THE NEW ZEALAND
MATHEMATICAL SOCIETY (INC.)

NEWSLETTER

CONTENTS

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EDITORIAL

BASIC RESEARCH FUNDING

At this time many of New Zealand's research mathematicians are preparing bids for the next round of the Marsden Fund. We are fortunate that more money is being channelled into basic research. I have attended two public addresses by the Simon Upton, who has passionately promoted "blue skies" research as an endeavour to be valued in our society. His enthusiasm appears to have been instrumental in the rapid growth of this fund at a time when market force philosophies have been responsible for declining government support for many activities in this country that do not provide immediate and transparent financial returns. However, with decreasing proportional support for tertiary education, the Vote Education block grant, with which universities had funded their basic research, we may not be gaining much headway.

The process of research grants requires us to specify in some detail our future research activity. On reflection I believe that some of my more profitable results had not been foreseeable, under the current system this would not have attracted external support. The University's block grant funding enabled us to pursue our own particular research interests without the need for predicting outcomes. I hope that under the new regime, this freedom is not completely lost.

One strategy rumoured to be used by some overseas researchers to overcome this difficulty, is to apply for funding for research "up their sleeve", i.e. results that have already been obtained. The funding granted is then used to seed the next set of results. Although this might suggest some degree of dishonesty, it does still require a match of peer reviewed research to the funding, and the continuation of this process depends on the production of further high quality research. It also requires some unfunded research to initiate the process.

However, such a scheme, if it was used this way, should not be done covertly. Perhaps to encourage continuing research activity, researchers could be rewarded for their current achievements with a grant to support further research. The current scheme works partially this way, in that research track record is a factor in the success of the application.

I recently attended a talk by Sir Colin Spedding, retired former director of Grasslands Research Institute at Hurley, UK, and advisor to the Minister of Agriculture in London. He illustrated his discussion on research funding policies with the statement that no British researcher had predicted the outbreak of BSE (mad cow disease) in Britain, and suggested that any timely proposal to undertake research in this area would not have been funded. (Indeed I suspect that if it had been predicted, the warning may well not have been heeded, and if the warning were heeded, the benefits of avoiding BSE would not have been known nor appreciated.) He advocated that a certain proportion of the basic research funding be targeted to the researcher, rather than to the research, without regard for the direction of the research. Although much of this research might never make a great financial return, it opens the way for some high impact research that otherwise might not occur, some of which may add significantly to the economic welfare of the nation.

How might such a scheme be implemented? We could possibly have a competitive scheme whereby a few prolific

quality researchers at mid career, could be awarded long term research fellowships, perhaps 10-20 years. This fellowship should be full time and fully funded and affiliated to an appropriate research institution. In return the researcher could be charged with the responsibility to publish her/his work, give papers regularly at local research conferences, take on a specified number of research students and post doc.s. The selection criteria should reflect her/his abilities in these activities, as well as a critical review of current research performance being of an exceptional international standard. Being relieved of undergraduate teaching responsibilities, administration and repeated research grant applications s/he would be able to concentrate her/his efforts into research.

Perhaps such something like this might be possible, to encourage unfettered undirected basic research of high quality, and eventually produce a high return.

Readers will find a new department on the back page, Mathematics Miniatures, a suggestion from John Butcher, which he has volunteered to edit. I hope that you will find this of interest and will offer comment, support and in particular provide material for future issues.

Mike Hendy

LOCAL NEWS

AgResearch

We were pleased to welcome the NZMS visiting lecturer, Professor Valerie Isham, to the AgResearch campuses at Whatawhata, Ruakura and Wallaceville; where she shared her knowledge of stochastic processes and their application to epidemiology and parasitology. Mick Roberts attended the New Zealand Society for Parasitology Conference at Taupo in August and gave an invited paper on modelling parasite populations in the face of drug resistance.

At Ruakura, Neil Cox continues to explore the use of Excel for dynamic statistical graphics and data summary. Martin Upsdell's Flexi is becoming still more flexible and a new version (2.4) is being released. Martin has developed a module for analysis of assays, in particular RIAs as read by the Microman automated plate reader. It fits a smooth curve through a set of standards and produces estimates of the concentrations and their standard errors. It is being run by the lab personnel at Ruakura. Harold Henderson attended the joint statistical meetings in Chicago in August and spent a week at Cornell in conjunction with the Conference in Honour of Shayle Searle, on the occasion of his retirement.

Mick Roberts

UNIVERSITY OF AUCKLAND

SCHOOL OF MATHEMATICAL AND INFORMATION SCIENCES

Professor Ivan Reilly was overseas for the first half of September. He visited the University of Thessaloniki to continue his joint research work with Dr Charikleia Konstadilaki-Savvopoulou, and to give a lecture there. He then was an Invited Speaker at the 10th Summer School on Real Functions Theory, held at Liptovsky Jan, Slovakia, on September 8-13. That conference was sponsored by the Slovak Academy of Sciences, and dedicated to the 70th birthday of Professor Tibor Salat, of Bratislava.

At the SMIS "end of semester" function, we recognised the following three individuals for excellent teaching performance in 1996: Andrew Luxton (Computer Science), Dr Ross Ihaka (Statistics) and Dr Paul Hafner (Mathematics). We also made the first annual School award for General Staff excellence to Anita Lal and Neena Raniga, both in the Computer Science Department office.

We have been sent copies of pages from a Canadian magazine and an Australian magazine, each with full-page advertisements inviting people to Get Rich Quick!!! Buy a system for winning at Lotto!! That system is said to have been "tested and confirmed by the prestigious Department of Mathematics and Statistics at the University of Auckland, in New Zealand".

Those advertizers are likely to find themselves subjected to some pressure, to induce them to desist from taking our name in vain!

DEPARTMENT OF COMPUTER SCIENCE

Dr Reinhard Klette, formerly Professor of Computer Vision at the Technical University of Berlin, is now Professor of Information Technology at the Tamaki campus. Dr Hansbjoerg Baltes has been appointed as Lecturer.

His research interests are mainly in artificial intelligence. Dr Michael Dineen as been appointed as lecturer. His research interests are mainly in theoretical computer science, including analysis of algorithms and complexity.

Professor Bob Doran has been appointed as Deputy Dean of the faculty of Science. Accordingly, he has relinquished the post of Head of Department; and Associate-Professor Peter Gibbons succeeds him as HOD. Dr Jennifer Lennon has been promoted to Senior Lecturer, and Director of the Hypermedia Unit.

Peter Shields has returned to work, after convalescing for several weeks after a car crash.

On Friday August 23rd at 10am, Garry Tee gave the last lecture for the first half of the History of Computing course 475.790, with 12 graduate students (plus c10 kibitzers). He told the students about Bletchley Park, and how Max Newman designed there an electronic machine for decryption, which was built there in 1943. COLOSSUS was kept totally secret for 31 years, and most of the information about it is still kept under the tightest security restrictions by the British Government; but that first COLOSSUS is now acknowledged as the first computer to operate.

At that point Garry left the room briefly, and then told the students that "I am pleased to introduce to you Mrs Caughey, who has kindly agreed to tell us how she became the operator of COLOSSUS, the first computer". Catherine Caughey spoke for 22 minutes, and she was given thunderous applause at the end. The students are likely to remember that lecture on the History of Computing!

Catherine Caughey also spoke about her work with COLOSSUS in the SPECTRUM programme, broadcast by National Radio on October 20 (with repeats). She has herself published her autobiography WORLD WANDERER, which got a rave review in the NZ Herald (1996-6-8). The 2nd edition of WORLD WANDERER is currently selling well (available at Wheeler's Bookshop and Remuera Books, at $35).

Seminars

Dr Ian Foster (Argonne National Laboratory), "Network-based approaches to supercomputing".

Dr Rusins Freivalds (University of Latvia), "Category, measure, inductive inference: a triality theorem and its applications".

Professor Jozef Gruska (Bratislava University), "Frontiers of computing".

Peter Gutmann, "Recovering erased data from disk drives".

Professor Frank Harary, (New Mexico State University), "A survey of hypercube theory".

Julian Harris & Rob Burrowes. "Mac OS 8: the next generation".

Professor Carl Jockusch, (University of Illinois at Urbana-Champain), "Ramsey's theorem and computability".

Dr Marjo Lipponen (Turku University), "Primitive solutions of the Post correspondence problem".

Dr Richard Lobb, "Impressions of SIGGRAPH '96".

Dr John Mashey (Silicon Graphics Inc.), "Technology directions for high-performance computing".

Dr Rick Mugridge, "Report on the Java developers conference".

George Sealy, "Implicit modelling of freeform shapes".

Dr Sameer Singh (University of Plymouth), "Fuzzy pattern recognition and fuzzy neural networks".

Professor Clark Thomborson, "Modelling hierarchy theory".

Matthew Tong, "General hashing".

Don Sheridan, David White, Li Ping Loo & David Poon, "CSL - functions and features".

DEPARTMENT OF MATHEMATICS

Dr Eamonn O'Brien has been appointed as Lecturer, and he is expecting to take up his appointment in February 1997. His research interests lie in group theory and computational algebra, and many of his contributions have been incorporated into the computer software packages GAP and MAGMA.

Dr Kevin McLeod, an Associate Professor of Mathematics at the University of Wisconsin at Milwaukee, is visiting as an Honorary Research Fellow for two semesters. His interests are in the theory and application of partial differential equations. Dr Tatiana Soboleva, a Leading Research Fellow at the Donetsk Physico-Technical Institute of the Academy of Sciences of the Ukraine, with interests in mathematical physics (and integrable nonlinear systems in particular), is an Honorary Research Fellow for the rest of 1996. Dr Alan Graham (Open University) visited for 2

months.

