

THE NEW ZEALAND MATHEMATICAL SOCIETY



NEWSLETTER

ISSN 0110-0025

Number 14

APRIL 1979

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THE NEW ZEALAND MATHEMATICAL SOCIETY

The New Zealand Mathematical Society was established in 1974 to promote the development, application and dissemination of mathematical knowledge within New Zealand and to assist mathematicians in New Zealand to maintain effective co-operation with one another and with colleagues and mathematical societies in other countries.

Publications

The *Newsletter* comes out three times a year. It publicizes the business of the society and gives details of activities we sponsor. It reports conferences, notices, news of mathematical organisations and visiting mathematicians and focusses on matters affecting mathematicians in New Zealand. *Supplements* to the Newsletter include texts of conference addresses, reports of special conferences, and collections of papers on a theme. Special publications appear from time to time. The Society has produced a brochure *Employment Opportunities in Mathematics* which is intended to be repeated at intervals. It is a detailed survey of jobs in mathematics within New Zealand, with advice about seeking jobs, an outline of job prospects, present commentaries of people using mathematics in their job and other career suggestions. Our yearly compilation *Post-graduate Topics in Mathematics* is a list of research topics and supervisors available in New Zealand universities. It is for the information and guidance of students of mathematical subjects considered for post-graduate work.

Other Activities

The Society sponsors a special lecture at each Mathematics Colloquium. We also have a visiting lecturer scheme and we promote regional meetings on specialized mathematical subjects. Competitions for advanced students are held.

Membership

Members are able to receive the New Zealand Mathematical Chronicle at a reduced rate and to become reciprocal members of a number of overseas societies including the Australian, South East Asian, London and Edinburgh Mathematical Societies and the Canadian Congress. Membership fees are due on the first of January each year. The full subscription is \$7.00 and the student rate is \$1.00. Applications for membership should be made to the Treasurer (Dr I.L. Reilly, Department of Mathematics, University of Auckland). An application form is printed in this Newsletter.

HUMAN RIGHTS

In this issue we feature three items which relate to the matter of human rights for scientists, and Soviet mathematicians in particular.

The Resolution 12 of the Eighth General Assembly of the IMU (see Dr Wake's report, page 7 of the December 1978 *Newsletter*) endorsed the resolution of the 15th General Assembly of the International Council of Scientific Unions (ICSU) on free circulation of scientists and requested the Executive Committee of the IMU "to do their best to implement the spirit and the letter of this resolution". We print the full text of the ICSU resolution below.

Just before the International Congress of Mathematicians in Helsinki last year a group of 12 Soviet scientists sent an Open Letter to all mathematical organisations and mathematicians. We print the text of this letter below.

We also draw your attention to a letter from 16 very well known American mathematicians to the Editor of the Notices of the American Mathematical Society, Volume 25, No. 7, pages 495 - 497 (1978). The letter contained a report entitled *The Situation in Soviet Mathematics* written by a group of scientists having first-hand information about the subject.

You are invited to respond to these items individually. The Society will pass on to its Human Rights Subcommittee for consideration any comment or suggestion sent to the Secretary, Mr H. S. Roberts.

RESOLUTION ON FREE CIRCULATION OF SCIENTISTS

In its 15th General Assembly, the International Council of Scientific Unions made the following Resolution on Free Circulation of Scientists:

"Having been informed of a number of cases in which bona fide scientists from National Adhering Bodies of the International Scientific Unions had recently been prevented from attending Symposia organized and sponsored by these Unions through a refusal to grant entry visas and,

Recalling the earlier decisions taken by the ICSU emphasizing the right of free movement of scientists in this connection,

Draws the attention of the individual scientific Unions and other ICSU bodies to the following guidelines and recommends their adoption:

- i) Before Symposia or meetings are arranged:
 - a) an assurance in writing should be obtained from the organizers in the country concerned that visas will be granted to bona fide if proper applications are made, and

- b) the unfortunate consequences which may arise through failure to grant visas should be communicated to the organizers of the symposia or meetings involved;
- ii) The procedure recently adopted by the IUPAC is commended for observance by other Unions, namely:
 - a) That applications for visas where necessary should be made to the appropriate authorities not less than three months before the date of the symposium or meeting, and if these visas are not granted or promised in writing one month before the date of the event, sponsorship should be withdrawn, and
 - b) arrangements for future meetings in any country found unable to comply with these principles should be suspended until more satisfactory circumstances exist,
- iii) National adhering bodies of the ICSU should urge the authorities in their countries to facilitate the delivery of attendance and exit visas for scientists to attend such meetings.
- iv) Each Union or other ICSU body should inform the ICSU and its Committee on the Free Circulation of Scientists of cases in which withdrawal of sponsorship has become necessary so that other Unions may take this into account in making their own arrangements for meetings and symposia,
- v) The Chairman of the Committee on Free Circulation and the Secretary General of ICSU should maintain a record of cases reported, to which scientific unions and other ICSU bodies may refer".

AN OPEN LETTER FROM SOVIET SCIENTISTS

On the threshold of the International Congress of Mathematicians (Aug.15-23,1978 at Helsinki), we would like to acquaint the world mathematical community with the situation of those Soviet mathematicians whom Soviet authorities deprive of their right to leave for Israel.

Each of us was refused permission to leave on the ground of our alleged possession of information which is valuable to the Soviet state. At the same time, immediately after applying for visas, each of us was either fired or lowered to much lower positions with working duties usually not connected with our profession.

