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COMBINATORICS

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* During 1986 all enquiries should be directed to the *
* CMSA, c/- Prof. D. A. Holton, Dept. Maths & Stats, *
* University of Otago, Box 56, Dunedin, New Zealand. *
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1. XIV ACCMC

A joint Australia-Singapore venture incorporating part of the XIVth Australasian Conference on Combinatorial Mathematics and Computing was held from 19-23 May this year in Singapore. Thanks to the deft hand of the organisers it was a great success.

The second half of this year's ACCMC will be held in Dunedin from 1-5 December. We can only hope that it is as successful as the Singapore meeting was. To assist in this end we would appreciate your replies by 31 / 8 / 86. Indeed we require them by this date.

(1) Invited Speakers

One hour addresses will be given by the following invitees:-

L. Caccetta (WAIT, Perth)
(Applications of combinatorics.)

C. C. Chen (Singapore)
(Unconfirmed.)

W. Jackson (Goldsmith College, London)
(Longest cycles in 3-connected cubic graphs.)

A. Hartman (IBM, Haifa)
(Factorisation of the Complete Uniform Hypergraph.)

L. Szekeley (Auckland)
(Inclusion-exclusion with vanishing terms.)

(ii) Papers/Proceedings

In addition to the invited lectures, we welcome contributed papers in all areas of pure and applied combinatorics including aspects of computing. Contributed papers will be of twenty-five (25) minutes duration with five (5) minutes allowed for questions.

Potential speakers should send a TITLE and a SHORT ABSTRACT to:-

Professor D. A. Holton,

CMSA Newsletter

Dept. of Mathematics and Statistics,
University of Otago,
Box 56, Dunedin,
New Zealand.

Titles and abstracts should reach us no later than 30/9/86.

The proceedings of the Dunedin Conference will be published as a special volume of *Ars Combinatoria*. All papers will be refereed. Contributors must submit their manuscripts in final form at the conference

It would be most appreciated if, where possible, papers were prepared as Macintosh Macwrite documents and brought to the conference on disc as well as in hard copy. It would also be useful if copies of any non standard fonts used could be included on the disc. (If it makes you feel more comfortable you may read "disk" for "disc" in the preceding sentences.)

(iii) Accommodation

Accommodation has been reserved at Knox College, University of Otago. This university hall of residence is some ten minutes walk from the department of mathematics and statistics.

This will be for bed and breakfast only. Lunches and evening meals can be purchased from a variety of reasonable venues within easy reach of the university and college. The Senior Common Room (Staff Club) will be available to conference participants for the duration of the conference. Reasonable lunches may be purchased there.

The cost of accommodation is \$NZ.30 per day (single). This cost, we are told, includes the new goods and services tax (G.S.T.) which is due to start in October. This marvellous little idea should provide some interesting, if not always desirable, changes to the prices of most things in New Zealand. For the most part this will be an increase of 10% at each transaction stage, with very few exceptions. In the rest of this newsletter the effects of G.S.T. have not been included but they should be taken into account.

For those wishing hotel/motel accommodation there is a variety of these residences in the neighbourhood for approximately

N.Z.\$40/day, bed only, G.S.T. not withstanding.

(iv) Registration

Registration fees are payable at the conference (though we'll take them any time ahead of time) and will be:

N.Z.\$95 for non members (giving membership for the year),

N.Z.\$88 for members,

N.Z.\$50 for students (which includes annual membership).

(v) Social Programme

The usual wine and cheese, cocktail parties and general riotous behaviour are guaranteed.

There will be an excursion. You will go on it. The exact details are a bit hazy as yet. Our intention is to show you many of the attractions of the Otago Peninsula; penguins, seals, albatross type things. Travelling by land, sea and, if you're prepared to flap hard enough, air we shall endeavour to provide something for everyone, even lunch.

To date we have not been able to pinpoint the exact, what you might call, cost of this noteworthy expedition but I can let you know that it will probably be less than \$N.Z.30.

Those who survive will be returned to their lodgings to recuperate before the next day's talks.

There will be a conference dinner, which, including drinks, should cost no more than N.Z.\$30/person. It would help the committee if you would indicate if you plan to attend the dinner. Also indicate if you are likely to be accompanied by guests to the dinner.

