

I.A.M.G. NEWS LETTER



More on an IAMG session at GSA:

As Dr. Mann pointed out in the previous News Letter, an informal IAMG assembly at GSA meetings would serve several useful purposes; I hope he perseveres in the matter. But whether or not we should continue" . . . dispersing mathematical papers into inappropriate technical sessions" is a very difficult question for which there simply is no unequivocal answer.

I think it is correct to say that very few of us are deeply concerned with generating a new, separate discipline, and that most of us are primarily concerned with contributing in novel ways to existing disciplines. We certainly do this less effectively if we are unaware of comparable novel methods or applications being developed in other disciplines by other numerical-, statistical- or mathematical-geologists. But we can't do it at all if we get out of touch with, and lose our identities in, the specific disciplines to which we hope to contribute. Concentration of papers in our own sessions avoids the first difficulty; dispersion of our papers according to subject matter specialty avoids the second. But it's pretty clear we can't do both at the same time; the dilemma has two horns, and we can't get off one without getting stuck on the other.

Not having been at the Miami meeting, I am quite prepared to believe the situation there was even more chaotic than usual. And I would be delighted to attend a half-day session on mathematical geology at Salt Lake City. But I think it may be useful to point out that the programming problem Dr. Mann raises is neither fundamental nor soluble. It is practical, unavoidable, and insoluble. There are only two directions we can go, both wrong. And we can't stand still. So, after moving for a time in one, we proceed to move for a time in the other. One may be unhappy about the rate at which the pendulum moves, but if I am right about our general orientation and intent it would be unwise to attempt to stop it at either end of its swing.

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Centenary of Pioneer Geomathematician:

Rudolf Gottlieb Viktor Eigen (1833-1876) is remembered by all mathematical geologists for his elucidation of the matrix properties that bear his name. Less well known are his pioneer mathematical investigations of glacial topology that distinguish him as possibly the true "father of mathematical geology." Eigen was born in the Austrian mountain village of Heiligenblut, the second son of a local pastor and, following a brilliant student career at the University of Göttingen, became the youngest professor of mathematics in the history of that illustrious university. The stocky young professor was highly popular with his students although his stringent academic demands earned him the nickname of "Eiger" (ogre). Eigen's somewhat bohemian lifestyle resulted in conflict with the university authorities and ultimately led to his enforced resignation following a scandal that rocked the university and purportedly involved no less than five professors' daughters. The embittered Eigen returned to Heiligenblut and singlemindedly devoted himself to his second love of mountaineering. The mathematician eked out a modest living by acting as mountain guide for rich Victorian climbers and supplemented his income by delivering invited lectures to mathematical societies in England and France. Eigen was acquainted with many of the prominent European mathematicians of the day, including Charles Dodgson ("Lewis Carroll") who may have used him as the inspirational basis for the Alice character, "the White Rabbit." The Austrian was also a gifted ama-

R. G. V. Eigen (continued):

teur chess player who drew with Morphy in an exhibition match in Paris, using a highly unorthodox opening (still known as the "Eigen Gambit") that anticipated Réti's hypermodern school by some fifty years. Eigen published little and is chiefly remembered for his monumental "Überbrückungsschlüsse der Zahlen" (out of print for many years) and his fragmentary and vituperative correspondence with Cayley (originator of matrix algebra). Eigen's life was prematurely cut short when he fell to his death in a crevasse on the Pasterzen glacier following a successful ascent of the Grossglockner. On the centenary of his death, a bronze plaque will be unveiled at a bend of the Hochalpenstrasse overlooking the Pasterzen. The plaque's inscription commemorates the distinguished mathematician's achievements and will include mention of Eigen's pioneer geomathematical studies. Would IAMG readers familiar with other biographical details or possessing memorabilia of Prof. Eigen please send this information to the Office of the Western Treasurer for transmittal to the Rudolf Gottlieb Viktor Eigen Memorial Committee.



SEDIM-NICE program:

IAMG will sponsor a technical session at SEDIM-NICE, convened by Prof. D.F. Merriam, Secretary-General. Titles of the papers to be presented include:

- B. Buchbinder and D. Gill, Geological Survey of Israel, Numerical classification of multivariate petrographic presence/absence data by association analysis in the study of the Miocene Ziqlag reef complex of Israel.
- M.W. Clark and I. Clark, University of London, A sedimentological pattern recognition problem.
- C.D. Conley, Kansas Geological Survey, Grain-size measurement by image processing.
- J.C. Cubitt, Institute of Geological Sciences, G-EXEC, a software package for the management and analysis of sediment data.
- J.C. Davis and F.W. Preston, University of Kansas, Structure of pores in clastic sediments.
- J.H. Doveton, Kansas Geological Survey, Multi-dimensional scaling ordinations of sandstone and sand depositional environments.
- S. Henley, Institute of Geological Sciences, Some new multivariate techniques for the analysis of sediments.
- G. Lea and E. Perrin, Geosystems, London, Information theory and sediments.