For years, we've made efforts to obtain permission to leave the USSR. All these years we tried to continue our scientific work. In Moscow and Leningrad, "refusenik" mathematicians established unofficial weekly mathematical seminars. Also, mathematicians take an active part in the Moscow Sunday scientific seminar which has existed for many years. But we are confronted with many difficulties which threaten our very existence as mathematicians.

It is substantially impossible for us to be admitted to seminars, symposia and conferences both in the USSR and abroad. The system of special permissions for scientific papers to be accepted for publication which exists in the USSR makes it automatically impossible to submit works to Soviet journals or get an official consent for publication outside the USSR for anyone who has no job. Our experience shows that for those of us who do have jobs, all ways to publish in the USSR are closed. Therefore the only possibility is to send them abroad, usually very difficult to implement. We are absolutely cut off from computers and those of us who work in applied mathematics cannot continue to work in our areas. We can have no students.

We address this letter to all mathematical organizations and all mathematicians with the appeal to render us all possible support both in our intention to leave the USSR and in our everyday mathematical work.

Signed, *Solomon Alber*, Moscow; *Victor Brailovsky*, Moscow;
Irena Brailovsky, Moscow; *Boris Granovsky*, Leningrad;
Gennadi Hasin, Moscow; *Alexander Yoffe*, Moscow;
Abraham Kagan, Leningrad; *Arnold Kogan*, Moscow;
Mark Pekker, Leningrad; *Boris Ryvkin*, Leningrad;
Michael Strugaë, Leningrad; *Aba Taratuta*, Leningrad.

* * * * *

DR CHIN DIEW LAI

Early in 1978 Dr Lai was appointed to a position as a Lecturer in Statistics at Massey University. However, at that time the N.Z. Government refused to grant him permanent entry to this country.

Representations were made to the N.Z. Government by Professor Hayman (Massey), Dr Hunter (Auckland), the N.Z. Mathematical Society, the N.Z. Statistical Association, and the N.Z. Association of University Teachers. On 13th October 1978 the Minister of Immigration advised that Dr Lai's application for permanent entry to this country could proceed. Dr Lai took up his position at Massey in February this year.

This case should be one of much interest to the N.Z. mathematical community, not only because many people know Chin Diew Lai personally, but also because of its general ramifications. The New Zealand Mathematical Society has played a very real part in the negotiations with the Government. For these reasons we report the successful outcome of this case and publish below, with permission from the Office of the Minister of Immigration, the letter from Mr Gill to the N.Z.M.S. Secretary, and the Secretary's original letter.

New Zealand Mathematical Society,
 C/- Applied Mathematics Division,
 D.S.I.R., Box 1335,
 Wellington.

30 August 1978.

Air Commodore The Hon. T.F. Gill,
 Minister of Immigration,
 House of Parliament,
WELLINGTON.

Dear Air Commodore Gill,

Dr Chin Diew LAI - Entry Permit

The New Zealand Mathematical Society wishes to ask you to reconsider your decision in the case of Dr Chin Diew Lai, who was recently denied entry to New Zealand.

Dr Lai received university training in New Zealand, gaining a B.Sc., and an M.Sc. (1st Class Hons), at Auckland, and a Ph.D. at Wellington. This year he was appointed to a position as Lecturer in Statistics in the Department of Mathematics and Statistics at Massey University, Palmerston North. However, he was denied entry to this country, apparently on two grounds:

- (1) His occupation was not on the approved list for countries which are not traditional sources of immigration,
- (2) Under the Geneva ILO agreement in 1976, New Zealand agreed to "refrain from recruiting skilled and highly skilled workers when there are recognised or potential shortages in the country of origin".

I believe that you, or your department, already have a certain amount of information concerning Dr Lai supplied by Professor B. I. Hayman, Head of the Department of Mathematics and Statistics at Massey University, and by Dr J. J. Hunter, Acting Head of the Statistics Unit at Auckland University. The latter person has already written to Mr Muldoon who handed the letter on to you.

Recently, I have ascertained from Dr Lai personally, that he had in fact applied for two positions at Universities in Malaya but failed to gain either. The difficulty appears to be a linguistic one. At present it is difficult to obtain a position in the educational sector in Malaya without knowing the Malaysian language. Dr Lai is of Chinese extraction, and while fluent in both English and Chinese does not speak Malaysian. Hence he is not able to obtain an educational position in his own country. He is at present lecturing in a university in Taiwan but would much prefer coming to New Zealand, since he spent many years of his life here, making many friends and acquaintances. He fitted in well with our way of life.

In addition, in New Zealand there is at present a shortage of good mathematicians and statisticians, especially statisticians. At the University of Wellington, for example,

there are currently two vacancies in Statistics, and the most recent appointments to mathematical positions have been overseas applicants. Dr Lai is considered as being easily the best applicant for the position for which he has applied.

Under these circumstances the New Zealand Mathematical Society urges you to reconsider your previous decision and to grant Dr Lai permission to enter the country to take up this position. (The New Zealand Mathematical Society is a group of about 150 mathematicians, drawn mainly from the Universities and from the Department of Scientific and Industrial Research). I am sending a copy of this letter to Mr Gandar, Minister of Education, for his information.

Yours sincerely,

(Signed) H. S. Roberts,
Secretary, New Zealand Mathematical Society.

Office of Minister of Immigration,
Wellington.
13 October 1978.

Mr H. S. Roberts,
Secretary, N.Z. Mathematical Society,
C/- Applied Mathematics Division,
D.S.I.R.,
P.O. Box 1335,
WELLINGTON.

