



SCHOOL OF MATHEMATICS

LIST OF RESEARCH PUBLICATIONS

2000

1. G.E. Andrews, A. Knopfmacher and J.P.L. Knopfmacher, “Engel expansions and the Rogers-Ramanujan identities”, *Journal of Number Theory*, **80** (2000), 273-290.
2. G.E. Andrews, A. Knopfmacher and P. Paul, “An infinite family of Engel expansions of Rogers-Ramanujan type”, *Advances in Applied Mathematics*, **25** (2000), 2-11.
3. P.A. Binding, P.J. Browne and B.A. Watson, “Inverse spectral problems for Sturm-Liouville equations with eigenparameter dependent boundary conditions”, *Journal of the London Mathematical Society – Second Series*, **62** (2000), 161-182.
4. P.A. Binding, P.J. Browne and B.A. Watson, “Spectral problems for non-linear Sturm-Liouville equations with eigenparameter dependent boundary conditions”, *Canadian Journal of Mathematics*, **52**(2) (2000), 248-264.
5. W.A. Chren and J.N. Ridley, “Digital oscillators over finite fields”, *IEEE Transactions on Signal Processing*, **48**(08) (2000), 2406-2413.
6. K.A. Driver and P. Duren, “Zeros of the hypergeometric polynomials $F(-n, b; 2b; z)$ ”, *Indagationes Mathematicae*, **11**(1) (2000), 43-51.
7. M. Faierman, “A transmission problem for elliptic equations involving a parameter and a weight”, *Glasnik Matematicki*, **35**(55) (2000), 89-109.
8. M. Faierman, “An elliptic boundary problem involving an indefinite weight”, *Proceedings of the Royal Society of Edinburgh Section A – Mathematics*, **130A** (2000), 287-305.
9. M. Faierman, R.J. Fries, R. Mennicken and M. Möller, “On the essential spectrum of the linearized Navier-Stokes operator”, *Integral Equations and Operator Theory*, **38** (1) (2000), 9-27.
10. M. Faierman and M. Möller, “On the essential spectrum of a differentially rotating star in the axisymmetric case”, *Proceedings of the Royal Society of Edinburgh Section A - Mathematics*, **130A** (2000), 1-23.

- 11.M. Faierman and M. Möller, “The essential spectrum of a system of singular ordinary differential operators of mixed order. Part II The generalization of Kako’s problem”, *Mathematische Nachrichten*, **209** (2000), 55-81.
- 12.P. Grabner, A. Knopfmacher and H. Prodinger, “Run statistics for geometrically distributed random variables”, Latin 2000, Theoretical Informatics, Punta del Este, Uruguay, *Latin 2000: Theoretical Informatics*, 10-14 April, pp.457-462, 2000.
- 13.M.E.H. Ismail, H. Prodinger and D. Stanton, “Schur’s determinants and partition theorems”, *Séminaire Lotharingien de Combinatoire*, **44** (2000), A1-A10.
- 14.A.H. Kara, “On the conserved quantities and associated symmetries for some classes of wave equations with non-linearities”, *Int. Journal of Non-Linear Mechanics*, **36**(1) (2000), 125-130.
- 15.A.H. Kara and C.M. Khalique, “The relationship between symmetries and conservation laws”, *Proceedings of the 3rd Hanno Rund Conference*, Durban, 13-16 September 2000, 51-70.
- 16.A.H. Kara and F.M. Mahomed, “The relationship between symmetries and conservation laws”, *Int. Journal of Theoretical Physics*, **39**(1) (2000), 23-40.
- 17.A.H. Kara, F.M. Mahomed and Qu Changzeng, “Approximate potential symmetries for partial differential equations”, *Journal of Physics A: Math and general*, (2000).
- 18.A.H. Kara and Qu Changzeng, “Nonlocal symmetries and associated conservation laws for wave equations with variable speed”, *Int. Journal of Theoretical Physics*, **39** (10) (2000), 2503-2512 .
- 19.A. Knopfmacher, “John Knopfmacher – Mathematical and other memories”, *Notices of the South African Mathematical Society*, **31** (2000), 11-15.
- 20.D.S. Lubinsky, “Asymptotics of orthogonal polynomials: Some old, some new, some identities”, *Acta Applicandae Mathematicae*, **61** (2000), 207-256.
- 21.D.S. Lubinsky, “On the maximum and minimum modulus of rational functions”, *Canadian Journal of Mathematics*, **52**(4) (2000), 815-832.
- 22.D.S. Lubinsky, “On mean convergence of Lagrange interpolation of general arrays”, *Journal of Approximation Theory*, **104** (2000), 220-225.
- 23.D.S. Lubinsky, “Asymptotic behaviour of entire functions with positive coefficients: Research problems 2000-2”, *Constructive Approximation*, **16** (2000), 313-316.
- 24.D.S. Lubinsky and D. Mache, “(C,1) Means of orthonormal expansions for exponential weights”, *Journal of Approximation Theory*, **103** (2000), 151-182.

- 25.D.S. Lubinsky and J. Szabados, “Weighted Lebesgue constants: Research problems 2000-1”, *Constructive Approximation*, **16** (2000), 157-159.
- 26.J.W. Moon and H. Prodinger, “A bijective proof of an identity concerning nodes of fixed degree in planted trees”, *Ars Combinatoria*, **55** (2000), 91-92.
- 27.A. Panholzer and H. Prodinger, “Two proofs of Filippini’s formula for odd-subscripted Lucas numbers”, *Fibonacci Quarterly*, **38** (2000), 165-166.
- 28.H. Prodinger, “A q-analogue of a formula of Hernandez obtained by inverting a result of Dilcher”, *Australasian Journal of Combinatorics*, **21** (2000), 271-274.
- 29.H. Prodinger, “Combinations of geometrically distributed random variables: New q-tangent and q-secant numbers”, *International Journal of Mathematics and Mathematical Sciences*, **24**(12) (2000), 825-838.
- 30.H. Prodinger, “Combinatorics of geometrically distributed random variables: Length of ascending runs”, Latin 2000, Theoretical Informatics, Punta del Este, Uruguay, *Latin 2000: Theoretical Informatics*, 10-14 April, pp.473-482, 2000.
- 31.H. Prodinger, “On binary representations of integers with digits $-1,0,1$ ”, *Integers*, **0** (2000), A8.1-A8.14.
- 32.H. Prodinger, “On Cantor’s singular moments”, *Southwest Journal of Pure and Applied Mathematics*, **1** (2000), 27-29.
- 33.J.N. Ridley, “An elementary proof on location of zeros”, *American Mathematical Monthly*, **107**(4) (2000), 357-360.
- 34.J.N. Ridley and G. Petruska, “The error-sum function of continued fractions”, *Indagationes Mathematicae*, **11**(2) (2000), 273-282.
- 35.J. Scheiber, A. Ferri, M.H. Graven, C. Hunter, B. Huntley, A.M. Jawurek and R. Karam, “Heinemann Outcomes Maths Grade 8 Learner’s Book”. Heinemann Publishers, Johannesburg, First Edition, 224 pp., 2000.
- 36.J. Scheiber, A. Ferri, M.H. Graven, C. Hunter, B. Huntley, A.M. Jawurek and R. Karam, “Heinemann Outcomes Maths Grade 8 Teacher’s Book”. Heinemann Publishers, Johannesburg, First Edition, 160 pp., 2000.
- 37.G.P. West, “Spectral theory and quotients in von Neumann algebras”, *Quaestiones Mathematicae*, **23** (2000), 219-225.