2. Notices

Wal Wallis has informed us that we now have a higher authority from whom we may seek assistance in combinatorial endeavours.

It would appear that one Francisco Faà di Bruno (probably best known in mathematical circles for his formula for the n^{th} derivative of a composite function) has taken the first step toward sainthood. Having obtained the rank of Venerable, he may now be prayed to for guidance in combinatorics.

3. Aus.M.S. Affiliation

Australian Mathematical Society - Special Interest Group

The matter of a formal relationship between Aus.M.S. and C.M.S.A. continues to rear its head. Enclosed is a copy of the rules of procedure laid down by Aus.M.S. for its Special Interest Groups. I suggest that we debate the pros and cons of the change through this newsletter and take a formal, final vote at the C.M.S.A. meeting in Canberra next August. This issue has dragged on far too long.

It seems to me that we have to address two questions:

(1) What are the benefits to C.M.S.A. and Aus.M.S.?

(2) What are the drawbacks to C.M.S.A. and Aus.M.S.?

If we are not sure that the advantages outweigh the disadvantages then we should maintain the status quo.

A copy of the "Rules of Procedure" along with comments by the Aus.M.S. secretary, Walter Bloom, are included with this newsletter.

Here are some views.

Kevin McAvaney:

The two societies have different purposes: Aus.M.S. serves mathematics in general, C.M.S.A. serves combinatorics in particular. What benefits and obligations would formal affiliation bestow on either society? Perhaps C.M.S.A. should formally affiliate itself with Australian Statistical Society, Australian O.R. Society, Australian Computer Society, N.Z. Mathematical Society, etc.? I suggest C.M.S.A.'s relationship with all other societies remains as now: friendly and informal. It should be noted that the termination clause in C.M.S.A.'s constitution acknowledges Aus.M.S.. The rules, as they stand, give Aus.M.S. control of C.M.S.A. without committing itself to any responsibility to the group. If however C.M.S.A. wishes to affiliate with Aus.M.S. I suggest the following amendments:

to 5(a) for financial flexibility: "... the amount thereof to be determined from time to time by the group.";

to 7 since 8 gives Aus.M.S. sufficient influence on the executive committee, and there is the problem of conducting elections for three positions independently so that at least two are filled by persons from a given set; "The Officers of the Group shall be a Chair, a Secretary and a Treasurer.";

delete 10 for flexibility and efficiency;

to 17, 18 20, 21, 22 and 26 since the main function of C.M.S.A. is to conduct an annual conference and the venues change each year these should require annual elections with the electoral procedures moved forward by one calendar month.

A copy of the "Rules Of Procedure" is included in this Issue of the newsletter..

4. Subscription Renewal

Members are reminded that the 1986 subscriptions for the CMSA fall due on 1st January. The rates are N.Z.\$7 (Aust.\$5) for those in full time employment and N.Z.\$4 (Aust.\$3) otherwise. Those remitting in U.S. funds please send U.S.\$5, (U.S.\$3) to cover bank charges. Prompt payment would be appreciated. Please make cheques, drafts etc. payable to the CMSA and post with full name and address to:

R. E. L. Aldred,
Dept. Maths & Stats,
University of Otago,
Box 56, Dunedin,
New Zealand.

De Olde Registration forme

Name: Prof./Dr./Mr./Mrs./Miss/Ms

(Please use BLOCK LETTERS and underline surname)

Mailing address: _____

Do you plan to submit a paper? ____

Title? _____

Knox College accommodation required for _____ persons from _____

until _____

Other accommodation required (Please specify) _____

I will/will not attend the conference dinner. I shall be accompanied by ____ guests

I will/will not attend the excursion. I shall be accompanied by ____ guests.

I am enclosing N.Z.\$20 as a deposit and _____ as prepayment of my registration.

THE AUSTRALIAN MATHEMATICAL SOCIETY
SPECIAL INTEREST GROUP

Combinatorial Mathematics Society of Australasia

RULES OF PROCEDURE

I - INTRODUCTION

1. The following Rules are to be read in conjunction with the constitution of the Australian Mathematical Society, in sequel to be referred to as the Society.

