Other Business

(a) T. Murphy reported that it was hoped to run a conference
     on the Mathematics of Theoretical Computing.

(b) There would be a joint meeting with the LMS on Operator
     Theory in Dublin.   Easter 1986 was a possible date.

(c) It was agreed to query the possibility of reciprocal
     membership arrangements with the Institute of Mathematics
     and its Applications.

IRISH MATHEMATICAL SOCIETY

CONSTITUTION

1. The Irish Mathematical Society shall consist of Ordinary and Honorary
    Members.

2. Any person may apply to the Treasurer for membership by paying one
    year's membership fee.   His admission to membership must then be
    confirmed by the Committee of the Society.   Candidates for honorary
    membership may be nominated by the Committee only, following a proposal
    of at least three members of the Society.   Nominations for honorary
    membership must be made at one Ordinary Meeting of the Society and
    voted upon at the next, a simple majority of the members present being
    necessary for election.

3. Every Ordinary member shall pay subscription to the funds of the
    Society at the times and of the amounts specified in the Rules.

4. The Office-Bearers shall consist of a President, a Vice-President,
    the Secretary, a Treasurer.   The office of President or Vice-President
    may be held in conjunction with any of the other offices.

5. The Committee shall consist of the President, the Vice-President, the
    Secretary, the Treasurer, and eight additional members.   No person
    may serve as an additional member for more than three years consecut-
    ively.

6. There shall normally be at least 2 ordinary meetings in a session.

7. Notice of a motion to repeal or alter part of the Constitution shall
    be given at one Ordinary Meeting.   Written notice of one month shall
    be given to all members before the next Ordinary Meeting at which the
    motion shall be voted upon, being carried if it receives the consent
    of two-thirds of the members present.

8. One month's written notice of a motion to repeal or alter a Rule, or
    to enact a new Rule, shall be given to all members before the meeting
    at which it is to be voted upon, the motion being carried if it rec-
    eives the consent of a simple majority of the members present.

9. All questions not otherwise provided for in the Constitution and
    Rules shall be decided by a simple majority of members present at a
    Meeting.   Eleven ordinary members shall form a quorum for such
    business.

RULES

These rules shall be subject to the over-riding authority of the Constitution.

SUBSCRIPTIONS

1. Every Ordinary Member shall pay, on election to membership and during January in each succeeding session, an annual subscription to be determined by the Committee. A change in the annual subscription shall be ratified by a Meeting of the Society.

2. Ordinary members whose subscriptions are more than eighteen months in arrears shall be deemed to have resigned from the Society.

OFFICERS AND COMMITTEE

3. The election of the Office-Bearers and the additional members of Committee shall take place at the first Ordinary Meeting of each session.

4. The term of office of the Office-Bearers and of the Committee shall be two years.

5. On alternate years elections for the following positions will take place (a) President, Vice-President and half of the additional members of the Committee (b) Secretary, Treasurer and one half of the additional members of the Committee.

6. Each session shall commence on the 1st day of October and last until the following 30th of September.

7. The Committee shall meet at least twice during each session, the President to be convenor. Five shall form a quorum.

8. A Secretary shall keep minutes of the Meetings of the Society and of the Committee and shall issue notices of meetings to members resident in Ireland.

9. At the first Ordinary Meeting of each session the Treasurer shall submit a Financial Statement for the previous session, duly audited by two persons appointed by the Committee.

ADDITIONS

Institutional Members

The New University of Ulster (Coleraine)

Dublin Institute of Technology (Kevin St)

Maynooth Students

Therese Shore, Kieran Flanagan, Jacqueline Maher

U.C.D. Students

Henry McLoughlin, Nada Couzi, Annette Pilkington

N.I.H.E. Limerick

Dr M. Burke, Dr M.A. Rahman,

Mr J. Buckley, Mr A. Hegarty

Other Ordinary Members

Mr R. Jordan, Regional Technical College, Carlow

Dr C. Thompson, The University of Southampton, England

AMENDMENTS

Dr J.W. Bruce (ex UCC), Dept of Math., The University, Newcastle-upon-Tyne, England.

Dr P. Rippon (ex UCC), Faculty of Math., Open University, Milton Keynes, England.

Dr E. O'Riordan (ex Waterford), Regional Technical College, Dundalk.

Dr M. Stynes (ex Waterford), Maths Dept, University College Cork.

Dr J. Stynes (ex Waterford), Regional Technical College, Cork.

Mr M. Brennan (ex Athlone), Regional Technical College,
Waterford.

Dr M. Klimek (ex TCD), Maths Dept, University College Dublin.

ADVANCES IN LINEAR PROGRAMMING

Linear programming is perhaps the most important mathemat-
ical technique in use today, at least if importance is judged
by any economic or utilitarian measure. By some estimates
nearly one-fourth of the scientific computation time of all
the computers in the world is devoted to solving linear prog-
ramming problems. Efficient solutions to these problems can
save industry millions of pounds each month. Modern economics
and management science depend very much on solutions to linear
programming problems.

The first method of solving these problems was devised
during World War II by George Danzig (now of Stanford Univer-
sity) in an attempt to resolve the logistical problems of main-
taining steady supplies to distant troops subject to the cons-
traints of wartime scarcities. This method is called the
simplex method and since its development, enormous economic
benefits resulted from its use. In the mid-1950s, the Exxon
Corporation used it to improve the blending of petroleum prod-
ucts and saved 2% to 3% of the cost of its blending operations.
The application soon spread within the petroleum industry and
at the same time other industries began to adopt the method.
Today, "packages" of computer programs based on the simplex
algorithm are offered commercially to customers who pay size-
able fees for their use.

The algorithm relies on two key ideas: that the solution
must be one of the vertices of the polytope of feasible points,
and that the sure way to find it is to climb steadily uphill
(or downhill) along the edges. The number of vertices is
finite, but even in a routine problem, it can be enormous.
It is estimated that for the problem of allocating 2,000 lim-
ited resources to 2,000 products, the number of vertices of
the polytope is of the order of 2^{2000} or 10^{602}. Yet the