

BULLETIN

OF

THE AUSTRALIAN MATHEMATICAL SOCIETY

Volume 52, Number 1
August 1995

*The Australian Mathematical Publishing Assoc. Inc.,
Australian National University, ACT 0200, Australia.*

Printed in Australia by Watson Ferguson & Co.

Print Post approved - PP229219/00095

ISSN 0004-9727

THE AUSTRALIAN MATHEMATICAL SOCIETY

President: Derek W. Robinson	School of Mathematical Sciences The Australian National University, Canberra 0200, Australia.
Secretary: D. Elliott	Department of Mathematics, University of Tasmania, Hobart Tas. 7000, Australia.
Treasurer: A. Howe	School of Mathematical Sciences, The Australian National University, Canberra 0200, Australia

These officers serve until July 1995

Membership and correspondence.

Applications for membership, notices of change of address or title or position, members' subscriptions and correspondence related to accounts should be sent to the Treasurer. Correspondence about the distribution of the Society's BULLETIN, GAZETTE, and JOURNALS, and orders for back numbers should be sent to the Treasurer. All other correspondence should be sent to the Secretary.

The Bulletin.

The Bulletin of the Australian Mathematical Society began publication in 1969. Normally two volumes of three numbers are published annually. The BULLETIN is published for the Australian Mathematical Society by the Australian Mathematical Publishing Association Inc.

Editor: Alan S. Jones	Department of Mathematics, The University of Queensland, Queensland 4072, Australia.
Deputy Editor: Neil H. Williams	
Honorary Editor: B.H. Neumann	

ASSOCIATE EDITORS

Robert S. Anderssen	B.D. Craven	J.A. Hempel	Brailey Sims
Alan L. Andrew	Brian A. Davey	B.D. Hughes	Ross Street
R. Bartnik	P.M. Diamond	B.D. Jones	R.P. Sullivan
Elizabeth J. Billington	P.G. Dodds	K.L. McAvaney	G. Szekeres
J. Clark	P. Donovan	Sidney A. Morris	E.U. Tarafdar
John Cossey	J.R. Giles	J.H. Rubinstein	H.B. Thompson
A.J. van der Poorten		N.C. Weber	

ASSISTANT EDITORS

K.G. Smith

G.A. Chandler

©Copyright Statement Where necessary, permission to photocopy for internal or personal use or the internal or personal use of specific clients is granted by the Treasurer, Australian Mathematical Publishing Association, Inc., for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of \$A2.00 per copy of article is paid directly to CCC, 21 Congress Street, Salem, MA 01970, U.S.A. Special requests should be addressed to the Treasurer, Australian Mathematical Publishing Association, Inc., c/- Department of Mathematics, The University of Queensland, St. Lucia, Qld 4072, Australia.

ISSN 0004-9727

BULLETIN

of the

Australian Mathematical Society

Editor: Alan S. Jones

Deputy Editor: Neil H. Williams

Honorary Editor: B. H. Neumann

Associate Editors

Robert S. Anderssen	B.D. Craven	J.A. Hempel	Brailey Sims
Alan L. Andrew	Brian A. Davey	B.D. Hughes	Ross Street
R. Bartnik	P.M. Diamond	B.D. Jones	R.P. Sullivan
Elizabeth J. Billington	P.G. Dodds	K.L. McAvaney	G. Szekeres
J. Clark	P. Donovan	Sidney A. Morris	E.U. Tarafdar
John Cossey	J.R. Giles	J.H. Rubenstein	H.B. Thompson
A.J. van der Poorten		N.C. Weber	

Assistant Editors

K.G. Smith G.A. Chandler

VOLUME 51 (1995)

The Australian Mathematical Publishing Assoc. Inc.
Department of Mathematics, ANU, ACT 0200, Australia.