II - NAME, OBJECTS AND COMPOSITION OF THE GROUP

2. The Group shall be called the Combinatorial Mathematics Society of Australasia hereafter to be referred to as the Group.

3. The objects of the Group shall be to foster and promote combinatorial mathematics in Australia.

4. To further these objects, the Group may among other things:-

- (a) hold or participate in conferences, meetings, seminars, short courses, lectures or other events for members of, and visitors to, the Group;
- (b) sponsor joint activities with other bodies concerned with the areas covered by the Group;
- (c) publish the proceedings of appropriate conferences and meetings, as well as other material related to the work of the Group;
- (d) disseminate information and material relating to combinatorics and combinatorialists through its newsletter;

5. The Group shall consist of two classes of Members, namely:

- (a) Ordinary Members, who shall be those persons who are not members of the Society but who elect to pay an annual membership fee to the Group, the amount thereof to be equal to the Society's annual reciprocal membership subscription;
- (b) Dual Members, who shall be those members of the Society who request membership of the Group and who pay an annual capitation fee to the Group, to be determined from time to time by the Group.

III - OFFICERS AND EXECUTIVE COMMITTEE

6. The Executive Committee of the Group shall consist of Members of the Group, with its composition subject to the provisions of Paragraph 8.

7. The Officers of the Group shall be a Chair, a Secretary and a Treasurer, at least two of whom shall be Dual Members of the Group.

8. The Executive Committee of the Group shall consist of the Officers abovementioned and four further elected Members who shall be called Ordinary Members of the Executive Committee. At least half of the Ordinary Members of the Executive Committee shall be Dual Members of the Group. The President of the Society or the President's nominee shall be an ex officio member of the Executive Committee.

9. The Executive Committee shall manage the business of the Group and shall act to further the objects of the Group.

10. The Executive Committee of the Group must seek approval from the Council of the Society for the annual budget and the financial arrangements for any major undertaking.

11. The Chair or the Chair's nominee shall preside at all meetings of the Executive Committee. Four members of the Executive Committee shall constitute a quorum.

12. The Secretary shall keep a record of the activities of the Group and the Executive Committee, shall be responsible for the conduct of Postal Ballots, and shall do all such things for the use and service of the Group as appertains to this office, including the annual submission of a written report on the activities of the Group to both the Executive Committee of the Group and the Council of the Society.

13. The Treasurer shall collect and receive all funds on account of the Group and shall deposit the same in an interest bearing Society Account established in the name of the Group. Payments from this Account shall be made by cheques signed by the Treasurer and one other person nominated by the Committee. The Treasurer shall keep true accounts of the sums of money received and expended by the Group and shall annually submit a financial statement to both the Executive Committee of the Group and the Council of the Society. The annual financial statement shall be made available to any Member of the Group on request.

14.

(a) All members of the Executive Committee shall act in an honorary capacity.

(b) The Group may, from time to time, invite distinguished mathematicians to act as (honorary) Patrons of the Group.

IV - MEETINGS

15. The Executive Committee of the Group shall organise as it sees fit such meetings, conferences and seminars in furtherance of the objects of the Group.

16.

(a) Where fees are to be charged to cover expenses involved in the organisation and conduct of such meetings, conferences and seminars, Members of the Group may pay a discounted fee as determined by the Executive Committee.

(b) In matters relating to attendance at meetings the Group shall extend appropriate courtesies, as determined by the Executive Committee, to Honorary Members of the Society.

(c) In matters relating to publications of the Group, the Group shall extend appropriate courtesies, as determined by the Executive Committee, to Institutional Members of the Society.

V - BALLOTS AND ELECTIONS

17. Positions on the Executive Committee shall be declared vacant on January 31 of every second calendar year.

18. The Executive Committee of the Group shall be elected for a period of two years by Members of the Group.

19. Such elections abovementioned shall be by Postal Ballot, the Returning Officer to be appointed by the Executive Committee.

20. The Returning Officer shall notify in writing each Member of the Group of the call for nominations for Officers and Ordinary Members of the Executive Committee; this notification shall be given by October 31 of each election year.

21. Nominations for any or all of the Offices and Seats to be filled may be made by any two Members who are entitled to vote at the ensuing election, provided that the persons nominated are entitled to vote at the ensuing election and that the nominations are received by the Returning Officer no later than November 30.

