

# IAMG

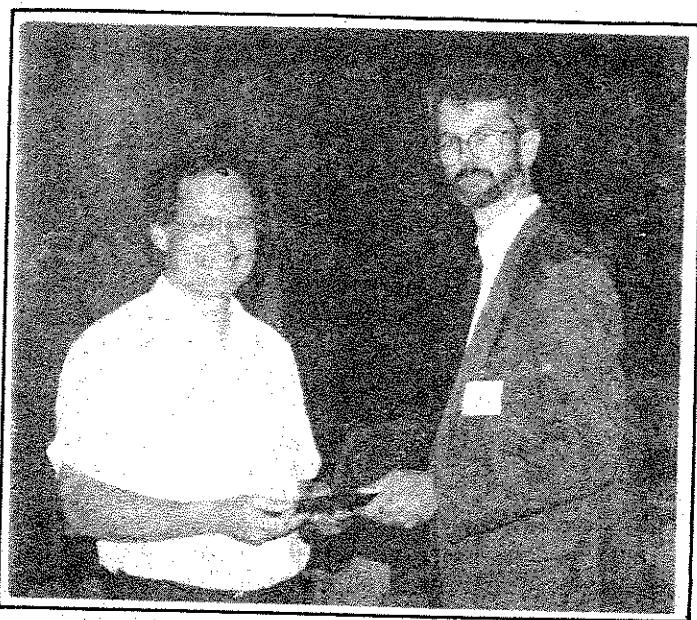
INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY NEWSLETTER  
Vol. 1, No. 45, October, 1992

## Troia a Success On to Wollongong

**Troia, Portugal** played host to the Fourth International Geostatistics Congress, September 13 - 18, 1992. Troia is a lovely resort city situated on the Atlantic coast, fifty kilometers south of Lisbon, reached via ferry boat from Setubal. This Congress witnessed 196 [pre-registered] participants, representing an aggregate of 27 countries. Two parallel sessions were organized encompassing the following themes: **theory, petroleum, environment, soil, mining, hydrology, human sciences, and natural resources.**

Several themes emerged from this meeting. One, conditional simulation seems to be enjoying renewed interest, especially for aquifer/reservoir modeling. Two, intriguing applications of kriging were presented for epidemiological studies and also for botanical studies (survey of gypsy moth damage in the eastern United States). And, three, whether an accurate reflection of current practice or not, mining applications were relegated to a minor presence at this conference, ironic given the historical perspective of geostatistics. This presents somewhat of an overview of the proceedings.

**Dr. Amilcar Soares**, of Centro de Valorizacao de Recursos Minerais, Lisbon, Portugal, organized this Congress. In gratitude, participants at the Congress presented Soares with one of the official Congress posters, signed by the participants. In addition to the Congress, itself, Soares organized a formal dinner at Palmela Castle in Setubal. Prior to this dinner, **Dr. Andre Journal** was presented the **IAMG Krumbein Medal** by **Dr. Michael Hohn**, newly elected president of IAMG; Journal won this award last year, but its formal presentation was delayed for the Troia Congress.



Dr. Andre Journal (left) accepts Krumbein Medal from Dr. Michael Hohn.

## University of Wollongong Selected To Host 5th Geostat Congress

All participants at the 4th International Geostatistics Congress voted to accept the **University of Wollongong's** proposal to host the 5th International Geostatistics Congress in 1996. This proposal was presented by **Dr. Ernest Baafi**. Wollongong is a port city in southeastern Australia, south of Sydney, having a population, with suburbs, of 155,160. Wollongong's proposal was one of three to host the 5th Congress; the other two were submitted by the **University of South Africa, Pretoria** and the **University of Nevada, Reno (U.S.A.)**.

# INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY

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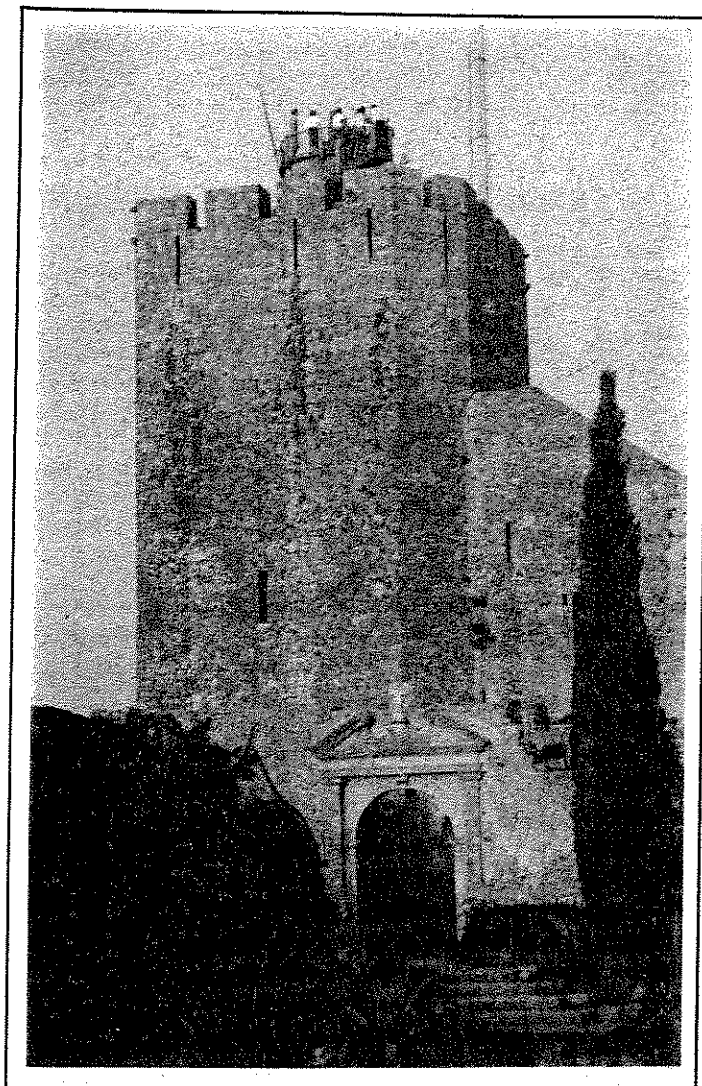
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Troia Geostat participants enjoy view from atop Palmela Castle.

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Contributors to this issue: Richard McCammon, Michael  
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fax: 702-784-1766; e-mail: carr@equinox.unr.edu.

**IAMG Archivist: Dr. Dan Merriam**, Stratigraphic Studies  
Group, Box 153, Wichita State University, Wichita, KS  
67208; Dan is calling for all materials essential to the  
history and operation of IAMG be sent to him for  
archiving (photos, memos, documents, correspondence,  
etc.).

# THE PRESIDENT'S FORUM

**Editor's Note:** Beginning with this issue of the *IAMG Newsletter*, a regular feature, *The President's Forum*, is established. This forum is an editorial, written, in this case, by IAMG President, Michael Hohn.

"I am honored to serve as President of the IAMG, and look forward to four years of development and change. The past three years saw the creation of a new journal, *Nonrenewable Resources*, and expansion of *Computers and Geosciences* to ten issues per year. This *Newsletter* is expanded and now appears on a regular, twice-a-year schedule in spring and fall. *Mathematical Geology* continues to be the IAMG's flagship journal.

But, the IAMG cannot afford to sit still and watch the world change around us. For the first time since the IAMG's founding in 1968, geologists throughout the world are not limited by official policies in their ability to join associations such as the IAMG. With economies improving in eastern Europe, prospective members should find it easier to become regular members. As this happens, the center of gravity of IAMG membership will move eastward. With change comes the need for your officers and the IAMG to respond.

Knowing that you all have ideas, opinions, and needs, I have decided to get the ball rolling by sharing my own views on matters concerning the IAMG. In this way, I hope to generate some discussion and guidance.

