
THE ROYAL INSTITUTE OF NAVIGATION

Aims and Objects

The objects of the Institute are to unite in one body those who are concerned with or who are interested in navigation and to further its development. Navigation is conceived as applying to locomotion of all kinds and is perceived as encompassing aspects of: command and control, psychology and zoology, operational research, risk analysis, theoretical physics, operation in hostile environments, instrumentation, ergonomics, financial planning and law as well as electronics, astronomy, mathematics, cartography and other subjects traditionally associated with navigation.

The aims of the Institute are to encourage the creation and dissemination of knowledge through research and development, to co-ordinate information from all the disciplines involved, to provide a forum in which new ideas and new products can have the benefit of informed and professional scrutiny and to further education and communication.

The Institute initiates conferences and symposia on specific subjects and has a programme of meetings at which lectures are given and discussed. There are standing Special Interest Groups (SIGs) which keep under constant review pertinent aspects of navigation. The success of these Special Interest Groups is crucially dependent on the active involvement of members.

The Institute publishes *The Journal of Navigation* three times a year. It contains papers which have been presented at meetings together with the ensuing discussion, other original papers, selected papers and reports from Special Interest Groups, and book reviews. The Institute also publishes *Navigation News* six times a year which contains a full account of the Institute's proceedings and activities. This includes Branch News, a record of current navigational work, a diary of events, topical articles, news about Membership and advertising. A great deal of the Institute's work is international in character and is co-ordinated with that of similar organizations in other countries.

Membership

There are six classes of Membership of the Institute:

(1) HONORARY MEMBERS: Distinguished persons upon whom the Council may see fit to confer an honorary distinction.

(2) FELLOWS: Members, of at least three years' standing, holding certain qualifications laid down in the by-laws; these qualifications include having made a contribution of value to navigation.

(3) MEMBERS: Persons over twenty-one years of age who satisfy the Council of their interest in navigation.

(4) STUDENT MEMBERS: Persons under twenty-five years of age studying at a recognized school or university with a view to making navigation, or an allied interest, their career.

(5) CORPORATE MEMBERS: Organizations such as universities, navigation schools, government departments or companies, here and abroad, who are directly or indirectly interested in the science of navigation. Corporate Members are entitled to send representatives to all Institute meetings and to receive six copies of its publications. They are encouraged to take an active part in the Institute's work. Applications should be sent by letter addressed to the Director.

(6) RETIRED MEMBERS: Fellows or Members of 65 years of age or over who have paid no fewer than 6 annual subscriptions.

There is also Associateship of the Institute, which gives entitlement of membership to one Special Interest Group SIG, but not to receipt of the *Journal of Navigation*.

Subscriptions

Annual subscriptions to the Institute are payable in advance as follows:

Members and Fellows	£65.00
Student Members	£15.00
Corporate Members	£400.00 + VAT
Retired	£43.00

The Institute's financial year begins on 1 July. Members in any category who are elected after 1 January in any year are only due for one half of their subscription until 1 July, when the full subscription for the next year becomes due.

THE JOURNAL OF

Navigation

VOLUME 50 NUMBER 1 JANUARY 1997

C O N T E N T S

Vehicle Navigation, Location and Control – Keynote Address	1
Steven Norris, MP	
The Highways Agency Approach to Traffic Management	5
Mel G. Quinn	
ROMANSE Public Transport Information Systems	14
Steven Brown	
Collision Avoidance, Driving Support and Safety Intervention Systems	27
Simon P. Gilling	
Dynamic Route Guidance: the prospects for establishing a sustainable business	33
Ian Catling and Richard Harris	
Transportation Command, Control, Communication and Information Systems (C²I) ‘Lifting the Lid of Pandora’s Box’	41
Air Commodore D. F. H. Grocott	
Sailing Directions of the North Atlantic Viking Age (from about the year 860 to 1400)	55
Captain Søren Thirslund	
Air Navigation Systems. Chapter 6. Navigation and the Pioneering Flights Part I	65
Philip Steele	
The River Danube. An Examination of Navigation on the River	77
Lt Cdr R. W. Cooper	
Pedro Nunes’ Discovery of the Loxodromic Curve (1537). How Portuguese Sailors in the Early Sixteenth Century, Navigating with Globes, had Failed to Solve the Difficulties Encountered with the Plane Chart	85
W. G. L. Randles	
A Tanker Navigation Safety System	97
Brad Judson	
A New High Precision Wide Area DGPS System	109
V. Ashkenazi, C. H. J. Chao, W. Chen, C. J. Hill and T. Moore	
A Fuzzy Autopilot Optimized Using a Genetic Algorithm	120
Robert Sutton and Gareth D. Marsden	
Forum	132
Record	150
Reviews	151
List of Corporate Members	153



0373-4633(199701)50:1;1-T