Bill Barton has completed his PhD and has been promoted to Senior Lecturer. Dr Michael Thomas has been promoted to Senior Lecturer, and Dr Joel Schiff has been promoted above the bar in the Senior Lecturer scale. Dr Paul Bonnington has been awarded a special increment in the Lecturer scale, and Pam Hurst has been promoted to Senior Tutor.

Dr Colin Fox is back on the Antarctic sea-ice, studying its breakup.

Ying Mai has completed his PhD. Four of our students have commenced PhD studies overseas: Chris Heath (University of Michigan), Rowan Killip (CalTech), John MacCormick (University of Oxford) and Rachel Weir (University of Michigan). Three graduate students at the University of Trondheim are Research Fellows in the Applied & Computational Mathematics Unit for 6 months: Eivor Øines, Einar Magero()øy and Erik Nilsen.

A convivial gathering of the Departments of Mathematics and of Physics was held on December 3, to celebrate the 1996 medals for research awarded by the RSNZ. Professor John Butcher has been awarded the 1996 Hector Medal (the major prize of the RSNZ) for his research on numerical solution of ordinary differential equations, and Associate-Professor Tom Barnes has been awarded the Cooper Medal in Physics for his research on optical-electronic circuits with nonlinear feedback.

Professor David Gauld and Professor Boris Pavlov have each gained research grants from the Marsden Fund.

A conference on "Women as an Influence in Mathematics Education" was held on November 29 in honour of Jill Ellis, who is now retiring after 10 years in the Mathematics Education Unit. About 100 people attended, with the speakers including Dr Gilah Leder (who came from La Trobe University), Dr Megan Clark (who came from VUW) and Elaine Mayo (who came from Christchurch College of Education). That full-day conference concluded with several people giving tributes to Jill as a teacher, as a researcher in curriculum development, and as a colleague in our Department.

The Aldis Lecture is given annually, to commemorate William Steadman Aldis, our first Professor of Mathematics. Dr Gillian Thornley (of Massey University), has given the 1996 Aldis Lecture, on "From Descartes to Aldis and Beyond: A Geometrical History".

Graeme Wake, as Professor of Industrial and Applied Mathematics delivered his Inaugural Lecture on `Hitech Angles'. About 120 people attended that Inaugural Lecture on October 2, followed by a reception.

An excellent BBC documentary feature on Andrew Wiles's proof of Fermat's Last Theorem was broadcast locally in an educational programme in September. Our Department has acquired a videotape of that program (lasting 48 minutes), which was screened here in place of a seminar, in October. The many people who saw it were much impressed, as was Frank Harary, who viewed it individually during his recent visit. Some further screenings will be arranged for students, in the next semester.

Mathematicians around the world were much saddened to learn that Paul Erdös had died in Warsaw on September 22, at the age of 83. A Memorial Meeting in honour of Paul Erdös was held in our Seminar Room on Wednesday September 25. Several members of our Department spoke about their contacts with Paul Erdös (who addressed the 1982 Mathematics Colloquium, at the University of Otago), and about his achievements and his influence. At least 4 members of our Department proudly bear the honour of Erdös number 2, i.e. each has co-authored a paper with someone who had co-authored a paper with Paul Erdös.

Filip Sajdak has now completed Year 3 of his course for BSc (Honours). During the past year, the journal MATHEMATICAL SPECTRUM has published a variety of contributions by Filip - notes, letters, problems and solutions. The Editors have now awarded him a prize for his contributions to Volume 28: the prize consists of book tokens for NZ$75. Filip wrote to Paul Erdös in May, and Paul Erdös replied to him on July 1, enclosing a copy of a 15-page manuscript on "Some problems in number theory". The Editors of the New Zealand Journal of Mathematics intend to publish that manuscript, in memory of Paul Erdös.

Dr Ganesh Dixit has now attained an age approximating 60 years, and so the Department celebrated his Shastipurti on the afternoon of October 17. At "A Mathematical Garland" for Ganesh Dixit, 6 colleagues gave short lectures on Aspects of Analysis; and that was followed by an Indian buffet dinner.

Ganesh (and his daughters) told how, after the University of Biafra had been destroyed, he arrived at Auckland Airport in 1968 with his wife and their 3 little daughters. They had the clothes they were wearing, and a Bank Draft for 2 pounds. At Auckland Airport, a man looked over the people arriving. He approached the Dixit family and addressed the 3 little girls by their names - that was John Butcher's way of identifying the Dixit family! Ganesh told how, in about 1620, the Mughal Emperor Jahangir visited Kashmir, where he was so delighted by the beauty of that region that he erected a monument, inscribed with his declaration that "If there is a Paradise on Earth, it is here, it is here! it is here!!". Ganesh concluded that he could only repeat "It is here. It is here! It is here!!"

Seminars

Professor Chris Godsil (University of Waterloo), "Cospectral graphs and isometric modules".

Professor Ivan Reilly, Bill Barton, Jill Ellis, Barbara Miller-Reilly (Mathematics Education Unit), "Report on the ICME Conference 1996".

Dr Catherine Sulem (University of Toronto), "The nonlinear Schrödinger equation and related systems".

Dr Edward Bierstone, "Resolution of singularities".

Dr Michael Meylan (University of Otago), "The wave-induced vibration of floating thin plates by a variational method".

Dr Roger Bryant (UMIST), "Finite groups acting on free Lie algebras".

Professor Don James (Penn State), "Bianchi groups and integral quadratic forms".

Dr Francis Y. C. Thio, (Massey University, Albany), "Plasmas and controlled thermonuclear fusion".

Professor Chris Tindle (Department of Physics), "Underwater wave fronts".

Dr Stuart Scott (Hon. Research Fellow), "Topology and near-rings", and "Radially symmetric solutions of semilinear elliptic equations".

Professor Isaac Namioka, (University of Washington, Seattle), "Separate and joint continuity - a survey".

Professor Zbigniew Slodkowski (University of Illinois at Chicago) "Multiple roots of estimating functions".

Professor John Butcher & Tina Chan (Applied & Computational Mathematics Unit), "Almost Runge-Kutta methods".

Dr Vladimir Pestov (VUW), "On free actions, minimal flows, and a problem by Ellis".

Mark McGuinness (VUW), "Heat pipes in geothermal reservoirs".

Dr Robert Chan (Tamaki Campus), "Symplectic integration of Hamiltonian problems".

Dr Shaun Cooper (Massey University, Albany), "Some generalisations of Euler's beta integral and Jacobi's triple product identity".

Bill Barton (Mathematics Education Unit), "Report on the British Council link visit".

Professor David Gauld, "The generalised Schoenflies theorem".

Tony Pleasants (AgResearch, Whatawhata), "Agriculture and mathematics: the interface".

Professor Winfried Kohnen (Heidelberg University), "Elliptic curves and modular forms".

Professor Gary Roach, (University of Strathclyde), "Scattering theory, inverse problems, pdes etc.".

Professor Valerie Isham (UCL), NZMS Lecturer 1996, "Stochastic modelling, point processes, epidemiology etc.", and "Spatial processes: point process models and some applications".

Dr Jose Ventura (Penn State), "Tight upper bounds on optimal broadcast networks".

Ying Mai, "Numerical simulation of the Smart Drive washing machine".

Dr Berwin A. Turlach (ANU), "On the estimation of a convex set and its support function".

Dr Stephen Joe (University of Waikato), "Numerical multiple integration - the lattice way".

Brian Van Dam, "Resolution via multifunctions".

Professor Cathy Kessel (University of California), "Teaching Mathematical Problem Solving:

Dr Andrew Pullan (Department of Engineering Science), "Modelling electrical activity from heart to body surface".

Jiling Cao, "A report on the Prague topological symposium".

Professor Ernie Kalnins (University of Waikato), "q-algebras, special functions and Kronecker products".

Professor Herve Morin (Universite de Laval, Canada), "An unbiased ratio estimator".

Gareth Hegarty, "Evolution operators and semigroups".

Dr Jiang Shouli (Shandong University, China), "A problem and its partial solution".

Greg Lomas (Auckland College of Education), "Developments in Mathematics Education at the Auckland College of Education".

Kerry Richardson, "Resolutions"

Bridget Jones, Royal Society Teacher Fellow & Dr Alan Graham (Open University), "Teaching a Level 1 Statistics course with a graphics calculator", and "Open calculator challenge".

Professor Ivan Reilly, "Impressions of the Slovak Academy of Science Summer School on Real Function Theory, Liptovsky Jan, Tatra Mountains, 8-13 September 1996".

Professor Frank Harary (New Mexico State University), "Ramsey theory for graphs".

Professor Peter Lorimer, "Constructing manifolds in dimensions 2 and 3 as orbit spaces of quotient groups of Coxeter groups".

Dr Sze Tan (Department of Physics), "Entangled physics: quantum cryptography and computation".

Dr Josef Siran (Technical University of Bratislava), "Cayley maps".

Abdul Mohamad, "Metrizability of manifolds with generalized diagonal properties".

DEPARTMENT OF STATISTICS

Dr Alan Lee and Dr Chris Triggs have both been promoted to Associate-Professor, Alan will be the Head of Department from February 1 1997. Dr Brian Eastwood has been promoted to Senior Lecturer, and Matt Regan has been promoted to Senior Tutor.

Professor Herve Morin, of Universite de Laval in Quebec, visited for the second semester.

Professor George Seber has gained a research grant from the Marsden Fund.

Seminars

Professor J. R. Birge (University of Michigan) "Quasi-Monte Carlo approaches to option pricing".

Dr Robert Gentleman, "On the proportional hazards model for interval censored data".