## EDUCATION

One IAMG-sponsored symposium at the International Geological Congress in Kyoto, Japan, had the theme, "50 Years of

*Mathematical Geology.*" In a retrospective of this type, it is natural for people to compare where we stand today in relation to the 1960s, or earlier. Several founders of the IAMG were present. The symposium closed with a lively discussion of mathematical geology in the education of today's geologist. All seemed to agree that little progress is being made. Few geology students are required to learn classes. Most need to go outside the department to take courses in quantitative methods.

Time after time, I have seen graduate students being told to include some quantitative analysis in their thesis or dissertation, yet they've never been required nor encouraged to take a class on the subject. Unprepared, the student only gets an unpleasant experience for his or her effort. The more adroit students find out how to practice cook-book statistics, but the superficiality of their work is beyond analysis.

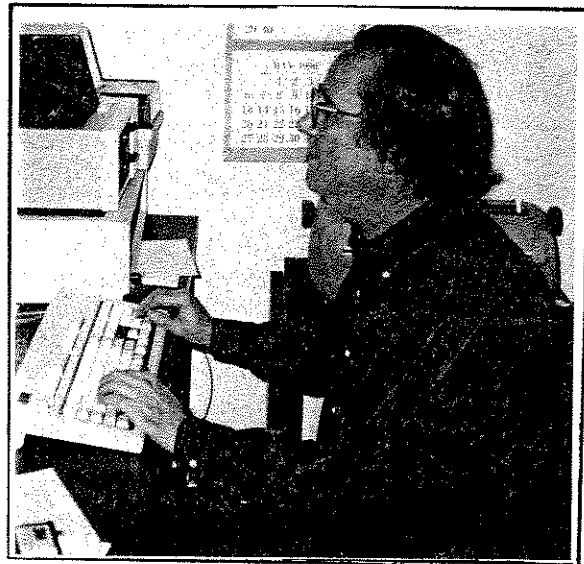
This raises several questions: How should mathematical geology be introduced into the curriculum? What successes have departments with such classes had? If not a class on its own, how can mathematical geology be embedded in "core" classes? What subjects comprise a sound basis in mathematical geology? What do prospective employers see as important?

I am in the process of setting up a study group to answer these questions. If you are interested in taking part, give me a call."

Michael Ed. Hohn

# 29th INTERNATIONAL GEOLOGICAL CONGRESS: IAMG AWARDS/SESSIONS

The 29th International Geological Congress was held August 24 - September 3, 1992, in Kyoto, Japan. As always, IAMG plays a major role in this Congress. This year, western treasurer, **John Kork**, newly re-elected for 1992-1996, was awarded IAMG's **Distinguished Service Award** for his dedicated and loyal service as treasurer and handler of IAMG's burgeoning publications. IAMG president, **Dick McCammon** presented **Nishiwaki-Nakajima**, IAMG's Special IGC Councillor for 1989-1992, IAMG's **Special Commendation Award** for his efforts in successfully organizing IAMG's scientific program as part of the 29th IGC. Dick McCammon also presented **Zhao Pengda**, newly elected IAMG Special IGC Councillor for 1992-1996 (the next IGC will be held in Beijing, China), the **Krumbein Medal** for 1990.



John Kork, IAMG Western Treasurer, was awarded IAMG's *Distinguished Service Award* during the 29th IGC in Kyoto, Japan.



Dick McCammon (left) presents Nishiwaki-Nakajima (right) with IAMG's *Special Commendation Award*.



Dick McCammon presents Zhao Pengda with the *William Christian Krumbein Medal* for 1991.



(Photo at left): Group photo of participants at the *International Symposium on Mineral Exploration, 1992 (ISME '92)* held September 7 to 8, University of Tokyo, Tokyo, Japan. Photo taken in front of Sanjo Conference Hall where conference took place. Kneeling in front from left to right are Toshiaki Ueki, Secretary Treasurer, Ryoicha Kouda, Secretary General, and Tetsuya Shoji, Chairperson, respectively.