Dear Mr Roberts,

I am replying to your letter concerning Dr Chin Diew Lai who has made application for permanent entry to New Zealand.

Recently a review has been made of immigration policy, and I am happy to tell you that as a result of relaxations being made to some aspects of policy, the application is one that can now proceed.

I anticipate that the Secretary of Labour will shortly be writing to Dr Lai informing him of the immigration requirements he and his family will be required to meet before final approval of the application can be given.

Yours sincerely,

(Signed) Frank Gill
Minister of Immigration.

Thanks from Dr Lai

I wish to take this opportunity to express my hearty gratitude to the New Zealand Mathematical Society on its vital role in supporting our application for permanent entry to New Zealand. Our hopes were raised considerably when the Society approached the Minister of Immigration.

It has now become quite apparent to me that the N.Z.M.S. has an important function in presenting cases like mine to the Government.

Sincerely,

C. D. Lai, Massey University.

* * * * *

MATHEMATICS CONVENTION IN AUSTRALIA

The Council of the New Zealand Mathematical Society has, on behalf of the Society, accepted the invitation of the Australian Mathematical Society to join with them in their annual meeting in May 1981. The venue will be on the east coast, probably Sydney.

In their invitation to us, the Australian Mathematical Society President, Dr Joe Gani, stated that the Australians had greatly enjoyed the combined Convention in May 1978 in Christchurch, and that they feel a similar occasion should be held every so often - probably at intervals of three or four years. The year 1981 was chosen to avoid close proximity with the International Congress of Mathematicians in August 1982 (in Warsaw). This would make it possible for the Convention to gain sponsorship from the International Mathematical Union.

While it is clearly not for the Society to decide, it is hoped that in 1981 it will be possible for all the activities normally associated with the annual N.Z. Mathematics Colloquium to be held in Australia as well. The 1979 Colloquium will be asked to consider this at its May meeting.

* * * * *

"My suspicion grows that the refinements of our own departments, institutes and organisations stand revealed as unnecessary luxuries. For good research one needs brains, intellectual drive and strong motivation; the rest seems marginal".

(J. Gani in "Impressions of Indian Statistical Institute", CSIRO DMS Newsletter No 5, 1975).

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LOCAL NEWSUniversity of Auckland: Department of Mathematics

A Department of Computer Science is to be established on 1 February, 1980, with *John Butcher* as Head of Department.

Appointments

Dr Richard Lobb has been appointed a Lecturer in Computer Science. He gained his Ph.D. in the Radio Research Centre here, and spent some years in Europe.

Dr Chris Wild who gained his M.Sc. here and is currently at the University of Waterloo, has been appointed as lecturer in statistics.

Mr David Thomson, who teaches at Mt Albert Grammar School, has been appointed as part-time lecturer.

Mr J. Sealey is the Teaching Fellow for 1979.

The new Junior Lecturers are: *R. Felton, A. N. Grace, D. G. Lane, K. W. Lee and R. O'Keefe.*

Departures

Dr David Ryan has transferred to the Department of Theoretical and Applied Mechanics, in the School of Engineering.

Evan Gray is now teaching in Oxford.

Peter Hughes is teaching in the Cook Islands.

Kevin Burrage has completed his Ph.D., and soon afterwards he and *Pamela Moss* announced their engagement. They have now left for Switzerland, en route to England.

Visitors

Dr Ronald King, a specialist in Lie groups from Southampton University is here for 1979 in an exchange visit with *Dr Wayne Walker*.

Dr B. B. Phadke, a geometer from Flinders University, is here for the first term.

Leave

Professor John Butcher is spending 1979 at several universities in Canada, Great Britain, Sweden etc., and *John Whale* is acting head of the Computational Mathematics Unit during his absence.

Professor George Seber will be on leave from May to September 1979, with *Professor Hookings* as Acting Head during his absence.

Seminars

Prof L. C. Woods (Oxford) spoke on: "The Great Model Maker - James Clerk Maxwell".

Dr J. Jarratt (Auckland) spoke on: "Geometric properties of crystal lattices in spaces of arbitrary dimension", and on "Some topological properties of crystal lattices".

Prof Donald James (Pennsylvania State University) spoke on: "Automorphisms of matrix rings".

The 19th Summer Research Institute of the Australian Mathematical Society was held at Macquarie University in January. About 260 people attended, and the section on the History of Mathematics proved to be remarkably popular. *Dr M. J. J. Lennon* spoke on *Jock Hoe's* work on ancient Chinese mathematics, which aroused considerable interest. *Bill Hawkins* spoke on early European trigonometry and on John Napier, and *Garry Tee* spoke on the early women mathematicians.

G.J.T.

University of Auckland: Department of Theoretical and Applied Mechanics

Leave

Assoc. Prof Mervyn Rosser has returned from Sabbatical Leave. Part of his time overseas was spent in the Department of Operational Research at Lancaster University. There he renewed acquaintance with *Dr Eric Ritchie* who spent a Sabbatical Leave with us in 1976, and with *Mr Michael Chambers* who visited us in 1977. He also spent four months in the Department of Industrial Engineering and Operations Research at the University of California at Berkeley meeting up with *Professor Robert Oliver* who visited New Zealand in 1977.

Appointments and Departures

Dr Roland Horne arrived last June to take up a Lectureship in this Department. A graduate (B.E., Ph.D) of this Department, Roland has been working in geothermal research for some years, first as an Energy Research Fellow at Auckland and more recently in the Department of Petroleum Engineering at Stanford University. He will also be involved in the newly formed Geothermal Institute at Auckland.