Professor Christopher G. Small (University of Waterloo), "Evolution of subsets of C^2".

Dr Glenys Bishop (University of Adelaide), "SMART: An explorapaedia of advanced statistical and mathematical techniques for researchers".

Professor George Seber, "Two-stage adaptive cluster sampling".

Dr Brian Eastwood, "Optimal sample allocation in clinical trials".

Dr Renate Meyer , "A Starter for 30 on MCMC on Discrete State Spaces".

Dr Geoff Nicholls (Department of Mathematics), "Some Basics on Global Optimization by Simulated Annealing".

Dr Ilze Ziedins, "Controls for telecommunications networks".

Dr Sajeev Varki (Department of Marketing & International Business), "Estimating judgment accuracy in classifications of fuzzy data".

Garry J. Tee.

UNIVERSITY OF CANTERBURY

DEPARTMENT OF MATHEMATICS AND STATISTICS

Emeritus Professor Gordon Petersen MA (Stanford), PhD (Toronto) and DSc (Wales) Professor of Pure Mathematics from 1965 until 1983, and Head of Department from 1967 until 1983, died 9th November after a long illness. [See Centrefold, Newsletter #29, ed.] Many of us have fond memories of this strong personality. He was always an advocate for the interests of the departments Honours and Postgraduate students, and of the interests of New Zealand mathematics.

Dr Murray Smith is leaving us for the Engineering Science Department of the University of Auckland after 29 years here. Professor John Deely is retiring and taking up a visiting position at Purdue after 28 years here. Dr James Sneyd is leaving us for the University of Michigan in Ann Arbor. They will all be sorely missed! Bill Baritompa was in Australia in August working with Professor Graham Wood in Rokhampton. Graham will be visiting Canterbury late November.

Mark Hickman spoke at the Sophus Lie summer school in Nordfjordeid, Norway, in late June.

Ian Coope has returned from Europe's biggest building site (Berlin) where he was an invited speaker at the International Workshop on Semi-infinite Programming. The excellent meeting was held at the new Technical University in Cottbus (South of Berlin in what was formerly East Germany). The building program there is certainly on a massive scale with what could only be described as a forest of cranes in East Berlin.

Rick Beatson was away on an Erskine Fellowship June and July. He visited Cooperative Research Centre for Sensor Signal and Information Processing and the University of Adelaide, in Adelaide. Then it was onto England via Santa Cruz. While in England he gave a series of lectures on the fast multipole method at the EPSRC summer school in Leicester, and a contributed talk at Mike Powell's 60th birthday conference in Cambridge. Rick has won a substantial FRST subcontract for research in fast algorithms for radial basis functions for use in image processing related applications.

Frank Lad is happy to announce the publication of his book, "Operational Subjective Statistical Methods: a mathematical, philosophical, and historical introduction" in New York, by John Wiley and Sons, ISBN 0-471-14329-4. The outcome of more than ten years work, the book develops the mathematical construction of coherent prevision in the tradition of Bruno de Finetti as a linear functional appropriate to represent the subjectivist foundation of statistics as the theory of coherent learning about specified measurements in the context of personal uncertainty. It contains materials of analysis, examples, and problems accessible for an undergraduate level introduction to mathematical probability and to graduate level understanding of the implications of exchangeability as probabilistic structure of broad applicability.

Dr Sunah Kim a ring theorist from South Korea is currently visiting.

Seminars

Professor Romano Scozzafava, (Rome), "The first digit problem", "Are improper distributions really improper?" "Null Probabilities and Coherence" "Conditional events and Simpson's paradox".

Dr Peter Waddell, (Massey University), "Novel methods of phylogenetic analysis and the evolution of mammals".

Professor Mike Fellows, (University of Victoria B.C.), "Computational complexity and biology - some new directions.

Dr Vincent Moulton, "Motion of points in 2-dimensional complex space" "T-theory: the mathematics of similarity".

Dr Valerie Isham, (University College London), NZMS visitor "Spatial-Temporal Rainfall Processes".

Professor Gary Roach, (Strathclyde University), "An Introduction to Scattering Theory".

Rick Beatson

OBITUARY

Gordon Marshall PETERSEN

1921 - 1996

Professor Gordon Petersen died on 9 November at the St John of God Hospital, Halswell, where he had lived for the past six years. He had been Professor of Mathematics at the University of Canterbury from 1965, and Head of the Department of Mathematics from 1967 to 1983, when he retired because of ill-health. He was, in his time, a very considerable ornament to his university, not just for his professional eminence, but also because of a colourful singularity of character not now so common in academic society as it once was.

Gordon was born in San Francisco in 1921, the only child of a father of Danish, and a mother of English stock. He received his early education there, and after taking his bachelor's degree from Stanford University in 1943, he went school-teaching at a boys' boarding school at Deep Springs, a small and remote settlement in Central California. Here he taught not only mathematics, for which he was no doubt well prepared, but also physics. One of his stories of this time had to do with his repeating, with his class, Galileo's famous falling weights experiment. The school was set in a ranch, and so the experiment was conducted by dropping objects of various sizes from the top of a feed silo. He got into trouble with the Matron over this, presumably on safety grounds. At some time in this period, during the war or just after, he was also employed at Moffett Field, a government aeronautical establishment in the San Francisco area. I attempted during his last years at St John of God to find out from him just when this was, and what sort of work he'd done. However, as many of his friends discovered, in conversation Gordon answered very slowly to the helm, like a super-tanker; and all I got from him were amusing and discreditable stories about distinguished aerodynamicists.

Gordon returned to Stanford after these excursions to take his master's degree in 1947, under the supervision of D.C. Spencer. He then spent two years lecturing at the University of British Columbia, before enrolling at the University of Toronto, taking as his topic functional analysis, with G.G. Lorentz as his supervisor. His career as a mathematician now began to prosper; he took his doctorate in 1951, in a very short time indeed, and even before this degree had been awarded he had submitted three papers for publication.

There followed a series of one- and two-year posts at universities in the United States and Canada, until in 1955 he settled in the University College of Wales at Swansea. It was at Swansea that he produced much of the research, on matrix summability theory, for which he is best known, and in 1963 he was awarded the D.Sc. of the University of Wales. He stayed there until in 1965 he was appointed to a chair of Pure Mathematics at the University of Canterbury. He was appointed Head of the Department of Mathematics in 1967, after the departure of Derek Lawden, and remained in this post until, after a stroke in 1983, he retired at the age of 62.

Gordon's life was centred around pure mathematics. (The penumbra was admittedly extensive and varied). The work which he did in matrix summability theory, which was summarized in his well-received book "Regular Matrix Transformations" (1966) gave him an international reputation. He knew, worked with, and was held in respect by an impressive body of mathematicians throughout the world, whom he would visit when on leave, and whose visits to Canterbury greatly enlivened the atmosphere of the Department. Even after his translation to Canterbury, at which in the sixties and seventies the teaching load in the department was anomalously high, and where he was involved in administrative work for which he had little taste, and perhaps talent to match, he continued to publish steadily. He promoted research in the department by vigorously fostering the honours and M.Sc. programmes, and under his headship the output of doctorates grew to some respectability. He was devoted to the interests of his students, particularly to those who enrolled in his legendary Honours I analysis class, whom he expected to continue to scale the steepest slopes of rigour and abstraction with him. This devotion verged on possessiveness when, as would at times happen, one of his promising students defected to, say, physics, or electrical engineering. In such cases he suspected underhand dealings by the department concerned, and would mutter darkly.

On the national scene, Gordon was one of the prime movers in establishing the Mathematical Colloquium, the annual meeting of this country's research mathematicians. The idea was mooted by him, he maintained, at a meeting of the Steering Committee in 1965, and the first was held in 1966, the year after his arrival. He also put a great deal of enthusiasm and energy into the first Australasian Mathematical Symposium to be held in New Zealand, which took place in Christchurch in 1978. He was elected to the fellowship of the Royal Society of New Zealand in 1973, and was a member of the London Mathematical Society, the American Mathematical Society, the American Mathematical Association, the Canadian Mathematical Congress, and the New Zealand Mathematical Society.

Beyond mathematics, Gordon had many enthusiasms, which he pursued with zest. He was an avid but informed collector of a surprising variety of things. He had a number of coin collections, centred on different themes; for example, he had coins bearing the heads of each of the Roman emperors; and he knew something discreditable or scandalous about each one of them. This collection can now be seen in the Logie Collection of the Classics Department at Canterbury University. Another collection, of Parthian coins, was given to the University of Swansea. He had a remarkable collection of chess-sets. He had many teapots and Toby-jugs, not all of them exquisitely beautiful. He was very keen and knowledgeable in the matter of oriental rugs, which he would pile one on top of the other on the floors of his house, so that at one stage I warned him that if this practice continued, he would have to walk through his rooms stooped.

There were two occasions in the seventies when Tibetan hand-knotted rugs were sold in the CSA Gallery. Gordon bought one or two at the first sale, and when the next sale was announced, declared that he'd go to add to his collection. I asked him afterwards how he'd fared. "Oh," he said, "It was a madhouse. The place was full of wretched ill-mannered Fendalton ladies, pushing to the front and seizing all the best pieces." I had a vision of Gordon, buffetted liked a great ship on a sea of blue-rinsed hair, and supposed he'd come away empty-handed. "Well, not really," he said, "I did manage to get hold of three of the smaller ones, and two of the larger ones".

Gordon was an imposing figure, and he loved ceremony, enjoying the occasions when, in his magnificent University of Wales Doctor of Science robes, he could appear not just twice as large, but also twice as scarlet, as anyone else. But in less formal occasions his dress could be quite disreputable. His colleagues in the Department may have been

gratified when he took New Zealand citizenship; but his adoption of the New Zealand bushman and shearer's black woollen singlet for informal wear gave less pleasure.