# Nemec 1991 Krumbein Medallist

Vaclav Nemec, IAMG Eastern Treasurer, has been selected as the **Krumbein Medallist** for 1991. Nemec has enjoyed a long and distinguished career as a geologist and has been a devoted member to IAMG. In particular, Nemec is recognized for his participation in the affairs of IAMG since its inception, and his leadership in organizing the Pribram meetings. Of course, as this issue of the Newsletter reports, Nemec is playing the major role in organizing the **IAMG 25th Anniversary Meeting** in Prague, Czechoslovakia.

The Krumbein Medal was presented to Vaclav Nemec by outgoing IAMG President, **Dick McCammon**, at the International Geological Congress held last August in Kyoto, Japan.



Dick McCammon, President, presents the William Christian Krumbein Medal for 1991 to Vaclav Nemec, re-elected IAMG Eastern Treasurer for 1992-1996.

# IAMG Financial Report

The following two documents, photographically reduced for inclusion in the Newsletter, are received from western treasurer, **John Kork**. These pages constitute the financial report for 1992.

## INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY BALANCE SHEET -- CASH BASIS Years Ended December 31, 1991 and 1990

	1991	1990
<b>CURRENT ASSETS</b>		
Cash in checking	\$ 876	\$ 723
Cash in money market accounts	83,152	47,120
	<u>84,028</u>	<u>47,843</u>
<b>OTHER ASSETS</b>		
Investments - at market value		
U.S. government securities mutual fund	60,053	51,702
Short-term world income funds	30,617	30,306
U.S. Treasury notes	21,950	20,700
GNMA unit trust accumulation program mutual fund	2,567	2,161
GNMA series E securities mutual fund	646	776
GNMA series J securities mutual fund	424	432
	<u>116,257</u>	<u>106,077</u>
<b>TOTAL ASSETS</b>	<u>\$ 200,285</u>	<u>\$ 153,920</u>
<b>LIABILITIES</b>	\$ --	\$ --
<b>FUND BALANCE</b>		
Balance at beginning of year	153,920	89,634
Net unrealized gain (loss) during the year on non-current investments - see accompanying note	6,111	1,480
Excess of revenue over expenses for the year	40,254	62,806
Balance at end of year	<u>200,285</u>	<u>153,920</u>
<b>TOTAL LIABILITIES AND FUND BALANCE</b>	<u>\$ 200,285</u>	<u>\$ 153,920</u>

## INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY STATEMENT OF REVENUE AND EXPENSES -- CASH BASIS Years Ended December 31, 1991 and 1990