Contents

W. ANANCHUEN AND L. CACCIETTA, A note on graphs with a prescribed adjacency property	5
B. BASIT AND A.J. PRYDE, Polynomials and functions with finite spectra on locally compact Abelian groups	33
NATHALIE BOISSARD, Characterisations of efficient sets in vector optimisation	43
ANTHONY J. BRACKEN, MARK D. GOULD AND YAO-ZHONG ZHANG, Quantised affine algebras and parameter-dependent R-matrices	501
MATEJ BREŠAR AND BOJAN HVALA, On additive maps of prime rings	177
RAYMOND E. BROEKSTEEG, E-solid regular semigroups and solid binary algebras [A]	377
R.H. BUCHHOLZ AND S.M. KELLY, On rational-derived quartics	171
L. CACCIETTA <i>see</i> W. ANANCHUEN	
S.S. CHANG <i>see</i> Y.J. CHO	
ANGELINA CHIN, The cohomology rings of finite groups with semi-dihedral Sylow 2-subgroups	421
Y.J. CHO, S.S. CHANG, J.S. JUNG, S.M. KANG AND X. WU, Minimax theorems in probabilistic metric spaces	103
JUNESANG CHOI, H.M. SRIVASTAVA AND J.R. QUINE, Some series involving the zeta function	383
U. JIN CHOI <i>see</i> YUNGEOM PARK	
J.R. CHRISTIE, K. GOPALSAMY AND JIBIN LI, Chaos in sociobiology	439
KOK SENG CHUA, A generalisation of Ahlfors-Schwarz lemma to Riemannian geometry	517
STEPHEN D. COHEN AND A.M.W. GLASS, Composites of translations and odd rational powers act freely	73
ROBERT DEVILLE AND EL MAHJOUB EL HADDAD, The subdifferential of the sum of two functions in Banach spaces II. Second order case	235
P. DIAMOND, P. KLOEDEN, V. KOZYAKIN AND A. POKROVSKII, Expansivity of semi-hyperbolic Lipschitz mappings	301
EL MAHJOUB EL HADDAD <i>see</i> ROBERT DEVILLE	
AHMAD ERFANIAN AND JAMES WIEGOLD, A note on growth sequences of finite simple groups	495
FRANCISCO ESQUEMBRE, Attracting invariant curves in planar discrete dynamical systems	273
G.R. EVEREST, Estimating Mahler's measure	145
GUSTAVO A. FERNÁNDEZ-ALCOBER <i>see</i> ANTONO VERA-LÓPEZ	
G.L. FORTI, L. PAGANONI AND J. SMÍTAL, Strange triangular maps of the square	395
A.M.W. GLASS <i>see</i> STEPHEN D. COHEN	
K. GOPALSAMY <i>see</i> J.R. CHRISTIE	
MARK D. GOULD <i>see</i> ANTHONY J. BRACKEN	
N.J. GROENEWALD AND L. VAN WYK, A link between two characterisations of complete matrix rings	511
MOWAFFAQ HAJJA, A note on Ohm's rationality criterion for conics	133
G. HARDY AND H.B. THOMPSON, An imbedding theorem for anisotropic Orlicz-Sobolev spaces	463
BUM IL HONG, Regularity for Hamilton-Jacobi equations via approximations	195
MIKE HURLEY, Bistable vector fields are axiom A	83
BOJAN HVALA <i>see</i> MATEJ BREŠAR	
J.S. JUNG <i>see</i> Y.J. CHO	
S.M. KANG <i>see</i> Y.J. CHO	
HISAO KATO, A note on peridic points and recurrent points of maps of dendrites	459
S.M. KELLY <i>see</i> R.H. BUCHHOLZ	
HA-JINNE KIM <i>see</i> YUNGEOM PARK	
P. KLOEDEN <i>see</i> P. DIAMOND	
TAKAO KOMATSU, On the characteristic word of the inhomogeneous Beatty sequence	337
V. KOZYAKIN <i>see</i> P. DIAMOND	
E.G. KWON, Extension of Hölders inequality (I)	369
JIBIN LI <i>see</i> J.R. CHRISTIE	
ANTHONY J. MARANO <i>see</i> SALVATORE BONAFEDE	
DAVID P. MC LAUGHLIN AND JON D. VANDERWERFF, Higher order Gateaux smooth bump functions on Banach spaces	291
JOHN BORIS MILLER, Conjugations on Banach algebras	1
R.A. MOLLIN AND A.J. VAN DER POORTEN, A note on symmetry and ambiguity	215
B. MOND AND J.E. PEČARIĆ, A simple proof of the Beckenbach-Lorentz inequality	417
SIEGFRIED MORAN, Cable knots and infinite necklaces of knots	17
JAMES LOUIS NDOUTOUUME AND MICHEL THÉRA, Generalised second-order derivatives of convex functions in reflexive Banach spaces	55
L. PAGANONI <i>see</i> G.L. FORTI	
SEUNG PARK, Best approximation theorems for composites of upper semicontinuous maps	263

