

# International Association for Mathematical Geology

## NEWSLETTER

NUMBER 1, 1970

### 1.1 IAMG Newsletter

A council meeting of the IAMG was held at Kansas Geological Survey on 6 June 1970. It was decided by council to establish a Newsletter to carry news of IAMG's activities. The Editor is

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to whom items for inclusion should be addressed. For the time being, the Newsletter will be issued to all members as the need arises. It is included as a supplement in Geocom Bulletin and the first issue is being distributed to all on the Computer Contributions circulation list. Future issues will only be sent to paid up members. New members will be listed in the Newsletter.

### 1.2 IAMG Committees

#### PROJECTS COMMITTEE:

KLOVAN, JE - Chairman (Canada)  
ADLER, RE (West Germany)  
COOK, AL (U K)  
CRAIG, GY, (U K)  
HARBAUGH, JW (U S A)  
HUBAUX, A (Sweden)  
MARSAL, D (West Germany)  
NAIRIS, B (Sweden)  
ROBINSON, JE (Canada)  
SCHLEIGER, N (Australia)  
SERRA, J (France)  
SOUKUP, B (Czechoslovakia)  
van VALEN, L (U S A)

#### MEMBERSHIP COMMITTEE

LEA, G - Chairman (U K)  
HEMPKINS, WB (U S A)  
KNAPE, H (East Germany)  
MATSCHINSKI, M (France)  
PHILIPP, W  
SAHA, AK (India)  
WADATSUMI, K (Japan)

#### EDUCATION COMMITTEE

BONHAM-CARTER, G - Chairman (U S A)  
CRAIG, GY (U K)  
FORMAN, JMA (Brasil)  
HART, G (U S A)  
MANN, CJ (U S A)  
OKADA, H (Japan)  
SAHA, AK (India)  
SCHWARZACHER, W (U K)  
TONANI, F (Italy)

### 1.3 IAMG needs more members

One of the most practical ways you can help IAMG is to 'persuade' a colleague to join. Dues are very modest. The membership target is 500 at the end of 1970, and 1000 before the 1972 Montreal Congress. The attached application form may be photocopied if you can use more than one copy. These are the present advantages to IAMG Members:

1. Members receive IAMG Newsletter free
2. Members can order a personal copy of IAMG Journal at half-price, i.e. \$3.00 per issue. There were two issues of volume 1 1969, and there will be four issues of volume 2

1970. If you require the Journal, please fill up the address-blank on the membership dues form, or send your name and address to the Treasurer. The publisher (Plenum) will bill you as postage is extra.

3. Geocom Bulletin, established in 1968 as the monthly abstracting and information journal for mathematical geology is available to IAMG Members at US\$25 (or £10 if remitted in sterling) if their organisation already subscribes at the normal rate. Orders should be sent direct to the Publishers:

Geosystems  
P O Box 1024  
Westminster  
LONDON SW1  
England

4. By helping IAMG you will be helping yourself professionally - IAMG's strength is your strength.

### 1.4 Membership certificates and 1970 dues

All 390 Charter Members of IAMG will receive a special certificate, and all new members will receive a certificate of membership in due course. All known members should not have paid or been billed for 1970 dues. Please arrange payment quickly if you have not already done so. Dues are 5 Swiss Francs (preferably sent as 12 shillings sterling to avoid IAMG having to pay exchange charges).

### 1.5 IAMG Institutional and Corporate Membership

Apart from your individual subscriptions, possibly your organisation can become an Institutional or Company Member. Sustaining members and Patrons are also sought.

	Swiss fr.	dollar equivalent
Institution	25	(US\$7.50)
Company	100	(US\$25.00)
Sustaining Member	500	(US\$120.00)
Patron	5000	(US\$1200.00)

Any member knowing of an organisation that might be approached for any of these categories of membership is asked to write to the Membership Chairman.

### 1.6 IAMG history in next Newsletter

It is intended to include information about all previous IAMG activities in the next issue of the Newsletter. All who have played a part in IAMG affairs are asked to sent information to the Newsletter Editor by airmail. Include dates, papers presented, availability of Proceedings, etc.

### 1.7 Next IAMG Council Meeting in Czechoslovakia

Dr Vaclav Nemeč is arranging the next IAMG Council Meeting in Pribram, Czechoslovakia from 12-14 October 1970.

### 1.8 IAMG Journal

Papers are required by the Editor-in-Chief for the IAMG Journal. Please write to: Dr D F Merriam, Kansas Geological Survey, University of Kansas, Lawrence, Kansas 66044, USA.