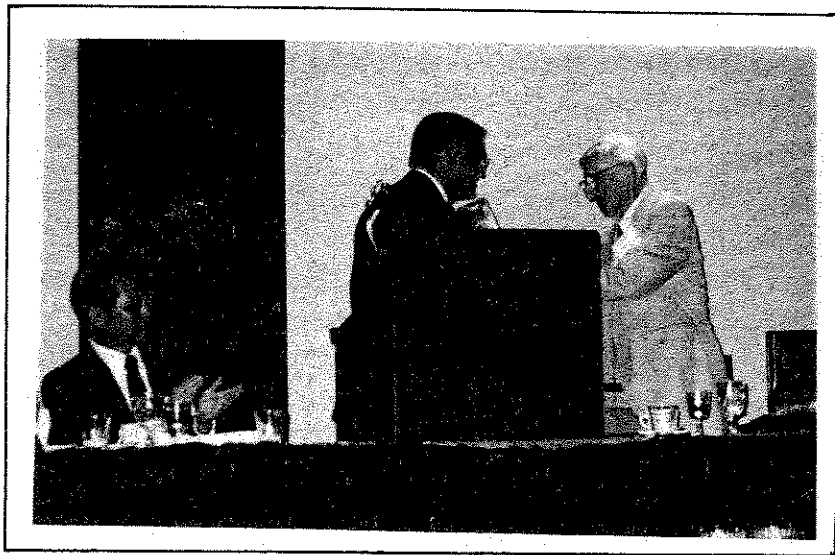
	1991	1990
<b>GROSS REVENUE</b>		
Membership dues and monograph orders		
For current year	\$ 36,775	\$ 34,530
For next year (received early)	8,802	--
Royalties from publishers	36,697	71,211
Interest income		
Checking and money market accounts	3,488	4,011
U.S. Treasury notes	1,725	815
Short-term world income funds	3,280	716
GNMA-series E, J and accumulation trust	339	357
Dividend income - U.S. government securities fund	4,184	4,002
	<u>55,290</u>	<u>115,642</u>
<b>GENERAL AND ADMINISTRATIVE EXPENSES</b>		
Journal subscriptions and membership dues	33,207	28,484
Monograph orders	3,368	5,814
Travel expenses	3,898	2,106
Meetings	--	4,421
Grants	3,800	--
Journal of nonrenewable resources (start up)	2,936	--
Membership promotion	1,478	2,876
Postage	576	995
Supplies and printing	820	898
Newsletter	4,314	6,010
Legal and accounting	480	510
Investment expense and bank charges	762	318
Application fee - tax exemption	--	300
Miscellaneous	182	104
	<u>55,036</u>	<u>52,826</u>
<b>EXCESS OF REVENUE OVER EXPENSES</b>	<u>\$ 40,254</u>	<u>\$ 62,806</u>

# Remembering a Friend

Dr. John C. Griffiths, professor emeritus, Pennsylvania State University, and IAMG'S first Krumbein Medallist, passed away May 31, 1992. It is fortunate he was able to receive the **Distinguished Achievement Award** at APCOM '92 (his selection for this award was featured in Issue No. 44 of the IAMG Newsletter). We are fortunate to have had **Dr. Griffiths** as a member of IAMG. A memorial to him will appear in a future issue of **Mathematical Geology**.



Danie and Ansi Krige (left side) and John and Nan Griffiths (right side) meet up before dinner at the IAMG booth and APCOM '92.



Following the dinner, Danie, on behalf of the International Council for APCOM, awarded **John Griffiths** the Distinguished Achievement Award. Danie Krige was a previous recipient of this prestigious award. Dr. Y.C. Kim, University of Arizona, is seated to the left of the podium.

# 25th Anniversary Meeting

Organization for the **IAMG 25th Anniversary Meeting** is progressing well. The organizing committee consists of: **Dan Merriam**, Chair; **Frits Agterberg**, **Peter Dowd**, **Andrea Forster**, **Michael Hohn**, and **Vaclav Nemeč**. This meeting is slated for 10-15 October, 1993, in **Prague, Czechoslovakia**. Headquarters for the meeting is the Hotel Cristal in Prague.

In addition to the organizing committee, a Technical Program Committee has been established, consisting of **John Davis** and **Jan Harff**. The Abstract Editor is **John Mann**.

Tentatively, sessions are proposed on: Spatial Estimation in the Earth Sciences; ES, AT, and Neural Networks - Paths to the Future; and Emerging Geomathematical Concepts. Abstracts are still being accepted, but please send them as soon as possible; from North and South America, send to **John Davis**, Kansas Geological Survey, University of Kansas, Lawrence, KS 66047. From Europe, Africa, Asia and Australia, send to **Jan Harff**, Institute for Baltic Sea Research, Seestr. 15, 0-2530 Warnemudende, Germany.

# MEETINGS

## Geostatistics For The Next Century

This meeting is an International Forum in honor of **Dr. Michel David** for his contribution to Geostatistics and will be held June 3-5, 1993, in Montreal, Quebec, Canada.