22. Following the closure of nominations, the Returning Officer shall conduct a Postal Ballot which shall close by December 31.

23. Retiring Officers and Members of the Executive Committee shall be eligible for re-election to any position on the incoming Executive Committee.

24. Each Member who is entitled to vote shall have just one vote in respect of each Office and each Seat to be filled.

25. The Member who receives the highest number of votes for each single Office shall be declared elected, and those members who receive the (up to) four highest number of votes for Ordinary Members of the Executive Committee shall be declared elected. If four or fewer nominations are received for Ordinary Members then they shall be automatically elected.

26. Persons elected as Officers or Ordinary Members of the Executive Committee shall take up their respective positions on February 1 of the year following the elections.

27. The Executive Committee shall decide whether to fill casual vacancies on the Committee should they occur. Such vacancies shall be filled by appointment by the Committee or by Postal Ballot subject to the provisions of Paragraph 8.

28. In the extraordinary case where no election of Officers or Ordinary Members to the Executive Committee has taken place when due, the Council of the Society shall intervene and take whatever action it deems appropriate.

VI - AMENDMENT OF RULES

29. Any question concerning an alteration of this set of Rules of Procedure shall be decided by a special Postal Ballot restricted to Dual Members of the Group.

THE AUSTRALIAN MATHEMATICAL SOCIETY

School of Mathematical and Physical Sciences
Murdoch University
Murdoch WA 6150

Telephone (09) 332 2143

Secretary: Dr. Walter R. Bloom

23 July 1986

Professor D.A. Holton
Department of Mathematics and Statistics
University of Otago
PO Box 56
DUNEDIN
New Zealand

Dear Derek,

Further to the various discussions in May about the proposal for CMSA to become a Special Interest Group of the Society I have discussed the suggested Rules of Procedure (copy enclosed) with Cheryl Praeger, and some of the concerns that were raised. Perhaps I could address these in turn.

Paragraph 5(a). By specifying that Ordinary Members pay an annual membership fee to the Group of the amount equal to the Society's annual reciprocal membership (currently \$25) it is envisaged that they would in part be matching the Society's commitment to the Group. This is particularly important from the point of view of the Dual Members, who will see the Group benefitting both financially and from the organisational structure of the Society; they would not wish to heavily subsidise non-Society members.

I should point out that this membership fee, together with the capitation fee specified in 5(b), would be collected by the Society's Business Office and given to the Group. Based on the 1984 CMSA membership figures, this would mean the following:

Ordinary Members (71)	\$ 1775
Dual Members (31)	\$ 155
	<hr/>
	\$ 1930

The sum \$ 1930, together with the \$500 subvention guaranteed by the Society, should cover the basic running costs of the Group. Special support for conferences would be considered on application, as the need arises.

Paragraph 7. This has been modified to allow the possibility of one of the Officers of the Group not being a member of the Society.

Paragraph 13. It is quite standard in constitutions for the Treasurer to be the person with the responsibility to collect and receive all funds. Of course this would be delegated in specific instances, so that the funds are collected via a third party, for example, Conference Treasurer, Book Fund Treasurer and, indeed, our Society Treasurer. Notwithstanding such delegation, the Special Interest Group Treasurer would be ultimately responsible.

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Paragraphs 17, 18. It is appreciated that the main activity of the CMSA is centred around the annual conference. This would not appear to conflict with members of the Executive Committee holding two-year terms of office and, indeed, the latter would promote continuity. The Executive Committee acts as a focal point of the Group, something that is especially important for promoting contact with combinatorists and/or mathematicians outside the group (especially those residing overseas), not to mention other bodies.

The running of the annual conference, and any other such meetings, would be the responsibility of the Executive Committee. In practice the Executive Committee would appoint a conference director, who would then set up an organising committee.

Finally, all the facilities of the Society would be available to the Group including, for example, mailing through the Business Office and the services of the Auditor.

Council feels that the above provides an attractive package within which to promote closer ties between CMSA and our Society. The larger combined group would also have a stronger voice in dealing with Government and the various scientific bodies.

I look forward to hearing from you.

Yours sincerely,



Dr Walter R. Bloom

cc. Dr R.S. Anderssen
Professor C.E. Praeger