### 1.9 Bibliography of Mathematical Geology

A Bibliography of Mathematical Geology is being prepared by Graham Lea. It is expected that there will be 5000 items in the first edition. Any Members having bibliographies that could be made available, or knowing of obscure publications, are asked to send them to the Newsletter Editor. Full acknowledgement would of course be made.

### 1.10 IAMG Local Groups

The formation of Local IAMG Groups is encouraged. At present there are groups in the UK (c/o G. Lea) and in Brazil. Others wishing to start local groups should write to the Secretary General and send information to the Newsletter for announcement.

### 1.11 IAMG - ISI London Meeting: Proceedings published

In September 1969, the International Association for Statistics in Physical Sciences organised a meeting jointly with the IAMG, during the International Statistical Institute Meeting. The papers presented have now been published in the Review of the ISI v38 no1 [ISI, 2 Oostduinlaan, The Hague, Netherlands. Dfls 15 -- or US\$4.25]

#### Statistics in Meteorology (5 papers)

#### Statistics in Hydrology

ALEXANDER, GN: Heavy rainfall as a stochastic process

BERNIER, J: Inventaire des modeles de processus stochastiques applicables a la description des debits journaliers des rivieres

BORGMAN, LE & AMOROCHO, J: Some statistical problems in hydrology

JENSEN, A: A characteristic application of statistics in hydrology

DISCUSSANTS: P E O'Connell, H Cramer, P J Delaporte, T O'Donnell, R D Elston, H C Hamaker, G Marlat, R Sneyers, E Stene

#### Statistics in Geology

COLE, AJ: A trend surface technique

GOWER, JC: Classification and geology

MATHERON, G: Structures aleatoires et geologie mathematique

ROBINSON, JE: Spatial filtering of geological data

DISCUSSANTS: F Chayes, D M Hawkins, R J Howarth, D G Kendall, W C Krumbein, G Lea, M Matschinski, W A Read, E L Scott, E H T Whitten

### 1.12 British Group Colloquium on Information Structure

The British Group of the IAMG held their inaugural meeting in London on 2 January 1970. The subject of the Colloquium was the 'Structure of Geological Information'. The account of the meeting is published in Geoscience Documentation v2, no2 1970 [Geosystems, P O Box 1024, London SW1, England £2 or US\$5].

#### Summaries of papers by

BROOKES, BC -- Chairman

COBLANS, H: The organisation of information

TERRELL, AC: Hardware for geological information

FELLGETT, P: Software for geological information

CLARKE, AM: Summary of morning session

CRAIG, GY -- Chairman

LEA, G: The present state of geological information

MCGEE, B: A diagram showing the structure of geological information

CLARKE, AM: A diagram showing the structure of information in geological engineering

DIXON, CJ & HOWARTH, RJ: A diagram showing that the structure of geological information is a function of the method of obtaining the information

### DISCUSSION

### 1.13 International Statistical Institute Meeting, Washington 1971

IAMG has been invited by Professor J Neyman to participate in the August 1971 ISI Meeting in Washington. IAMG has suggested 'Correlation techniques' as the topic. Further details will be announced when available.

### 1.14 IAMG at International Geological Congress, Montreal 1972

IAMG will institute the custom of having a Presidential Address at the IGC Meeting at the end of the President's term of office. The Projects Committee have received six topics from Council for the Montreal meeting:

1. Random processes in geological events
2. Mathematical and statistical aspects of strain measurement
3. Significance of percentage data problems in geology
4. Correlation techniques
5. Optical processes in geological analysis
6. General Session for any papers

Dr S C Robinson will coordinate arrangements with the IGC, and he has been elected a member of IAMG Council until the close of the IGC meeting.

### 1.15 A Current Assessment

Two years have passed since the foundation of the IAMG. What lessons have we learned since that time?

a. Mathematical geology as a title has been accepted by numerous geologists as a new branch of the geological sciences. The general probabilistic approach has been confirmed by reality.

b. It has been proved that computation is helpful in geological investigations, and it is impossible, in many cases, to get useful results in modern geology without computer applications. The relative importance of the computational approach in mathematical geology is not yet clear.

c. We are not able, in all cases, to obtain the solution of inverse problems in mathematical geology, but we understand that these solutions can be found by using stochastic models of geological processes as a basis. We must delve deeper and examine more closely our geological concepts in order to find mathematical patterns.

d. There have been cases of oversimplification in decision-making because of an inadequate statistical background on the part of the investigator. We must seek more informal contacts with appropriately specialised mathematicians.

We should attune ourselves to the lessons to be learned from science and industry.

AB Vistelius

London, 15 July 1970