Dr Peter Hunter joined the T.A.M. staff last October. A graduate (M.E.) of this Department, Peter has been working in the Departments of Physiology and Engineering Science at Oxford and the nearby Rutherford Laboratory on problems involving the application of continuum mechanics to biology. His work includes experimental research as well as numerical modelling.

Dr David Ryan has transferred from the Mathematics Department at Auckland to T.A.M. thereby replacing *Dr Michael Forster*, who has recently taken up an industrial appointment

in Santa Barbara, California. Dr Ryan's transfer further cements the interdepartmental collaboration in Operations Research at Auckland that has existed over the last few years.

Mr Robert McKibbin has also joined the staff of T.A.M. replacing *Gib Bogle*. A Mathematics Honours Graduate from Canterbury, Robert spent four years, before his return to New Zealand, as a Lecturer in Mathematics at the University of Technology, Papua New Guinea. He is now engaged on a staff Ph D, working on Geothermal Flows with Dr Michael O'Sullivan.

John Dempsey has now graduated Ph D from this Department, his doctoral work focussing on stress singularities in the plane elasticity of a composite wedge. He is now a Post-Doctoral Fellow working with Professor H. D. Achenbach in the Department of Civil Engineering, Northwestern University.

David Lee was awarded a Ph D from this Department in August last year and has now taken up a post-doctoral position at Caltech. He will continue to pursue the research into the effect of base isolation mechanisms on the dynamic response of multi-storey structures to earthquake excitation which he began at Auckland with Ian Medland.

Mr Graeme Edwards has recently been appointed to a permanent post in the Applied Mathematics Division, D.S.I.R. with two years' study leave to enable him to pursue doctoral work in Operations Research under Dr Ryan. He has been for the last two years working part-time towards an M.Phil. in this Department and in 1978 acted as a Temporary Junior Lecturer.

Visitors

For the last three or four years this Department has been able to use monies from unfilled posts to assist a series of visitors, the latest being *Mr Jon Sims-Williams*, a member of the Department of Engineering Mathematics at the University of Bristol. His academic interests include Operations Research, Statistics and Numerical Analysis.

Dr George Zyzolowski, after spending two years in T.A.M. as an Energy Research Fellow, has returned to the U.S.A. to take up a post in the University of California at Santa Barbara.

C.M.S.

University of Waikato

Overall maths enrolments seem to be more than 10% higher than last year, in line with an increased first year intake which headed more towards science and (business) management than to social science or humanities.

Arrangements for the Colloquium in May seem to be well in hand, including an impressive array of invited speakers. For further details, see the Colloquium Notice.

Seminar

Professor T. S. Santhanam spoke on "Angular Momentum Coherent States".

Some time ago, I put out a feeler in this Newsletter, about (maths) libraries' feeling the financial squeeze, and being forced to cancel subscriptions. No replies means, I hope, no cancellations needed yet.

M.S.

Massey University

Chin Diew Lai and *Howard Edwards* have arrived (from Taiwan and Canterbury respectively) to take up Lectureships in Statistics. *Sirimathie Wewala* has arrived from Sri Lanka to take up a research assistantship in Statistics. *Neville Jeans* has been appointed as Junior Lecturer in Mathematics and is engaged in Ph.D research in number theory. *David Johnstone* has been appointed as Demonstrator in Mathematics and is engaged in MSc research on deterministic predator/prey problems.

Leave

Dean Halford has returned from two months leave in Australia. He attended the Australian Mathematical Society Summer Research Institute at Macquarie University and spent the rest of the time at Monash University. *Dick Brook* is on leave in North Carolina and *Adrian Swift* goes on three months leave to Aston University in England at the end of August.

Seminars

Dr S. R. Wilson (Australian National University) spoke on "O' Mice an' Men" (with a statistical flavour).

Dr M. D. Hendy (Massey University), described "Generalisations of the Continued Fraction Algorithm".

Dr H. P. Edwards (Massey University) spoke on "Statistical Decision Theory".

Courses

Extramural rolls have increased at all levels, with the first 300-level courses (302 Algebraic Structures and 311 Statistical Inference) attracting a lot of well-qualified applicants.

D.C.J.

Victoria University of Wellington

We are glad to have with us *Dr Ken Russell* as a Lecturer in Statistics; he has come from a similar position at the University of New South Wales and has specialized in experimental design and analysis.

Also *Kathy Spencer* and *Bruce Christianson*, who have been appointed as Teaching Assistants from last year's Honours class.

Leave

Rob Goldblatt spent a week at the Australian National University in the long vacation lecturing on the construction of the continuum over intuitionistic logic. He came back with BINDEX, a computer package which will, when it has been made to work on our computer, help in the construction of book indexes (not necessarily on intuitionistic logic).

J.F.H.

University of Canterbury

For the first time in five years the department has welcomed a new staff member. *Dr Ian Coope* who joins us from Dundee is a Numerical Analyst specializing in optimization problems.

While *David Robinson* acts as Dean of Science, a temporary Assistant Lectureship has been created and this post has been filled for 1979 by *Mrs Patricia Coope*.

During 1978/79 three of the department's doctoral students completed their theses and took up employment in mathematical fields: *A. K. Laing* who is now in the Meteorological Office, *H. P. Edwards* who went to a Lectureship in Statistics at Massey University and *M. K. Mara* who has joined the Statistical Division of the D.S.I.R.

