 3 subgroups of orthogonal groups . 116–121

SUITA, NOBUYUKI and JENKINS, JAMES A., On regular functions on Riemann surfaces II 122–126

SULLIVAN, JOHN BRENDAN, Products of Witt groups 27–32

TAKENS, FLORIS and BANCHOFF, THOMAS, Height functions on surfaces with three critical points 325–335

TALPUR, M. N. M., Generalization of a theorem of Hayman to R^n . 412–423

VARADARAJAN, K. and ANTONELLI, P., A characterization of projective spaces in terms of h-enclosability. 433–439

WEINSTOCK, BARNET M., Some conditions for uniform H-convexity . 400–404

WOLF, JOSEPH A. and SHAPIRO, DANIEL B., On isoclinic closure: Correction to "Elliptic spaces in Grassmann manifolds" . . . 316–317

YANUSHKA, ARTHUR, The primitive rank 3 extension of the pointwise stabilizer of $PSp(2m, q)$ 505–536