He loved drama, and he loved to act. I recall of his speaking about his year at the University of Manitoba only once, and that was to reminisce about a production there of a modern Russian play, "He Who gets Slapped" (I have not remembered the author) in which he took a part. A few of his colleagues may recall his cameo role in a production of "A Winter's Tale" that Wendy De La Bere directed. He played the bear, and was terrifying. He also made a very menacing Barnardine in a later production of "Measure for Measure"; this role permitted him to display his famous scowl to very good effect. There is some dispute among his friends as to whether he had any taste, or indeed ear, for music. There is however no doubt that one of his most prized possessions was an old-fashioned player-piano, which he would pedal for the entertainment of guests; and he certainly knew the plots of most of the better-known Italian operas, which he treasured, I think, for their ludicrous nature.

Gordon loved to travel, and he travelled widely, and had plans for further travel in his retirement, which in the event he was unable to put into effect. In the early eighties, just before his first stroke, he published privately a number of booklets containing his journals of visits to Denmark and China, both countries dear to his heart. Although he was unable to give these the editing they deserved, they give some insight into his character and tastes. He wrote at this time another little book, which was initially intended to be autobiographical, but which turned out to contain for the most part stories to the credit and discredit of other mathematicians. But in it he gave credit to those from whom he believed he had learnt the craft of mathematical research - these were Polya at Stanford, Lorentz at Toronto, and Goffman at Oklahoma - and he also paid tribute to some of his best students, particularly those in whose early training he had a part.

The University of Canterbury, and the mathematical community of this country, owe much to Gordon Petersen for his contribution to teaching and research in his subject, and his colleagues have left the memory of a generous if unpredictable and unorthodox friend.

Emeritus Professor Brian Woods

MASSEY UNIVERSITY

DEPARTMENT OF MATHEMATICS

Staff update:

With great sadness we record the death, on Wednesday 2 October, of Wolfgang Vogel, Professor of Pure Mathematics. Wolfgang died within a few weeks of returning from overseas leave in Germany, Japan and Vietnam. Since his appointment to the Department of Mathematics at Massey University in August 1993, Professor Vogel gave tremendous quality leadership in pure mathematics, especially in research. More of his life is told in this issue's centrefold feature. A memorial service was held at Massey University on 8 October.

We welcome post-doctoral fellow Dr Le Tuan Hoa, who arrived from Hanoi in September. Originally intending to work with Professor Vogel for a year, Dr Hoa is now closely involved with Wolfgang's students, advising them as they complete theses. Dr Hoa gained his PhD from Halle University (Germany) in 1989 under the supervision of Wolfgang Vogel. His thesis was in the area of commutative algebra and its interaction with combinatorics. Dr Hoa was awarded Doctor of Science (Dr. habil.) at the Institute of Mathematics, Hanoi, in 1995. His recent main research area is on the Castelnuovo-Mumford regularity.

Welcome also to Liz Herkes who took up her secretarial position in September, and joins Gail de Joux in the departmental office.

Gordon Knight retires at the end of this year. He was appointed to Massey University in 1970 as a Senior Lecturer in Mathematics. Previously he was a SL in Mathematics at Wellington Teachers' College and, prior to that, HoD Mathematics at Southland Boys' High School after coming to New Zealand in 1962 from the UK. In 1994, as Associate Professor, he transferred to Albany to be Section Head, Mathematics and Associate Dean of the Faculty of Information and Mathematical Sciences. Gordon is an academic leader in mathematics education in New Zealand, with a considerable international reputation in that area. He has served as a University Mediator, as a staff representative on Massey University Council, and also on several boards and University committees. We will miss his warm concern for students and fellow staff, and his good common sense, and wish him well in his retirement, although we suspect he will not be cease being active academically for some time to come!

A one-year contract lectureship is currently being filled to replace Gordon at Albany during 1997. Francis Thio has been appointed Section Head of Mathematics at the Albany Campus from the beginning of 1997.

Gillian Thornley delivered the 1996 Aldis Lecture, on "Descartes and geometry", at the University of Auckland in September. This distinction recognises Gillian's many contributions to the New Zealand mathematical community and her expertise in geometry. We were delighted to have her re-present her lecture here at Massey.

Mahyar Amouzegar, currently has been invited to join the Editorial Board of the *Journal of Business and Management*. He is also Managing Editor of the new *Journal of Applied Mathematics and Decision Sciences* which is being published at Massey University. Francis Thio has been appointed as Associate Editor of the international journal *Physics Essays*.

Research:

Drs Igor Boglaev and Robert McLachlan are congratulated for their successes in obtaining grants from the latest round of the Marsden Fund: Igor $23,000 over two years for "Numerical algorithms for parabolic problems with boundary and interior layers" and Robert $210,000 over three years for "Unconventional methods and structures in numerical differential equations".

Visitors:

Dr Vince Moulton from the University of Bielefeld, Germany, is visiting us over the summer. We were also delighted to have a visit from Gary Roach, Professor of Mathematics at Glasgow's University of Strathclyde, and an expert on scattering theory. Describing scattering theory as "both beautiful in its abstract development and powerful in its various applications as an approximation procedure". Professor Roach gave four seminars on various aspects of his work.

Dr Valerie Isham, the 1996 NZMS Visiting Lecturer, from University College, London, presented two talks on temporal and spatial aspects of stochastic models of disease epidemics. Frank Harary, Emeritus Professor of Computer Science at New Mexico State University, presented a seminar (see below) during his first visit to Massey (and his second to New Zealand). Professor Harary's main interests are in graph theory and its applications, and he has written numerous papers and several books on the subject.

Staff travel/conferences:

Glenda Anthony, Mary Day and Margaret Walshaw attended the conference "Gender Issues in Science, Mathematics and Technology Education: New Directions" at Victoria University of Wellington during November. Wide-ranging discussions looked at past, present and future ways of addressing gender issues in education.

The fifth New Zealand Association of Mathematics Teachers biennial conference "Get in the Know" is to be held in October 1997 in Palmerston North. Glenda Anthony, the convenor, reports that an interesting range of both overseas and New Zealand speakers have been invited to address all levels of the mathematics education sector.

Igor Boglaev visited Kent State University during November, supported by Massey University Research Fund and the Research Council of Kent State University. Igor and colleagues from the Department of Mathematics and Computer Science there tested special numerical algorithms on parallel computers and carried out numerical experiments for modelling skin-effect problems. During his visit, Dr Boglaev gave a seminar "Domain decomposition algorithms for singular perturbation problems". A joint research project between the Department of Mathematics at Massey and that at Kent State University is expected to be formalised soon.

Chris Palliser and Robert McKibbin attended the 18th New Zealand Geothermal Workshop at the University of Auckland during November.

Scholars:

PhD student Easwaran Balakrishnan has successfully defended his thesis. Working in the area of combustion theory, Easwaran was supervised by Graeme Wake and Adrian Swift.

Teaching:

A departmental committee is reviewing the entire mathematics curriculum in light of a university-wide standardisation of paper sizes. It is anticipated that the BInfSc and BSc degrees will run under a 24-paper structure, with a typical student taking 4 papers per semester.

Seminars

Dr Vince Moulton (University of Bielefeld, Germany), "T-theory: The mathematics of similarity".

Thomasin A Smith, "On arithmetic degree theory".

S Anton Raviraj , "Gauss' equation and Bäcklund transformations".

Dr Michael Carter, "On Proof in Mathematics: its nature and role".

Professor Gary Roach (University of Strathclyde, Glasgow), "An introduction to scattering theory", "Aspects of

non-linear scattering theory", "Scattering theories involving moving boundaries", "An introduction to iterative techniques for potential problems".

Professor Valerie Isham (University College, London), "Epidemics: Models for the spread of infection and the development of disease". "Spatial processes: Point process models and some applications".

Professor Frank Harary (New Mexico State University), "Independent discoveries of graph theory".

Dr Gillian Thornley, "Descartes and geometry".

Dr Le Tuan Hoa, "Complexity of solving systems of algebraic equations".

Dr Soeren Perrey, "Theory and practice in aligning nucleic acid sequences".

Jose A Ventura (Pennsylvania State University), "A Lagrangian relaxation method for scheduling Mixed-Model Assembly Lines for a Just-In-Time production system".

Mathematical Modelling Discussion Group

Mr Adrian Swift, "Computers can disguise the truth: Some comments on interpretation of numerical output for various approximation processes". "Extraction of resistance parameters from car coast-down data".

Mark Johnston, "Modelling a competitive route planning problem".

Dr Simon Hurley (Production Technology), "Is there an analytical solution to the Production Scheduling Problem?"

Professor Andrew Cleland (Food Technology), "Opportunities for mathematical modelling projects in 'Prediction Technology'".

Dr Mahyar Amouzegar, "Mathematical modelling of optimal pricing strategies for the abatement of regional hazardous waste generation".

Dr Paul Austin (HortResearch), "Modelling the effect of temperature on early-season apple fruit growth".

Robert McKibbin

VICTORIA UNIVERSITY

SCHOOL OF MATHEMATICAL AND COMPUTING SCIENCES

Big changes are afoot at VUW, with the pending merger of Mathematics, Computer Science and the Institute of Statistics and Operations Research into a School of Mathematical and Computing Sciences (MCS). Centralised offices for the School of MCS will be set up over Xmas (your correspondent is being chucked out of his office!), a Head of School has been (informally) chosen, and the structure of the school is being thrashed out as I write this. The changes are partly a response to the recent review of this University's administration, and accompany a restructuring of Faculties, and they are partly a response to the desires of Deans and VC's. We see them as potentially good for mathematics, especially the hope that the school will be more effective at obtaining resources. The three departments will retain much of their autonomy, and we are looking at a model that involves a closer merger than that at Auckland for example, but this is still up in the air really.