In 1979 the second year paper in Numerical Methods, Math 231, will be taught by the Keller plan method of instruction.

Leave

Gordon Petersen is on leave. His latest letter was written from Aachen where he gave a talk on a new Tauberian theorem which he thought up in Aarhus. So far he has delivered invited lectures in Hong Kong, Tel Aviv, Aarhus, Amsterdam and Aachen. *Brian Woods* is acting Head of Department during his absence.

Roy Kerr was one of four invited lecturers at the Australian Mathematical Society's annual Applied Mathematics Meeting in Leura in January. While in Canberra he played in a strong Bridge tournament, taking his fair share of the prizes.

Bob Long and *Murray Smith* attended the Summer Research Institute of the Australian Mathematical Society at Macquarie University in January.

P.F.R.

Christchurch Teachers College, Secondary Division

This year there are 35 students (30 in 1978) taking Mathematics Education as their major teaching study. An additional 70 students (52 in 1978) are taking Mathematics Education as a second teaching study and a further 8 mathematics students will be completing a 4 term course in May.

H.M.W.

Lincoln College

The Biometrics section of the Plant Science Department runs courses in Computer Methods, Computer Science, Biometrics, Statistics and Mathematics.

The mathematics course for 1st year B. Com. (Ag) students uses calculus for examining rates of change based on accumulated data, curves for the historical outline and integration assists in predictive techniques. Matrices are taught for use in description of multicomponent enterprises.

Statistics is taught towards management and the biometrical goals of measurement, data recording and analysis of experimental trials. Advanced biometrics courses facilitate analysis of field study data in particular.

Staff are *Mr N. S. Mountier, Mr B. E. Love, Miss I. Garrett, Mr D. I. Evans.*

H.M.W.

University of Otago

Professor D. B. Sawyer has returned from his leave which was spent almost entirely at University College, London.

Professor W. H. McCrea, F.R.S., world famous cosmologist and theoretical astronomer, will be a William Evans Visiting Professor in our Department from 16 March 1979 until October. Further details appear on page 27 of the December 1978 Newsletter.

The Otago Mathematics Association was formed on 7 February 1979 with *Mr Craig Grant* of St Paul's High School as Foundation President. (The "break-away" from the Otago Science and Mathematics Teachers Association occurred last spring).

G.O.

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"*The prefix "pseudo" arises from the method by which the sequence of digits is produced and not to (sic) possible deviations from some ideal standard of randomness in the constitution of the sequence. Given the programme, or algorithm, and the necessary skills required to interpret it, the sequence would become predictable. The successive decimal digits of π for example might appear to be random to someone who did not know how they had been produced. Once the secret (given the algorithm "divide 22/7") the sequence would become predictable". (Sir Alister Hardy, Robert Harvie and Arthur Koestler: *The Challenge of Chance: Experiments and Speculations*, Hutchinson, London 1973, (p.136).

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NOTES AND NOTICES

14th N.Z. MATHEMATICS COLLOQUIUM

The annual conference of the N.Z. division of the Australasian Association of Philosophy and the 14th N.Z. Mathematics Colloquium are both being held at the University of Waikato in May, the former from the 5th until the 9th and the latter from the 6th to the 9th, with a number of sessions in common.

Those who have accepted invitations to speak at the Colloquium include:

- Professor G. Hughes (V.U.W.),* about 'John Buradin on Self Reference' (this in conjunction with the philosophers),
Professor G. Andrews (Penn State), on 'Partitions and the False Theta Functions of L.J. Rogers',
Dr. G.L. Kalra (Delhi), on 'Non-Linear Waves and Instabilities',
Dr. R. Wooding (A.M.D., D.S.I.R.), on 'Aspects of Flow Through Porous Media',
Dr. W. Wojtyński (Warsaw), on 'The Present and Future of Infinite-Dimensional Lie Groups and Algebras', and
Professor E.J. Hannan (I.A.S., A.N.U.), on "Mathematics and Reality: Time Series Analysis as an Example".

Besides these major attractions and the usual parallel sessions of contributed papers, there will be a panel discussion on 7th Form mathematics and the school-university transition.

Those who have not already seen the First and Second Notices or who need more information, may write to: The Colloquium Secretary, Mathematics Department, University of Waikato, Private Bag, Hamilton, New Zealand.

MEETING IN ANALYSIS

A mini-symposium in analysis (sponsored by the Department of Mathematics of Victoria University and the New Zealand Mathematical Society) will be held at Victoria University from 27 to 29 June 1979 inclusive, during the proposed visit of Dr W. Wojtyński of the University of Warsaw. The meeting is intended not merely as a forum for research announcements, but also as an occasion for expository lectures on topics which are of interest to the participants and fall within the domain of analysis, broadly interpreted. Depending on the numbers attending, it may be possible to arrange private accommodation for those taking part; motel accommodation may be booked if necessary.

Prospective participants are encouraged to contact Dr. C.J. Atkin, Department of Mathematics, Victoria University of Wellington with suggestions of topics for lectures or of papers to be delivered, or with any queries. A further notice will be circulated at the Colloquium in Hamilton.

RECIPROCITY WITH AMERICAN MATHEMATICAL SOCIETY

The NZ Mathematical Society recently arranged a reciprocity agreement with the American Mathematical Society, effective from January 1979.