- D. Marsal, Gewerkschaften Brigitta und Elwerath, Simulation technique of matching and its stability.
- W.A. Read, Institute of Geological Sciences, An assessment of some quantitative methods of comparing lithological successions.
- R.A. Reyment, P.Y. Berthou, and B.P. Moberg, Paleontological Institute, Uppsala University, Statistical recognition of environments in Lower Cretaceous sediment of the Algarve, Portugal.
- K.P. Thirvikramaji and D.F. Merriam, Syracuse University, Comparison of trend surface maps: a cluster analysis approach.



1975 Corporate and Academic Members:

The International Association for Mathematical Geology wishes to acknowledge the generous support of the following Corporate and Academic Members. Their contributions are helping the Association to grow and will enable us to expand our services to the profession. In these times of unsettled world economics, the support provided by our Corporate and Academic Members is especially welcome!

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Canadian Publications:

"Computer use in projects of the Geological Survey of Canada," by T. Gordon and W. W. Hutchison (Paper 74-60).

"Computer-based systems for geological field data (an international state-of-the-art review for 1973)," by W. W. Hutchison (Paper 74-63).

Both available from the Geological Survey of Canada, Publications-Information Office, 601 Booth St., Ottawa, K1A 0E8.

Who Says Nobody's Interested?

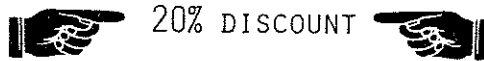
The AAPG Research Conference on Probability Methods in Oil Exploration, to be held at Stanford University this August, was sold out in two days after it was publicly announced! The Conference could only accept 65 members, and at least that many more were turned down. This augurs well for the IAMG session on exploration strategy to be held at the IGC.

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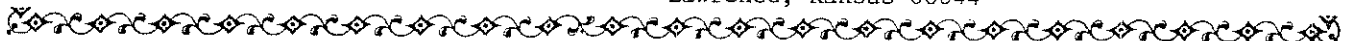
Practical Applications of Computer Mapping:

The practical use of Trend-Surface Analyses in the Geological Sciences; Computer Applications in Land-Use Mapping and the Minnesota Land Management Information System; The Evaluation and Prediction of visual clustering in maps symbolized with proportional circles; The Relevance of Cartography; Compilation of Data for Computer-Assisted Relief Cartography; Subject Index; Author Index. 378 pages. Published by John Wiley & Sons (1975).

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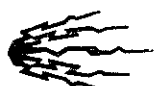
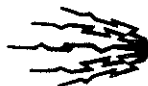

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COGEODATA

COGEODATA, the IUGS committee on storage, automatic processing, and retrieval of geological data, has been restructured into five working groups under the direction of the COGEODATA chairman, W.W. Hutchison of the Canadian Geological Survey and COGEODATA secretary C. F. Burk, Jr., of the Canadian Centre for Geoscience Data. The five groups are

- I. Data Capture and Display, A.L. Clark (USA), chairman.
- II. Data Management Systems, J. Hruska (Czechoslovakia), chairman
- III. International Aid, D.F. Davidson (USA), chairman
- IV. Public Information, G.Y. Craig (U.K), chairman

- V. Standards, H. de la Roche (France) and T. Hugi (Switzerland), chairmen

COGEODATA and the IAMG share responsibility for guidance on matters related to systematic recording of data and statistical analysis for the International Geological Correlation Programme (IGCP). COGEODATA will be primarily responsible for specifications on minimum data content, standards, and formats for specific data.

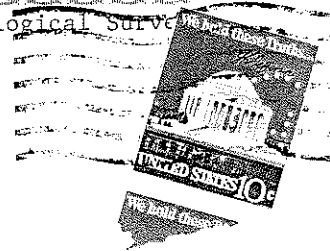
A COGEODATA Newsletter can be obtained by writing the Secretary,
Dr. C. F. Burk, Jr.
Canadian Centre for Geoscience Data
580 Booth Street
Ottawa, Ontario, Canada K1A 0E4



Prof. Eigen leading a party of Victorian sightseers across the Pasterzen Glacier

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