Other things here go on as usual:

Philip Rhodes-Robinson is going to Manchester University on leave for a year.

Peter Donelan returned from leave in Liverpool in June. He attended a conference "Do Computers Count?" celebrating 25 years of computer-aided instruction in Mathematics at Sydney. This was a sweetener for him returning to MATH 113 in its new form with Maple as a major teaching component. He saw Geometers' Sketchpad demonstrated in Sydney and looked like lots of fun.

Vladimir Pestov has been to the US in October (Howard University, the University of Maryland, and Penn State University). On the first leg of his academic leave, he is visiting Wollongong (N.S.W.) and a number of Universities in Japan (Tohoku, Ehime, Tsukuba, and Shizuoka).

John Harper will be going to the Maths-in-Industry Study Group in Melbourne and to the Applied Maths Conference in Lorne,Vic. Jan-Feb 97. He is presenting a paper at the latter, on recent work on bubbles rising in a line.

Geoff Whittle has had an exceptional year, following his receipt of the NZMS Research Award, with a promotion to Reader and a Marsden Fund Grant.

Irene Pestov has been awarded a PhD in Mathematics for her thesis on two-phase flows in geothermal reservoirs, and is at Tsukuba in Japan on a three-month fellowship, working on two-phase flows up geothermal well-bores.

Irene Pestove reports that she is enjoying Sendai very much. She recently went to the Kakkonda Geothermal Field and saw the deepest geothermal well, 4km.

Rod Downey, in between body-boarding and juggling the responsibilities that come with having two postdoctoral fellows this year (Richard Coles and Geoff LaForte), has been elected FRSNZ.

Mark McGuinness continues his Study Leave, based mainly in Wellington, with visits to Auckland University Maths Dept in August, the NZ Geothermal Workshop at Auckland University in November, and the Fifth International Heat Pipe Symposium at the Royal Melbourne Institute of Technology in November. January and February are to be spent mainly at Lawrence Berkeley Laboratory in California, with visits to USC, Claremont Graduate College and Cal Tech in Los Angeles, Simon Fraser University in Vancouver and Victoria University in Victoria BC.

Departmental Seminars

André Nies (The University of Chicago), "Logical Questions About Free Groups".

Vladimir Pestov, "Minimal Flows and a Problem by Ellis".

Ken Pledger, "The Discovery of Irrationality".

Geoffrey LaForte, "Enumerable Sets, Quasi-reducibility, and Algebraically Closed Groups".

Lindsay Johnston, "Frames".

Gary Roach (the University of Strathclyde), "An Introduction to Scattering Theory".

Vladimir Pestov, "Almost periodic points, or an improbably easy solution to a problem going back 50 years".

Peter Donelan, "Learning to Teach Mathematics with Computers".

Mark McGuinness

UNIVERSITY OF WAIKATO

DEPARTMENT OF MATHEMATICS

The Department was very pleased with the outcome of the latest round of the Marsden Fund. Congratulations are due to Douglas Bridges (A constructive development of operator algebra theory), Ernie Kalnins (Harmonic analysis, special functions and separation of variables), and Alfred Sneyd and Ian Craig (Magnetic energy release in astrophysical plasmas).

Professor Valerie Isham, the NZMS Visiting Lecturer, gave us seminars on epidemics and rainfall processes when she visited in the middle of October.

Other visitors to the Department have included Richard Easther (Waseda University, cosmology), Masamitsu Otake (Meiji University Japan, DMTCS) and Yuan Zhai (Shanghai Second Polytechnic University, mathematics education).

A Common Lisp version of Numerical Recipes has been developed by Kevin Broughan. It has now appeared on the `Numerical Recipes Code CDROM v 2.06'.

Ian Hawthorn has been interacting with the local schools. Recently he gave a talk at the school assembly at Huntly College.

Douglas Bridges and Alfred Sneyd are still on study leave. Alfred has finished the overseas component of his leave while Douglas has made a trip to Japan and is off to Vienna shortly.

The Victoria University of Wellington was audited by the New Zealand Academic Audit Unit earlier in the year; now it is the turn of the University of Waikato. Our Department was one of the two fortunate(???) departments in the university to be chosen for a more detailed look by the Academic Audit Panel. The Panel was originally scheduled to come here in early November, but now will not do so until March 1997.

Seminars

F. Harary (New Mexico State University), "Mathematical games on numbers, geometries, chess pieces and grids".

V. Isham (University College London, NZMS Visiting Lecturer), "Spatial-temporal rainfall processes: stochastic models and data analysis".

V. Isham (University College London, NZMS Visiting Lecturer), "Epidemics: models for the spread of infection and the development of disease".

R. Easther (Waseda University), "The origin of large scale structure in the universe".

G. Roach (University of Strathclyde), "An introduction to scattering theory".

P. Mittelstaedt (University of Cologne), "Language and reality in quantum physics".

P. Mittelstaedt (University of Cologne), "The interpretation of quantum physics and the measuring process'"

Y. Wang, "Constructive weak solutions of the Dirichlet problem".

M. Glanvill, "Curve reconstruction in the plane".

Stephen Joe

Conferences

1997

January 3-11 (Tolaga Bay, New Zealand) **Summer Workshop on Reflection Groups and Hyperbolic Manifolds**
Contact Professor Marston Conder, Department of Mathematics, University of Auckland, Private Bag 92019, Auckland, New Zealand.
email: conder@math.auckland.ac.nz

January 6-9 (Kensington, New South Wales) **Conference on Soliton Theory, PDEs and Nonlinear Analysis**
Contact Nalini Joshi, University of New South Wales, School of Mathematics, Sydney, NSW 2052, Australia.
email: N.Joshi@unsw.edu.au

January 27-31 (Melbourne, Victoria) **Maths-in-Industry Study Group**
Contact Kerry Landman, Department of Mathematics, University of Melbourne, Parkville, Victoria 3052, Australia.
email: kal@maths.mu.oz.au

February 2-6 (Lorne, Victoria) **33rd Applied Mathematics Conference**
Contact ANZIAM `97, School of Computing and Mathematics, Deakin University, Geelong, Victoria 3217, Australia.
email: amc97@deakin.edu.au

February 7-8 (Hobart, Tasmania) **Conference on the Occasion of David Elliott's 65th Birthday**
Contact David Paget, Mathematics Department, University of Tasmania, Hobart, Tas 7001, Australia.
email: David.Paget@maths.utas.edu.au

June 30 - July 4 (Melbourne, Victoria) **3rd International Conference on Combinatorial Mathematics and Combinatorial Computing**
Contact Nick Wormald.
email: nick@maths.mu.oz.au

July 3-4 (Clayton, Victoria) **International Conference on Computational Fluid Dynamics in Mineral and Metal Processing and Power Generation**
Contact Dr Phil Schwarz, CSIRO Division of Minerals, Box 312, Clayton South, Victoria 3169, Australia.
email: Phil.Schwarz@minerals.csiro.au

July 7-11 (Auckland, New Zealand) **Joint Meeting of the Australian and New Zealand Mathematical Societies**
Contact Professor Gaven Martin, Department of Mathematics, University of Auckland, Private Bag 92019, Auckland, New Zealand.
email: martin@math.auckland.ac.nz

July 7-11 (Canberra, ACT) **Workshop on Quasi-Two-Dimensional Turbulent Motion**
Contact Robert Dewar.
email: robert.dewar@anu.edu.au

July 9-13 (Auckland, New Zealand) **New Zealand Statistical Association 48th Annual Conference**

Contact David Scott, Division of Science and Technology, University of Auckland, New Zealand
email: d.scott@auckland.ac.nz

July 13-19 (Brisbane, Queensland) **XIIth International Congress of Mathematical Physics (Triennial Meeting of the International Association of Mathematical Physics)**
Contact Professor Tony Bracken, Department of Mathematics, The University of Queensland, Brisbane 4072, Australia.
email: icmp97@maths.uq.oz.au

July 14-18 (Macquarie University, New South Wales) **Algebraic Methodology and Software Technology - AMAST 6, 1997**
Contact Dr Michael Johnson, School of Mathematics and Computing, Macquarie University, Sydney, New South Wales 2109, Australia.
email: amast97@mpce.mq.edu.au

July 21-August 22 (Canberra, ACT) **Extended Workshop on Statistical Mechanics and Integrable Models**
Contact M.T.Batchelor.
email: murrayb@pell.anu.edu.au

October 5-8 (Palmerston North) **NZAMT biennial conference: Get in the know**
Contact Dr Glenda Anthony, Department of Mathematics, Massey University.
email: G.J.Anthony@massey.ac.nz

November 30 - December 4 (Melbourne, Victoria) **4th Conference of the Association of Asian-Pacific Operational Research Societies (APORS'97)**
Contact APORS'97, PR Conference Consultants Pty Ltd, P O Box 326, Balwyn, Victoria 3103, Australia.
email: APORS97@sci.monash.edu.au

1998

June 21-26 (Hawthorn, Victoria) **5th International Conference on Teaching Statistics**
Contact Brian Phillips, School of Mathematical Sciences, Swinburne University of Technology, P O Box 218, Hawthorn, Victoria 3122, Australia.
email: bphillips@swin.edu.au

VISITORS

Mathematical Visitors to New Zealand New Zealand Mathematical Society (Inc.)

Mathematical Visitors to New Zealand

author List 45: 1 November 1996

The main purpose of this list is to enable other institutions to invite visitors to spend time with them. Anyone wishing to issue such an invitation should do so through the principal contact person.