This forum has an unconventional format. It will include scheduled and surprise speakers in the morning and late afternoon sessions, discussion groups in the early afternoon and evening sessions, and "social" debates in the evening. A scientific publication of volunteered articles is planned. **FOR FURTHER INFORMATION, PLEASE CONTACT:** Roussos Dimitrakopoulos, Department of Mining and Metallurgical Engineering, McGill University, 3480 University Street, Montreal, Quebec, Canada H3A 2A7. Tel: (514) 398-4379 (or 4373); Fax: (514) 398-7099.

## XXIV APCOM

The Canadian Institute of Mining, Metallurgy and Petroleum will host the XXIV APCOM (International Symposium on Application of Computers and Operations Research in the Mineral Industry) October 31-November 3, 1993, at the Centre Sheraton, in Montreal, Quebec, Canada.

Topics of this Symposium will include: geological and geostatistical modeling of mineral deposits; project development and mine valuation; optimization of rate of production and cut-off grade; design of mine, concentrator, and smelter; long, medium and short range production planning, dispatching and control of mine, concentrator and smelter; in-situ data acquisition, monitoring, automation and robotization; maintenance planning; mineral economics and market analysis; mineral industry data networks; computer graphics - fractals, interactive, 3-D, simulation, animation and virtual reality; and expert systems.

For more information, please contact: **Prof. Jorgen Elbrond**, Department of Mineral Engineering, Ecole Polytechnique, P.O. Box 6079, Station A, Montreal, Quebec, Canada, H3C 3A7; tel: (514) 340-4923.

## 1993 International Geoscience and Remote Sensing Symposium (IGARSS'93)

The theme of IGARSS'93 emphasizes the capability of remote sensing to understand global environment for human survival and to manage natural resources. The conference will be held August 18-21, 1993, at Kogakuin University, Tokyo, Japan. Abstracts for papers will be accepted until **January 31, 1993**. For a photocopy of the announcement for this conference, please contact **J. Carr**, address shown on page 2 of this Newsletter.

## Fourth Global Warming Conference

The Fourth International Conference on the Scientific and Policy Issues Facing All Governments, **GLOBAL WARMING - A Call for International Coordination**, will be held April 5-8, 1993, in Chicago, Illinois (U.S.A.). A Call for Papers has been issued, with abstracts due by November 16, 1992 (with papers due by February 15, 1993). If you would like a copy of the call for papers, please fax **J. Carr** at (702) 784-1766 with your fax number; an immediate response will be initiated.

## Canadian GIS Conference

The Fifth International Conference on Geographic Information Systems will be held March 23-25, 1993, in Ottawa, Ontario, Canada. For information, please contact: **Lou Aubrey**, Director, The Canadian Conference on GIS, 615 Booth St., Room 403, Ottawa, Ontario K1A 0E9, CANADA; tel: (613) 995-0266; fax: (613) 995-6001.

## SIAM Conferences

The calendar for SIAM (Society for Industrial and Applied Mathematics) Conferences, Meetings, Symposia, Tutorials, and Workshops, is available. Please contact **J. Carr**, address shown on page 2 of this Newsletter, for a copy of this calendar. Or, write to **SIAM Conference Coordinator**, 3600 University City Science Center, Philadelphia, PA 19104-2688 (U.S.A.); tel: (215) 382-9800; fax: (215) 386-7999; e-mail: [meetings@siam.org](mailto:meetings@siam.org).

## Fractals and Dynamic Systems

The International Symposium on Fractals and Dynamic Systems in Geosciences will be held April 1-3, 1993, at **Johann Wolfgang Goethe-University, Frankfurt/Main, Germany**. It is the intention of the conference to bring together colleagues from different fields of geoscience who are involved in the different aspects of applying methods of fractal geometry and nonlinear systems in geoscientific research. **The deadline for abstracts is December 31, 1992**. For a copy of the Call for Papers, write to **J. Carr**, address shown on page 2 of this Newsletter. Or, please write: **Dr. Jorn H. Kruhl**, Geol.-Palaont.Institut, JW Goethe-Universitat, Senckenberganlage 32, D-6000 Frankfurt/Main, Germany.

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