Briefly, the terms allow for our members to join the AMS at a much reduced rate (\$US18 p.a.) which will entitle you to all rights of ordinary members including the right to vote for officers of the AMS. This means that for the reduced rate you will get free copies of the *Notices* of the AMS, the *Combined Membership List*, the *Bulletin* (New Series), and also substantial price reductions on other publications.

Application forms for reciprocal membership of the AMS can be obtained from our Treasurer, Dr Ivan Reilly, who will endorse your application provided you are a paid-up member of the NZ Mathematical Society.

INTERNATIONAL MATHEMATICAL UNION (IMU)

Dr Wake's report to the Royal Society of New Zealand was published in our December 1978 *Newsletter*. Your attention is drawn again to the Recommendations on pages 9 and 10 of that issue relating to change of group adherence to IMU and to IMU support for meetings in the Australasian region. *These recommendations will be discussed at the Mathematics Colloquium in Hamilton in May.*

INTERNATIONAL UNION OF THEORETICAL & APPLIED MECHANICS (IUTAM)

In March 1979 an application to the Royal Society of New Zealand was made with the support of the New Zealand Mathematical Society, for N.Z. to join IUTAM. The final submission was prepared by Dr Ian Donaldson of the Physics and Engineering Laboratory, DSIR, Lower Hutt.

EXCHANGES WITH CHINESE MATHEMATICAL SOCIETY

Our President, Dr Wake, has just negotiated an agreement with Professor Loo-keng Hua, President of the Chinese Mathematical Society, to establish constant exchanges between the two societies. This means immediately that the NZMS sends the Chinese Mathematical Society copies of the *Newsletter* and Supplement in exchange for copies of *Acta Mathematica Sinica* and *Acta Mathematicae Applicatae Sinica*.

FIELDS MEDAL AWARDED

The Fields Medals were presented at the Eighth International Congress of Mathematicians in Helsinki last August. Regarded as the equivalent for mathematics of the Nobel Prizes, the Fields Medals are awarded every four years to mathematicians under the age of 40 in recognition of work already done and as an encouragement for further achievement. The 1978 awards went to Pierre Deligne (Institut des Hautes Etudes Scientifiques, France), Charles Fefferman (Princeton), G. A. Margulis (Soviet Union) and Daniel Quillen (MIT).

EXHIBITIONS SERVICE

The Education Committee of the Book Publishers Association of New Zealand, representing the major N.Z., British, American and Australian publishers in this country, has established an exhibition service.

If you wish displays of educational and/or scholarly books to be set up at a conference, refresher course, or in-service course, please advise the Exhibitions Organiser at Box 36105, Northcote Central, Auckland. You will be sent an "Exhibition Information Required" form which upon return will ensure that all publisher-members are advised of each forthcoming exhibition.

The advantage is that you need send details of a forthcoming exhibition to one person only. The only proviso is that there is sufficient time to obtain and circulate exhibition information, and obtain a response from publishers. A lead-time of 2 months or more is recommended.

In some cases the services of a local educational bookseller may be used to mount the exhibition.

SUPPLEMENT TO NEWSLETTER No. 14

The *Supplement* contains a list of members of the New Zealand Mathematical Society as at November 30, 1978

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The poet W. H. Auden (1907-1973) had this to say about mathematicians:

'How happy the lot of the mathematician. He is judged solely by his peers, and the standard is so high that no colleague or rival can ever win a reputation he does not deserve'.

The Dyer's Hand, 1948.

However, he was rather worried about statisticians (do they have under-arm problems?)

'Thou shalt not answer questionnaires
or quizzes upon world affairs,
Nor with compliance
Take any test.
Thou shalt not sit with statisticians nor commit
A social science'.

Under Which Lyre.

CONFERENCES 1979-80

*** 1979 ***

- May 6-9
(Hamilton) 14th New Zealand Mathematics Colloquium
Details from the Colloquium Secretary, Department of Mathematics,
University of Waikato, Private Bag, Hamilton, New Zealand.
- May 14-18
(Canberra) Australian Mathematical Society Annual Conference
Details from Dr E. Seneta, Academic Secretary, Department of
Statistics, SGS, Australian National University, P.O. Box 4,
Canberra, ACT 2600, Australia.
- May 14-31
(Singapore) First Franco-Southeast Asia Mathematics Conference
Details from Franco-SEA Conference, Department of Mathematics,
Nanyang University, Jurong Road, Singapore 22.
- May 19-26
(Blażejewko) International Conference on Functional-Differential Systems and
Related Topics
Details from D. Przeworska-Rolewicz, Mathematics Institute, Polish
Academy of Science, Śniadeckich 8, 00-950 Warszawa, Poland.
- June 5-8
(Berlin) International Conference on Fundamentals of Numerical Computation
Details from G. Alefeld/R. D. Grigorieff, Department of
Mathematics/H64,H65, Technical University of Berlin, Strasse des 17.
Juni 135, 1000 Berlin 12, Germany.
- June 14-19
(Siegen) Internationales Symposium über Topologie
Details from Ulrich Koschorke, GHS Siegen, Mathematik V, Postfach
21 02 09, D-5900 Siegen 21, Federal Republic of Germany.
- June 17-23
(Han-sur-Lesse) Second International Conference on Finite Groups and Geometries.
Details from J. van Buggenhaut, Centre for Statistics and
Operations Research, Vrije Universiteit Brussel, Pleinlaan 2,
B-1050 Brussels, Belgium.
- June 18-22
(Evanston) International Conference on the Global Theory of Dynamical Systems
Details from the Secretary, Dynamical Systems Conference,
Department of Mathematics, Northwestern University, Evanston,
Illinois 60201, USA.
- June 20-22
(Bethlehem, Penn.) Third IMACS International Symposium on Computer Methods for
Partial Differential Equations
Details from R. S. Stepleman, David Sarnoff Research Centre,
Princeton, New Jersey 08540, USA.
- June 25-29
(Grignano) International Symposium on Information Theory
Details from M. Pursley, Department of Electrical Engineering,
University of Illinois, Urbana, Illinois 61801, USA.
- June 25-29
(Berkeley) International Symposium in Differential Geometry in Honour of
S.S. Chern
Details from Nora Lee, Department of Mathematics, University of
California, Berkeley, California 94720, USA.
- July 16-20
(Graz) Sixth International Colloquium on Automata, Languages and
Programming.
Details from A. H. Maurer, Instut für Information-verarbeitung,
Techn. Universität Graz, Steyrergasse 17, A-8010 Graz, Austria.