The information for each item is arranged as follows:

Name of visitor; home institution; whether accompanied; principal field of interest; dates of visit; principal host institution; principal contact person; comments.

An up-to-date version of this list is maintained available on the Worldwide Web, at the URL
http://www.math.auckland.ac.nz/~mcintyre/Visitors

This site also contains a form for convenient submission of information about forthcoming visitors.

Professor David Armitage; The Queens University of Belfast; - ; Potential Theory and Harmonic Approximation; July and August 1997; University of Canterbury; Neil Watson; Erskine Fellow.

Professor Jan Awrejcewicz; Division of Control and Biomechanics, Technical University of Lodz, Poland; - ; dynamical systems; December 1996; University of Waikato; Kevin Broughan.

Professor Fan Chung; University of Pennsylvania; husband (Ron Graham); graph theory; 9-13 December 1996; University of Auckland; Professor Marston Conder; guest of Centre for Discrete Mathematics & Theoretical Computer Science.

Professor Satya Deo; Allahabad University, India; - ; topology; February-June 1997; University of Auckland; David Gauld.

Alan Graham; Open University, England; unaccompanied; mathematics education; November and December 1996; University of Auckland; Dr Michael Thomas; was a visitor as part of British Council funded LINK scheme in 1993.

Professor Ron Graham; AT&T Bell Labs; wife (Fan Chung); combinatorics; 9-13 December 1996; University of Auckland; Professor Marston Conder; guest of Centre for Discrete Mathematics & Theoretical Computer Science.

Dr David Johnson; University of Nottingham; wife; combinatorial group theory; March-May 1997; University of Auckland; Professor Marston Conder.

Dr George Gheverghese Joseph; University of Manchester; wife Leela; author of `Crest of the Peacock: The Non-European Roots of Mathematics', social and historical aspects of mathematics; March-June, 1997; University of Auckland; Bill Barton; British Council LINK funded visit.

Professor Gerhard Kristensson; Department of Electromagnetic Theory, Lund University, Sweden; unaccompanied; inverse problems; March-April 1997; University of Canterbury; Dr David Wall; Erskine Fellow.

Dr Kevin McLeod; University of Wisconsin at Milwaukee; - ; theory and application of (partial) differential equations; July 1996 - July 1997; University of Auckland; - ; Honorary Research Fellow.

Professor Ferenc Moricz; University of Szeged, Hungary; unaccompanied; sequence spaces; 8-13 March 1997; University of Auckland; Ganesh Dixit.

Hervé-Georges Morin; Université Laval, Québec, Canada;; Sample Survey Theory (Statistics); September-December 1996; University of Auckland; Alastair J. Scott.

Dr Peter Olver; - ; - ; - ; 24 March - 24 April 1997; University of Canterbury; Dr Mark Hickman; Erskine Fellow.

Dr Soeren Perrey; University of Bielefeld; accompanied by wife (Marlies) and son (Samuel); combinatorics (game theory), mathematical biology; November 1995 - April 1997; Massey University; Professor Mike Hendy; Post-doctoral Fellow.

Professor M.J.D. Powell; Cambridge University; Accompanied by wife Caroline; Optimisation and Approximation; (approx) August - September 1997; University of Canterbury; Rick Beatson.

Professor Greg Reid; University of British Colombia; Unaccompanied; Algebraic Computing and Symmetries of PDEs; January - June 1997; University of Canterbury; Mark Hickman.

Professor Fred Richman; Florida Atlantic University; accompanied by wife (Sue); constructive mathematics, infinite abelian groups; January-May 1997; University of Waikato; Professor D.S. Bridges.

Professor Jiang Shouli; Shandong University; unaccompanied; topology; Second semester 1996; University of Auckland; Professor Ivan Reilly.

Dr Tatania Soboleva; Donetsk Physico-Technical Institute of the Academy of Sciences of the Ukraine; - ; mathematical physics (particularly integrable nonlinear systems); July to December 1996; University of Auckland; Boris Pavlov; Honorary Research Fellow.

Professor Ian Stewart; University of Warwick; accompanied by spouse; Interests too many to list; mid February - mid March 1997; University of Canterbury; Rick Beatson; 1997 LMS Forder Lecturer.

Professor Guido Weiss; Washington University in Saint Louis; wife Barbara; Harmonic Analysis; 13 July - 23 August 1997; University of Canterbury; Qui Bui; Erskine Fellow.

Professor Donald Wilken; State University of New York at Albany; accompanied by wife; complex analysis; last two weeks of January 1997; - ; David McIntyre.

Professor Richard Wilson; Universidad Autonoma Metropolitana, Mexico; wife Elda; topology; February-June 1997; University of Auckland; David Gauld.

Professor Keith Worsley; McGill University, Montreal, Canada; - ; Statistics; December 1996-July 1997; University of Auckland; Alan Lee.

Please note: Production of these lists is dependent on me receiving information. When you know about a visit (whether it be definite, very likely, or possible), would you please forward the details to me at the earliest convenient time. Thank you.

David McIntyre

N.Z. Mathematical Society Visitors' Co-ordinator

email: ; fax: (09) 373 7457

N***ZMS Newsletter #68***

CENTREFOLD

Wolfgang Vogel

With great sadness we learned that on the morning of October 2, 1996, our friend and colleague, Wolfgang Vogel, Professor of Pure Mathematics at Massey University had died following a short occurrence of cancer. He is survived by his wife Dagmar and son Andreas. Tributes were paid to Wolfgang at a memorial service held in the Russell Room, Wharerata, Massey University on 8 October 1996. From that service I have selected the following extracts from the tributes presented by family, friends and colleagues.

Wolfgang Vogel was born on 8 February 1940 in Bremen, Germany, and in 1958 entered the University of Halle, Germany, to study mathematics and physics. There in 1963 he gained his "Diplom" (MSc) in mathematics, and studied as a "Wissenschaftlicher Aspirant" (Research Scientist) at the universities of Halle, Berlin and Innsbruck (Austria), gaining his PhD in mathematics in 1965, and Habilitation in 1968. He remained on the staff of the University of Halle as "Dozent" (Associate Professor) for algebra and geometry becoming Full Professor of Pure Mathematics in 1975, and Chairman of the Department of Pure Mathematics 1977 - 91.

During this time he was able to travel extensively and held visiting Professorships in Hungary, Czechoslovakia, USA, Canada, India, Iraq, Italy, France, Vietnam, USSR, Romania, Spain, and the UK. In 1993 he was appointed Professor of Pure Mathematics, at Massey University. In 1994 he was a UNESCO Visitor to Vietnam.

During his research career he published four books and over 120 research papers. Wolfgang was a leading specialist in the field of Commutative Algebra and Algebraic Geometry. At his heart lay the theory of Buchsbaum rings and Intersection Theory. Buchsbaum Rings Theory introduced by him was one of many topics in the above field in the last 20 years. Some hundreds papers were devoted to this topic. His book with J. Stueckrad "Buchsbaum Rings and Applications" is well known to everybody in the field. Intersection Theory has roots going back to the 18th century. His contribution to this theory is enormous. His second book "Lectures On Results On Bezout's Theorem" published by Springer Verlag and his fourth book "Algebraic and Geometric Refined Intersections" which will appear in Cambridge University Press are vivid proof for that. The manuscript of his fourth book, co-authored with Hubert Flenner and Liam O'Carroll, was completed just before he died.

His Commutative Algebra and Algebraic Geometry School in Halle University was strong and famous. Coming here

he had much energy and many plans to build up a new school at Massey. It seems incredible that he was denied the opportunity to realise this excellent idea. Wolfgang Vogel was also a well-respected member of Massey University -respected by both staff and students.

It can be said of Wolfgang that he epitomised the ideal academic. He successfully achieved the link between research and teaching and was inspirational in this achievement. At the same time he provided leadership to the Department in his field of pure mathematics (and in particular, algebra). He was fully committed to the Department and undertook administrative duties conscientiously and with concern for the efficiency of the Department.

Because of his research achievements and his reputation as an excellent expositor, Wolfgang was invited to be guest lecturer at many international conferences and workshops in many countries, including our own New Zealand Mathematics Colloquium. He was on the editorial board of professional journals, a responsibility which he felt was important and which he enjoyed.

He was passionate about his mathematics. A man of tremendous energy and determination, he worked extraordinarily hard. Wolfgang was one with whom the term "research professor" could be fittingly associated. You could tell he loved his subject by the way in which he presented it, with great enthusiasm. He was concerned to make his topic understandable with concrete examples. The beauty of pure mathematics was, for him, marvellous; it was a living part of him, it shone through him, and he conveyed it to others.

Wolfgang cared for his students, helping them to develop confidence, much as a father does for his children. Throughout his career he was supervisor of 13 PhD students. Three of them are now also well know in the field: J Stueckrad from University of Leipzig, P Schenzel from Halle University and N V Trung from the Institute of Mathematics, Hanoi. He maintained contact with them and wrote papers with them. He inspired them. His postgraduate students at Massey recall his friendly smile, making himself available to them when they needed him, his concern to help them get financial support, his ability to make them feel that their work was important, introducing them to distinguished visitors. He also made considerable efforts to help undergraduate students, requesting to be involved in teaching at all levels.

Wolfgang's efficient organisation was apparent in his teaching, too. If you've ever attended one of his lectures or seminars you well know the well-structured argument, the careful presentation, the attention to detail. Every theorem proved was a jewel in the crown of the Queen of Science. His humility was evident. Wolfgang would, in his diplomatic manner, never turn aside a question, no matter how trivial it might seem. On 7 April 1995 Wolfgang delivered his Inaugural Professorial Lecture at Massey University. Entitled Appreciating Apollonius: 2000 Years Later, he demonstrated the sheer delight which he found in his subject and gave his audience an historical perspective of his own research on problems sourced in ancient times. He took much pride in the publication of this Lecture some 16 months later (although, much to his chagrin, he discovered a typographical error!).

