

# **BULLETIN**

of the

## **Australian Mathematical Society**

edited by

**B. H. Neumann      L. G. Kovács  
A. McMullen**

**VOLUME 3 (1970)**

The University of Queensland Press  
St Lucia, Queensland, 4067, Australia

**Printed by Watson Ferguson & Co, Brisbane, Queensland 4101, Australia**

# Contents

D. H. ADAMS, Baer semigroups and lattices (Abstract of Ph.D. thesis) . . . . .	425
RONALD ALTER and MARK VILLARINO, A remark on primes in arithmetic progressions . . . . .	185
A. L. ANDREW, Convergence of approximate operator methods for eigenvectors . . . . .	199
HOWARD ANTON, On Lebesgue-type decompositions for Banach algebras . . . . .	39
T. W. ATTERTON, A prime ideal and its quotient ring . . . . .	107
J. M. BRADY, On the classification of just-non-Cross varieties of groups . . . . .	293
J. M. BRADY, On soluble just-non-Cross varieties of groups . . . . .	313
J. M. BRADY, Just-non-Cross varieties of groups (Abstract of Ph.D. thesis) . . . . .	427
Peter I. BROOKER, Problem in kinetic theory (Abstract of Ph.D. thesis) . . . . .	423
NITA BRYCE, On the Mathieu group $M_{23}$ (Abstract of Ph.D. thesis) . . . . .	139
R. A. BRYCE and JOHN COSSEY, Some product varieties of groups . . . . .	231
R. BURMAN, Particle paths of general relativity as geodesics of an affine connection . . . . .	325
C. C. CADOGAN, On multigraphs with a given partition . . . . .	125
G. CALUGAREANU JR, <i>see</i> H. WIESLER	
PREM CHANDRA, A theorem on absolute summability of Fourier series by Riesz means . . . . .	179
S. B. CONLON and W. D. WALLIS, The identity of certain representation algebra decompositions . . . . .	73
JOHN COSSEY, <i>see</i> R. A. BRYCE	
B. D. CRAVEN, A generalization of Lagrange multipliers . . . . .	353
B. D. CRAVEN, Two properties of Bochner integrals . . . . .	363
G. DAVIS, A note on order topologies on ordered tensor products . . . . .	385
S. E. DICKSON and G. M. KELLY, Interlacing methods and large indecomposables . . . . .	337
J. E. DRUMMOND, An existence theorem for differential equations . . . . .	265
J. L. DYER, A five lemma for free products of groups with amalgamations . . . . .	85
R. J. FAUDREE, Regular metabelian groups of prime-power order . . . . .	49
P. D. FINCH, On the Möbius function of a non-singular binary relation . . . . .	155
LINDA J. FREDE, <i>see</i> ROBERT C. THOMPSON	
J. L. B. GAMLEN, <i>see</i> R. J. GAUDET	
R. J. GAUDET and J. L. B. GAMLEN, An elementary proof of part of a classical conjecture . . . . .	289
NARAIN GUPTA and FRANK LEVIN, Some symmetric varieties of groups . . . . .	97
T. E. HALL, On regular semigroups whose idempotents form a semigroup: Addenda . . . . .	287
J. A. HEMPEL, G. R. MORRIS and N. S. TRUDINGER, On the sharpness of a limiting case of the Sobolev imbedding theorem . . . . .	369
DENIS HIGGS, Boolean-valued equivalence relations and complete extensions of complete boolean algebras . . . . .	65
MASAKO IZUMI and SHIN-ICHI IZUMI, Absolute Nörlund summability of Fourier series of functions of bounded variation . . . . .	111
MASAKO IZUMI and SHIN-ICHI IZUMI, Absolute Riesz summability of Fourier series and their conjugate series . . . . .	217
SHIN-ICHI IZUMI, <i>see</i> MASAKO IZUMI	
LEE W. JOHNSON, Unicity in the uniform approximation of vector-valued functions . . . . .	193
G. M. KELLY, <i>see</i> S. E. DICKSON	
FRANK LEVIN, <i>see</i> NARAIN GUPTA	
R. McGOUGH, A note on a theorem of Sah . . . . .	269
B. C. MCQUARRIE and J. J. MALONE, Endomorphism rings of non-abelian groups . . . . .	349
J. M. MACK, A note on simultaneous approximation . . . . .	81
J. M. MACK, On the continued fraction algorithm . . . . .	413
J. J. MALONE, <i>see</i> B. C. MCQUARRIE	
PETER D. MEYER, An orthomodular poset which does not admit a normed orthovaluation . . . . .	163
H. G. MOORE, Free algebra structure: categorical algebras . . . . .	207
G. R. MORRIS, <i>see</i> J. A. HEMPEL	
SIDNEY A. MORRIS, Varieties of topological groups (Abstract of Ph.D. thesis) . . . . .	429
B. J. NOYE, On a class of differential equations which model tide-well systems . . . . .	391

## Contents

D. L. OUTCALT and ADIL YAQUB, A commutativity theorem for power-associative rings	75
DAVID L. PARROTT, On the Mathieu groups $M_{22}$ and $M_{11}$ (Abstract of Ph.D. thesis)	141
H. F. PETERSONS, Disturbance daily variation (Abstract of Ph.D. thesis)	140
JACK R. PORTER, Minimal first countable spaces	55
JOHN RANDOLPH, A solvability condition for finite groups with nilpotent maximal subgroups	273
M. RAMA MOHANA RAO and CHRIS P. TSOKOS, Integro-differential equations of Volterra type	9
P. F. RHODES-ROBINSON, Fundamental singularities in the theory of water waves with surface tension: Corrigenda	432
VIJAY K. ROHATGI, On probabilities of large deviations	277
ROBERT C. THOMPSON and LINDA J. FREED, Eigenvalues of partitioned hermitian matrices	23
N. S. TRUDINGER, <i>see</i> J. A. HEMPEL	
CHRIS P. TSOKOS, <i>see</i> M. RAMA MOHANA RAO	
M. R. VAUGHAN-LEE, Generating groups of nilpotent varieties	145
MARK VILLARINO, <i>see</i> RONALD ALTER	
W. D. WALLIS, <i>see</i> S. B. CONLON	
J. M. WAMSLEY, The multiplicator of finite nilpotent groups	1
H. WIESLER and G. CALUGAREANU JR, Remarks on triples in enriched categories	375
NEIL H. WILLIAMS, Cardinal numbers with partition properties (Abstract of Ph.D. thesis)	143
N. H. WILLIAMS, An order property of partition cardinals	171
ADIL YAQUB, <i>see</i> D. L. OUTCALT	