- August 6-10
(Rio de Janeiro) International Seminar on Functional Analysis, Holomorphy and Approximation Theory
Details from G.I. Zapata, Instituto de Matemática, Universidade Federal do Rio de Janeiro, Caixa Postal 1835, ZC-00, Rio de Janeiro RJ Brazil.
- August 6-16
(Kent, Ohio) International Conference in Banach Spaces
Details from J. Diestel, Mathematics Department, Kent State University, Kent, Ohio 44242, USA.
- August 13-17
(Adelaide) CSIRO-DMS Divisional Conference
Details from L. Veitch, CSIRO-DMS, Private Bag No 2, Glen Osmond, SA 5064, Australia.
- August 15-22
(Kumasi) Second International Symposium in West Africa on Functional Analysis and its Applications
Details from T. Owusu-Ansah, Department of Mathematics, University of Science and Technology, Kumasi, Ghana, West Africa.
- August 20-25
(Ottawa) International Conference on Representations of Algebras
Details from ICRA Secretary, Department of Mathematics, Carleton University, Ottawa, Canada.
- August 22-29
(Hanover) International Congress for Logic, Methodology and Philosophy of the Exact Sciences.
Details from Sekretariat des Internationalen Kongresses für Logik, Methodologie and Philosophie der Wissenschaften, Welfengarten 1, D-3000 Hanover, Federal Republic of Germany.
- August 26-Sept 1
(Sydney) Second Australian Number Theory Conference
Details from J. Loxton, School of Mathematics, University of NSW, Kensington, NSW 2033, Australia.
- August 27-31
(Montreal) Tenth International Symposium on Mathematical Programming
Details from Symposium Secretariat, Tenth International Symposium on Mathematical Programming, 772 Sherbrooke St West, Montreal, Quebec H3A 1G1, Canada.
- September 4-9
(Warsaw) Ninth IFIP Conference on Optimization Techniques
Details from K. Tracki, Systems Research Institute, Polish Academy of Sciences, ul. Newelska 6, 01-447 Warszawa, Poland.
- ** 1980 **
- January 14-18
(Canberra) Eighth Biennial Conference of the Australian Association of Mathematics Teachers
Details from Ms Lois Boyd, Conference Co-ordinator, P.O. Box 20, Civic Square, Canberra, ACT 2608, Australia.
- May 12-16
(Adelaide) 50th Jubilee ANZAAS Congress
Details from Dr D.L. Clements, Department of Applied Mathematics, University of Adelaide, GPO Box 498, Adelaide SA 5001, Australia. (Incorporating the Annual Meeting of the Australian Mathematical Society).
- August 11-16
(Berkeley) Fourth International Congress on Mathematics Education
Details from J. K. Goldhaber, National Research Council/Math, 2101 Constitution Ave NW, Washington DC 20418 USA.
- October 6-17
(Tokyo & Melbourne) International Federation for Information Processing Congress
Details from IFIP Congress 80, GPO Box 880 G, Melbourne, Vic 3001, Australia.

RECIPROCITY AGREEMENTSAmerican Mathematical Society

Members of the NZMS may join the AMS at a much reduced subscription rate (currently \$US18 a year) which entitles you to all rights of ordinary members including the right to vote for officers of the AMS. A reciprocal member receives free copies of the *Notices* of the AMS, the *Combined Membership List* and the *Bulletin*, and is entitled to substantial price reductions on other publications of the AMS. Application forms for reciprocal membership can be obtained from our Treasurer who will endorse your application provided you are currently a financial member of the NZMS.

Australian Mathematical Society

The terms of the agreement provide for individuals who are members of one Society to join the other for half the usual fee and thereby enjoy all the privileges of that Society, other than the right to vote. This applies, of course, provided you are not resident in the country of the second Society. Current subscriptions and prices are as follows:

- (1) Membership subscription (including the *Gazette*): \$25 (with a remission of \$5 for early payment)
- (2) *Journal* - Series A: \$12
- (3) *Journal* - Series B: \$3
- (4) *Bulletin*: \$12

Thus members of the NZMS may join the Australian Mathematical Society for \$10 a year. They should obtain a note of authentication and an application form from our Treasurer and send both to the Australian Mathematical Society Secretary (D. G. Hurley, Department of Mathematics, University of Western Australia, Nedlands, Western Australia 6009, Australia).

Canadian Mathematical Congress

The same terms apply as for the Australian Mathematical Society. Current subscriptions and prices are as follows:

- (1) Membership subscription (including newsletter): \$15
- (2) *Canadian Journal of Mathematics*: \$14
- (3) *Canadian Mathematical Bulletin*: \$10

Thus members of the NZMS may join for \$7.50.