He was always cheery and optimistic. Even when clearly in ill health he displayed determination and a positive attitude. He exuded optimism till the last moment and tried to make us feel comfortable about his condition. A humble man, very logical, straight to the point, you knew exactly where you stood with him. He was patient, very rarely showing annoyance even in the midst of frustration. Upon reaching agreement or concurrence with others he would say "Everything is OK - everything is fine with me." We shall remember his resounding, jolly laugh in the corridors. His cheery greeting "So...!" as he strode briskly into the Department office will not be forgotten. We shall all miss a warm, openly good-natured friend. He was very loyal to the Department, always referring to it as "our Department".

In three years Wolfgang raised the profile of the pure mathematics programme at Massey enormously. In that area he greatly enhanced the Department's visibility to the world. He brought several eminent visitors and three Postdoctoral Fellows to the Department. New Zealand has lost a top-ranking scholar. The world of academe has lost a highly respected mathematician. However, the uplifting, positive element is the enduring quality seen in Wolfgang Vogel, in his relationships and in his contributions.

When Wolfgang and Dagmar came to Palmerston North, the curiosity of the German community was immediately roused. Professors from Germany we had met before, but a professor from what had been East Germany was a small sensation. When we got to know Wolfgang and Dagmar better, it was soon apparent that their East German background had something to do with the fact that they had come all the way to New Zealand although other possibilities, closer to home, would have been open to them. The years of confinement, interrupted only by the trips he was allowed to make as a scholar, in a small state that had surrounded itself with barbed wire and walls, called for the widest possible horizon that could be spanned. New Zealand was a liberation - both in terms of space and in terms of personal freedom. Wolfgang was happy here and this was visible in the man. He put on weight and ascribed it to the stress-free environment. He wanted to put down his roots here - and together we discussed plans of what we would do after our retirement. He wanted to stay in New Zealand and go north because of the warmer climate.

He was a keen hiker. In shorts, a chequered shirt and a wonderful hat with an enormously wide brim. He looked most unprofessorial! When Wolfgang and Dagmar first went to Santoft beach just behind Bulls, he climbed the highest sand dune, put his arm around Dagmar and just stood there for minutes looking at the arc of the coastline, the sea and the snow-clad Tararua Ranges. There it was, that space and that freedom.

And span a wide horizon he did. Like few others who left Europe behind. The invitations to conferences to top level institutes and universities, his work with students and colleagues world-wide, his reputation world-wide as a brilliant mathematician. This made him a citizen of the world with which he kept in constant touch through the Internet. This is what his Saturday mornings were dedicated to when he would go to his office.

[I acknowledge the notes provided to me from Professors J. McWha, J. Hunter and G. Wake, Associate Professors W.D. Halford and A. Vieregg and Dr.s A. Vogel and L.T. Hoa.]

Mike Hendy

NOTICES

HECTOR MEDAL FOR JOHN BUTCHER

Professor John Butcher has been awarded the Hector Memorial Medal in Mathematical, Physical and Engineering Science by the Royal Society of New Zealand for his work on numerical analysis (ordinary differential equations). This medal is New Zealand's premier scientific honour and is awarded annually, in rotation amongst various sciences. It was named in memory of Sir James Hector FRS (1834-1907) a Scottish doctor who became a geologist and explorer, finding the route for the Canadian Pacific Railway to cross the Rocky Mountains. In 1862 he was appointed as Provincial Geologist for Otago, and subsequently he became director of all governmental scientific activity in New Zealand. Amongst its recipients is Ernest Rutherford (1916).

The Hector Memorial Medal and Prize was founded in 1910 by the New Zealand Institute, in honour of Hector, and it remains the major prize awarded by the Royal Society of New Zealand.

The bronze Medal and the Prize (of $500) are awarded each year to that investigator, working in New Zealand, who has done most to advance a

specified branch of science, consisting of Plant Sciences, Chemical Sciences, Human Sciences, Solid Earth Sciences, Mathematical, Physical and Engineering Sciences, and Animal Sciences, in cyclic order.

The Hector Memorial Medal and Prize has previously been awarded to the eminent mathematicians Duncan McLaren Young Sommerville in 1928, Henry George Forder in 1946, Keith Edward Bullen in 1952, Derek Frank Lawden in 1964 and Roy Patrick Kerr in 1982. John Butcher has now been honoured for his achievements in mathematics, particularly in the numerical solution of ordinary differential equations. His monograph on "The Numerical Analysis of Ordinary Differential Equations: Runge-Kutta and General Linear Methods" (Chichester & New York: J. Wiley, 1987) is a standard major reference work. Indeed, "Butcher trees" are now household words for every mathematician concerned with such problems.

The award of the Hector medal this year is regarded by John as a recognition of the importance of numerical analysis.

Garry J. Tee

BRUNEI CONNECTION

Professor Wilfred Malcolm, previously Professor of Pure Mathematics at Victoria University of Wellington and Vice-Chancellor of the University of Waikato 1984-1994 has accepted the position of Visiting Professor of Mathematics at the University of Brunei Darussalam for 1997. There has been a substantial degree of contact between New Zealand and Brunei in the Applied Mathematics area since 1991 when Professor Graeme Wake was appointed as External Examiner in Mathematics to the then newly formed University of Brunei in Negara Begawan Darussalam.

Subsequent to this New Zealand had a strong role of leadership in the International Conference on Mathematical Modelling in 1995. Professor Wake was the Scientific Director of this conference.

The Mathematics Department at the University of Brunei Darussalam has 2 staff members with New Zealand Masterates from Massey University and

is seeking external advice as it develops as a major University in the region.

Professor Malcolm's appointment serves as a further signal of New Zealand's committment to help the region and the return of one of New Zealand's most respected teachers of mathematics to the centre-stage...at the chalk-face.!! We applaud this appointment and wish Wilf and Ruth Malcolm a rewarding time in Brunei.

Recently ANZIAM, which I have the privilege to Chair, has made an approach to seek wider involvement in the

South East Asian Region and some further joint ventures are being investigated.

Graeme Wake

NOTICE TO STUDENTS PLANNING TO ATTEND THE

1997 NZ MATHEMATICS COLLOQUIUM

(1) The 1997 New Zealand Mathematics Colloquium will be held at The University of Auckland during the week 7-11 July 1997. Students who wish to apply for financial assistance to attend this Colloquium should do so when they send in their registration form. The Colloquium organisers are empowered to distribute funds on behalf of the NZMS.

(2) The NZMS offers a prize for the best contributed talk by a student at the annual

New Zealand Mathematics Colloquium. Known as the Aitken prize. it consists of a cheque for NZ$250, accompanied by a certificate. Entrants for the prize should clearly indicate their willingness to be considered for the award when they register their intention to contribute a talk at the Colloquium. Further information about the Aitken prize will published in the April 1997 issue of the NZMS Newsletter.

NZMS ACCREDITATION

The Society has decided that there will now be Graduate Members, Accredited Members and Fellows of the NZMS. Next year the Accreditation Committee which has been set up by Council will consider the first applications. The deadline is Monday March 3rd, 1997. If you would like to be considered or would like to nominate someone could you send for applications forms to

The Accreditation Secretary

C/- Department of Mathematics and Statistics

University of Otago

P O Box 56

DUNEDIN.

To help you understand better what each of the categories of membership are, I have added a copy of Article IV of the Constitution.

Article IV: Optional Accreditation

An ordinary Member (or Reciprocity Member) may apply to the Council to become a Graduate Member, Accredited Member, or Fellow. The Council shall make and issue, and may revise from time to time, Rules which shall give effect to the following requirements.

(1) A Graduate Member shall have completed a degree or diploma at a recognised university or other tertiary institution, the studies for which shall include mathematics as a major component, and shall be currently employed or occupied in the development, application or teaching of mathematics.

(2) An Accredited Member shall have completed a postgraduate degree in mathematics at a recognised university or other tertiary institution, or shall have equivalent qualifications and shall have been employed for the preceding three years in a position requiring the development, application or teaching of mathematics.

(3) A Fellow shall be a person who currently has or previously has had the qualifications of an Accredited Member and who, in addition, is deemed by the Accreditation Committee (see paragraph below) to have demonstrated a high level of attainment or responsibility in mathematics and to have made a substantial contribution to mathematics or to the profession of mathematician or to the teaching or application of mathematics.

An Honorary Member shall have the right to become a Fellow immediately upon application to the Council and without payment of a fee.

The Council shall establish an Accreditation Committee to consider applications for designation as a Graduate Member, Accredited Member or Fellow, and to administer the Rules described in the first paragraph of this Article. In its determinations, the Accreditation Committee shall discount interruptions to employment such as temporary unemployment and parental leave.

A Graduate Member may use the abbreviation GNZMS, an Accredited Member may use the abbreviation MNZMS, and a Fellow may use the abbreviation FNZMS. These designations and the corresponding abbreviations are the rights of that class of Member only while the member remains a financial member of the Society and while the occupational requirements outlined in the first paragraph of this Article continue to be satisfied. The occupational requirements shall be deemed to be satisfied by Honorary Members and in the case of interruptions to employment such as temporary unemployment and parental leave, and they shall not be applied in the case of retirement or promotion to an administrative or other position.

A fee shall accompany each application to the Accreditation Committee. The fee shall be additional to the annual subscription charged by the Society and shall be the only charge for accreditation. The fees are: Fellow $100, Accredited member $75, and Graduate member $40. These are one off fees.