YUNGEOM PARK, U. JIN CHOI AND HA-JINNE KIMN, Approximate conversion of Bézier curves	153
C.E.M. PEARCE AND J. PEČARIĆ, On an extension of Hölders inequality	453
J. PEČARIĆ <i>see</i> C.E.M. PEARCE	
J.E. PEČARIĆ <i>see</i> B. MOND	
TA DUY PHUONG <i>see</i> PHAM HUU SACH	
A. PROKROVSKII <i>see</i> P. DIAMOND	
A.J. PRYDE <i>see</i> B. BASIT	
J.R. QUINE <i>see</i> JUNESANG CHOI	
ALEXANDER M. RUBINOV AND BELGIN ŞİMŞEK, Dual problems of quasiconvex maximisation	139
PHAM HUU SACH AND TA DUY PHUONG, Invexity criteria for a class of vector-valued functions	249
STEPHEN A. SAXON AND IAN TWEDDLE, The fit and flat components of barrelled spaces	521
BELGIN ŞİMŞEK <i>see</i> ALEXANDER M. RUBINOV	
J. SMÍTAL <i>see</i> G.L. FORTI	
H.M. SRIVASTAVA <i>see</i> JUNESANG CHOI	
A. STOROZHEV, On the join of varieties of groups	287
MICHEL THÉRA <i>see</i> JAMES LOUIS NDOUTOUUME	
H.B. THOMPSON <i>see</i> G. HARDY	
MICHAEL G. TKAČENKO, On group uniformities on the square of a space and extending pseudometrics . .	309
IAN TWEDDLE <i>see</i> STEPHEN A. SAXON	
A.J. VAN DER POORTEN <i>see</i> R.A. MOLLIN	
DINH VAN HUYNH AND NGUYEN VAN SANH, A right continuous right weakly si-ring is semisimple	479
NGUYEN VAN SANH <i>see</i> DINH VAN HUYNH	
L. VAN WYK <i>see</i> N.J. GROENEWALD	
JON D. VANDERWERFF <i>see</i> DAVID P. McLAUGHLIN	
SALVATORE VASSALLO, Area-diameter and area-width relations for covering plane sets	163
ANTONIO VERA-LÓPEZ AND GUSTAVO A. FERNÁNDEZ-ALCOBER, Some bounds for the degree of commutativity of a p -group of maximal class	353
JAMES WIEGOLD <i>see</i> AHMAD ERFANIAN	
GEORGE WILLIS, Totally disconnected groups and proofs of conjectures of Hofmann and Mukherjea . .	489
REINHARD WOLF, On the average distance property in finite dimensional real Banach spaces	87
X. WU <i>see</i> Y.J. CHO	
X.Q. YANG, Generalized second-order directional derivatives and optimality conditions [A]	175
HUA-PING YU, On strongly pi-regular rings of stable range one	433
LÁSZLÓ ZÁDORI, Natural duality via a finite set of relations	469
YAO-ZHONG ZHANG <i>see</i> ANTHONY J. BRACKEN	

[A] Abstracts of Australasian Ph.D. theses