Edinburgh Mathematical Society

Members of the New Zealand Mathematical Society may join the Edinburgh Mathematical Society on payment of the reciprocity member's subscription. This is £5.00 for the current session (against £7.50 for a full member). A reciprocity member receives the *Proceedings of the Edinburgh Mathematical Society*, but does not have voting rights. Anyone wishing to become a reciprocity member should write to the Secretary, Edinburgh Mathematical Society, James Clerk Maxwell Building, Mayfield Road, Edinburgh EH9 3JZ, Scotland.

Southeast Asian Mathematical Society

The same terms apply as for the Australian Mathematical Society. The current subscription is US\$5.00, and privileges of membership include a quarterly newsletter and members' rates for conferences, meetings and occasional publications. Thus NZMS members may join the SEAMS for US\$2.50. Application forms may be obtained from our Secretary.

London Mathematical Society

The same terms apply as for the Australian Mathematical Society except that reciprocal members do have the right to an LMS vote. Current subscriptions and prices are as follows:

- | | | |
|-----|--------------------------|-------|
| (1) | Membership subscription: | £3.00 |
| (2) | <i>Journal</i> : | £6.00 |
| (3) | <i>Proceedings</i> : | £6.00 |
| (4) | <i>Bulletin</i> : | £3.00 |

Reciprocal members are also entitled to a discount on the *Journal of Applied Probability*, LMS Monographs and LMS Lecture Notes. Members of the NZMS may join the LMS for £1.50 a year. Application forms may be obtained from our secretary.

OTHER NEW ZEALAND MATHEMATICAL PUBLICATIONSMathematical Chronicle

is published by the Mathematical Chronicle Committee, Department of Mathematics, University of Auckland, Private Bag, Auckland. The editors are Professor J A Kalman, Dr D B Gauld, Dr G D Dixit and Dr D M Ryan. The subscription is \$10.00 per volume of three issues, with a reduced rate of \$5.00 for individual subscribers and a further reduction to \$4.00 for members of the New Zealand Mathematical Society. The Chronicle welcomes contributions of short research articles and mathematical notes by New Zealand mathematicians.

Mathematics Magazine

is published by the Auckland Mathematical Association, PO Box 6855, Auckland, 1. The annual subscription for individuals is \$5.00 and three issues are published each year. A reduced rate is available for students.

Network

is published by the Mathematics Education Department of Christchurch Teachers' College (Secondary Division), Dovedale Avenue, Ilam, Christchurch 4. It exists to help provide an exchange of ideas among all those concerned with Mathematics Education in secondary schools.

New Zealand Operational Research

is published by the Operational Research Society of New Zealand, PO Box 904, Wellington. The editor is Dr H G Daellenbach. The annual subscription for individuals is \$6.00 and two issues are published each year.

New Zealand Statistician

is published by the New Zealand Statistical Association, PO Box 1731, Wellington. The editor is Dr D Rhoades. The annual subscription for individuals is \$6.00 and two or three issues are published each year. A reduced rate is available for students.

N.Z.M.S. VISITING LECTURER 1979

The Visiting Lecturer for 1979 is *Professor George Andrews* of Pennsylvania State University who is currently spending a sabbatical leave at the University of New South Wales.

His itinerary in New Zealand is:

April	12	Sydney/Christchurch
	13-18	Mt Cook/Southern Lakes
	19	Queenstown/Dunedin
	20	University of Otago
	21-22	Dunedin/Christchurch
	23	University of Canterbury
	24	Christchurch/Wellington
	25	Victoria University of Wellington
	26	Wellington/Palmerston North
	27	Massey University
	28-30	Rotorua/Waitomo/Hamilton
May	1	University of Waikato
	2	Hamilton/Auckland
	3	University of Auckland
	4-6	Auckland/Hamilton
	7-9	N.Z. Mathematics Colloquium
	10	Auckland/Sydney

His lecture titles are:

1. Sylvester and the Durfee Square
2. Ramanujan's "Lost" Notebook
3. Partitions and the False Theta Series of L. J. Rogers.

* * * * *

- STOP PRESS -

IUTAM

Information has just been received that the Council of the Royal Society of New Zealand has decided to apply for New Zealand membership of the International Union of Theoretical and Applied mechanics.

THE NEW ZEALAND MATHEMATICAL SOCIETY



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	Mr D C Harvie (1978-1981)	Mathematics Department Victoria University of Wellington Private Bag WELLINGTON
Co-opted Member:	Dr D J McCaughan (1978-1979)	Mathematics Department University of Otago P O Box 56 DUNEDIN

Members are warmly invited to contact any of the above if they have any suggestions or comments about the activities of their Mathematical Society.

This Newsletter was compiled for the Council of the New Zealand Mathematical Society by Dean Halford, typed by Joan Bishop and Gail Tyson, and printed by the Massey University Printery.

The editor is grateful to the typists and to those who contributed copy. Contributions to future Newsletters are invited from anyone with items of interest to the New Zealand mathematics community, and may be sent to the Editor (C/- Department of Mathematics and Statistics, Massey University, Palmerston North, New Zealand) or to one of the following Honorary Correspondents:

University of Auckland	:	Garry Tee (Mathematics) Cecil Segedin (Theor. & Appl. Mech.)
University of Canterbury	:	Peter Renaud
University of Otago	:	Gloria Olive
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