If you have any queries could you please direct them to me at the above address or by email (dholton@maths.otago.ac.nz).

Derek Holton, Chair, Accreditation Committee

ROYAL SOCIETY OF NEW ZEALAND

Sub-committee for Mathematical and Information Sciences

December 1996 Update

As my term as Convener of this Committee is due to end this month, I would like to take this opportunity of thanking the Societies for your support during our formative years. I have enjoyed the opportunity of being on the Board of RSNZ as the re-structuring was completed. I trust the legislation will get through parliament once the new government is formed.

1. Elections for Convener

This process should be underway and completed in time for the first meeting (teleconference?) in 1997 February.

2. Member Bodies Representative

The five member bodies (NZMS, NZSA, ORSNZ, NZCS - Information Group, NZAMT) and the Academy Group should confirm with RSNZ their nominees for 1997 onwards. The sub-committee now functions as a National Committee for two ICSU organisations to which New Zealand belongs: the International Mathematics Union (IMU) and the International Union for Theoretical and Applied Mechanics (IUTAM). One or two members of the committee will act in the portfolios for these areas.

3. MORST Review of the Mathematical Sciences

This is to managed through RSNZ in 1997 after completion of the all discipline coverage of the knowledge base project in 1996. A small group is to help (Professors Conder, Hunter and Wake) formulate the terms of reference of the review. Some MORST support is available for this project. I am hopeful we can succeed in demonstrating the key role the Mathematical Sciences has in the science fabric in New Zealand and overseas.

4. Coordination of Conferences

Member societies are encouraged to liaise with the Sub-committee so as to avoid clashes of subject conferences. Joint/parallel conferences are encouraged so as to support interdisciplinary cooperation which is very important for the growth of our subject.

5. Unit Standards

The dialogue between NZQA and RSNZ continues. The RSNZ is preparing a discussion paper on the matter. Clearly this will continue into 1997.

Graeme Wake

NZAMT CONFERENCE 1997

The New Zealand Association of Mathematics Teachers' fifth biennial conference: *Get in the Know* is to be held at Palmerston North Girls' High School from Sunday 5 to Wednesday 8 October, 1997.

Get in the Know will be the major forum for mathematics teachers in New Zealand during 1997. It will provide an

opportunity for all

interested in mathematics education from early childhood, primary, secondary and tertiary levels to share common experiences, insights and research, and to plan a positive way forward for mathematics education in New Zealand. A wide range of invited speakers from both New Zealand and overseas will contribute to forums, workshops and plenary addresses.

Enquiries can be forwarded to Glenda Anthony (Conference Convenor) at G.J.Anthony@massey.ac.nz

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ANZIAM (NZ) Notes

COMING MEETINGS

Reminders that the following meetings are coming up: Mathematics in Industry Study Group (MISG 1997). This will be the 13th and last of these problem solving workshops to be held at the University of Melbourne in the near future. It is free of charge to mathematical participants, and runs from January 27-31, 1997.

Email misg@maths.mu.oz.au.

WWW:http://macserver.maths.mu.oz.au/misg/Defaut.html.

The 33rd ANZIAM Applied Maths Conference (ANZIAM `97) will be held at Lorne, Victoria, from 2-6 February 1997, and as usual will span a

wide range of topics in industrial and applied mathematics being studied by New Zealand and Australian mathematicians. Further information is available from amc97@deakin.edu.au.

MEMBERSHIP

Membership of ANZIAM is available to interested NZMS members for a fee of NZ$10 to be paid to the treasurer (Adrian Swift, Department of Mathematics, Massey University, anziam@massey.ac.nz). 1997 fees are due now!

Simon Woodward

HEAT PIPE SYMPOSIUM

Mark McGuinness went to the Fifth International Heat Pipe Symposium in Melbourne in November, thanks partly to a grant from NZMS, Mark presented a talk including a 4-minute video of computer animations. One of the papers at the symposium was from Russian scientist who spoke about the heat pipes he had helped put into

the Russian satellite that was crashing into the sea near Chile at about the same time. All in all, the symposium was a good source of applied maths problems, in fluid flow, heat transfer, boiling, capillary effects, and other areas.

Tian Yong

GRANTEES' REPORTS

David Bryant:

University of Canterbury

Last year I was privileged to attend a conference on phylogenetics in Bielefeld, Germany. The conference, or perhaps more accurately, the workshop was jointly organized by phylogenetics groups in Massey and in Bielefeld. The emphasis was on encouraging discussion, particularly on classification techniques that were not restricted to trees.

What I found most helpful was the opportunity to discuss my own work, and to discuss future

work, with other participants at the conference,

including many of the principle contributors to this field. What I found least helpful was my travel insurance company after all of my luggage was stolen.

I wish to thank the NZMS, the department of Mathematics and Statistics at Canterbury, and the Mathematics department in Bielefeld for financial assistance.

Chris Stephens:

University of Canterbury

During December 10-14, 1995 I attended the `Third Workshop on Global Optimization', in Szeged, Hungary. The central topic of the conference was the methods, theory and applications of finding the overall, or global, optima of multiextremal functions.

The atmosphere of the conference was warm and sociable, making it easy to meet, and have enlightening discourse, with many of the other fifty participants. I presented a joint paper, by myself and my supervisor, Dr. W. Baritompa, `Global optimization requires global information'.

I learned a lot from the talks of the other participants, as well as renewing my enthusiasm and interest in the field. I also took the opportunity to visit two universities in Australia, on my way to, and from, Hungary.

On my way there, I gave a talk, `Global optimization-tools and techniques', to the Department of Applied Mathematics at the University of Adelaide; and on my way back, I travelled up to the University of Central Queensland in Rockhampton, for a short, but rewarding, visit to a group of three mathematicians in the field. My attendance at my first interval conference proved to be more than just interesting and informative, but rather invaluable to me. I am grateful to the NZMS for their retrospective grant.

I would also like to thank the NZMS for their student travel grants to the annual Mathematics Colloquiums, which have, in part, allowed me to attend for the past three years.

Irene Pestov:

Victoria University of Wellington

First of all I would like to thank the New Zealand Mathematical Society for their continued support throughout all three and a half years of my study. This year I attended the MISG workshop in Melbourne, the 32nd Australian Applied Mathematics Conference (ANZIAM 96) in Masterton, and the 2nd Biennial Engineering Mathematics Conference in Sydney with the help of student travel grants from the New Zealand Mathematical Society. Participating in conferences and workshops is no doubt important as an opportunity to meet other researchers working in the same field and those from a wider scientific community. For my research it was particularly useful since mathematical modelling involves a great deal of information from other disciplines such as engineering, geosciences, and so on. So far I have travelled to 11 conferences and 2 MISG workshops in New Zealand and Australia, most of them was supported by the New Zealand Mathematical Society.

I am very grateful to the council of NZMS for supporting my participation and giving me a chance to present and discuss my results at these conferences.

I would like to see Mathematics Departments in New Zealand supporting the PhD student conference attendance as a matter of their policy (as it is of NZMS, VUW Mathematics Department, and Australian universities.)

SITUATIONS VACANT

Lecturer/Senior Lecturer

Department of Mathematics and Statistics

University of Canterbury, Christchurch, New Zealand

Applications are invited from suitably qualified persons for the above continuing (tenured) position at the University of Canterbury. The minimum qualification on appointment is the Ph D degree or equivalent.

Preference will be given to applicants with experience in mathematical modelling of continuous processes including the field of Mathematical Biology. It is expected the successful applicant will play an important role in the Department's Biomathematics Research Centre.

The Department has an establishment of 30: 28 academic staff, 1 Programmer/Analyst and 1 Programmer/Technician. The research areas of the Department cover a wide range. In Applied Mathematics these include approximation theory,

discrete mathematics, differential equations, dynamical systems, fluid mechanics, multivariate approximation, optimization, relativity and wave theory. There is also wide interest in numerical, algebraic and statistical computing.

Applications, quoting Position No. MT26, close on 21 March 1997, and must be addressed to: The Registrar, Attention Staffing Section, University of Canterbury, Private Bag 4800, Christchurch, New Zealand.

Academic enquiries may be directed to the Head of Department, Dr P.F. Renaud, Telephone 64-3-364 2696 or Fax 64-3-364 2587, email: <p.renaud@math.canterbury.ac.nz>. The Department's World Wide Web address is: http://www.canterbury.ac.nz/maths

Department Of Mathematics, RMIT

ARC Research Associate

Applications are invited for this postdoctoral position to work on the ARC funded project ``Cocyclic Codes for Communications". The project area is algebraic coding theory, particularly development of the theory of cocyclic codes and their applications, for example to data storage, signals transmission and communications

security.

Applicants should have, or expect to receive shortly, a PhD or equivalent qualification in Mathematics, Computer Science, Electrical or Communications Engineering and should have a record of publication of original research in their area. Preference will be given to candidates who can demonstrate expertise in some or all of the following areas: algebraic coding theory or applications, projective representations of finite groups, algebraic combinatorics, security coding. Strong computational skills are desirable. The appointment will be for two years, with the possibility of renewal up to one further year.

For further information about the project contact Prof. Kathy Horadam on telephone (+61 3) 9660 2752/3219, FAX (+61 3) 9660 1748 or e-mail: horadam@rmit.edu.au.

For a position description please telephone Heather Herbert on telephone (+61 3) 9660 3074. Written applications are to be posted to Human Resources Officer, Faculty of Applied Science, City Campus no later than 7 February 1997.

Salary Range: $ 38,092 - $ 40,889. Ref No: 5447

Equal opportunity is university policy

RMIT, City Campus

GPO Box 2476V

Melbourne VIC 3001

Australia.
