

# SPOTLIGHT

## on APCOM '84

by A.N. BROWN\*

The Eighteenth International Symposium on the Application of Computers and Mathematics in the Mineral Industries was held in London from 26th to 30th March, 1984. The Symposium was organized by the Institution of Mining and Metallurgy under the leadership of Mr M.J. Cahalan, Chairman of the Organizing Committee. The venue chosen was the Royal School of Mines, Imperial College of Science and Technology, in South Kensington. Some 300 delegates from all parts of the world attended, which included a delegation from South Africa that numbered about 20 persons.

This extremely successful series of international meetings was begun in 1961 in Tucson, Arizona, and has grown in strength and importance over the years. The arrangement of the symposia is regulated by the International Council for APCOM under the Chairmanship of Professor R.V. Ramani (U.S.A.), the other current members being Professor J. Elbrond (Canada), Dr Thys B. Johnson (U.S.A.), Professor Young C. Kim (U.S.A.), Professor D.G. Krige (R.S.A.), Professor A.J. Lynch (Australia), Professor C.T. Shaw (U.K.), Dr A. Weiss (U.S.A.), and Professor F.L. Wilke (F.R.G.). There is no doubt that the enthusiasm and dedication of this small group of people and the excellent working relationship that exists between them are responsible for the continued success of APCOM meetings.

### Opening

APCOM '84 was opened by Mr K.B. Smale-Adams, President of the Institution of Mining and Metallurgy, in the Great Hall, Sherfield Building. Professor D.G. Krige (R.S.A.) delivered the Eighteenth Sir Julius Wernher Memorial Lecture of the Institution of Mining and Metallurgy, which was entitled 'Geostatistics and the Definition of Uncertainty'. In 1983, Professor Krige was awarded the William Krumbein Medal of the International Association for Mathematical Geology, but, since no appropriate opportunity had come about for the presentation, it was made by Dr Howe, Vice President of the IAMG, after Professor Krige had delivered his lecture.

### Technical Programme

The technical programme consisted of some 85 papers by authors from 21 countries. The general format was a plenary session followed by three parallel sessions. Main themes of the papers could be grouped together under the following headings, with the number of papers in each cate-



**Professor D.G. Krige receiving the 1982 William Krumbein Medal from Dr Howe, Vice President of the International Association for Mathematical Geology.**

gory shown in brackets: Exploration (8); Mine Design and Operations—Surface Mining (9) and Underground Mining (19); Mineral Processing (11); Geostatistics and Ore Reserve Estimation (11); Financial Valuation and Planning (7); Information Retrieval (3); and Computer Technology (3).

Many papers provoked stimulating discussion. Authors' replies to questions, together with the essence of the discussions, are expected to be published in the *Journal of the Institution of Mining and Metallurgy*.

### Exhibition

The APCOM '84 Exhibition was held in a hall in the Sherfield Building. Fourteen companies from Europe, America, South Africa, and Canada participated in the

\* Professor of Mining Engineering, University of Pretoria, Hillcrest, 0083 Transvaal.

© The South African Institute of Mining and Metallurgy, 1984.  
SA ISSN 0038-223 X \$3.00+0.00.



**Professor R.V. Ramani (Chairman, APCOM Council), Mr M.J. Cahalan (Chairman, Organizing Committee), Mr K.B. Smale-Adams (President, IMM), Dr Howe (Vice President, IAMG), and Professor D.G. Krige.**

exhibition, at which computer hardware, software, and services offered by the companies was on display. Although most of the exhibits were of high standard, the whole exhibition was much smaller than one would have expected. It would have been better to have had the exhibition closer to the conference halls.

#### **Visits and Tours**

Wednesday, 28th March, was a free day on which delegates could visit the exhibition or participate in a number of technical visits that were arranged in and around London. The purpose of the visits was to illustrate computer applications in mineral-related industries such as the use of computer graphics, satellite imagery interpretation, and application in geophysics, ore-reserve estimation, and mine planning. Visits to other places of interest such as the London Stock Exchange, the London Metal Exchange, and the Institution of Mining and Metallurgy were also available.

Two short post-symposium technical tours were arranged and were well patronized. One tour covered the south-western part of England, centred mainly in the historic Cornish tin-mining district. The other tour covered the north-eastern part of England, centred in north Yorkshire, where computer applications to design and control in aluminium, steel, chemicals, and coal were visited.

#### **Workshops**

An important part of APCOM '84 was the two three-day short courses-cum-workshops held immediately prior to the Symposium, and these were well supported. The first

workshop concerned the subject of 'Financial Evaluation of Mining Projects'. It covered a practical introduction to the use of computers in the evaluation of mining practice through consideration of various technical and financial models, as well as suitable computer programmes. The group workshop utilizing the excellent computer facilities at Imperial College allowed participants to get hands-on experience. The second short course was concerned with the use of computer graphics and microprocessors. This very interesting course dealt with the state-of-the-art, engineering applications in the minerals industry, and computer graphics applications within the National Coal Board.

#### **Proceedings**

The Programme Committee, under the chairmanship of Professor C.T. Shaw of the Royal School of Mines, succeeded in having the papers printed and circulated internationally at least a fortnight before the Conference. Copies of the proceedings are available from the IMM in London at a price of £65. This volume is an indispensable link in the APCOM series, which records the present state-of-the-art relating to the application of computers and mathematics in the mineral industries.

#### **Future Symposia**

The 19th International Symposium APCOM '86, is scheduled to be held at The Pennsylvania State University, U.S.A., from 14th to 18th April, 1986. The Twentieth Symposium, APCOM '87, will be held in Johannesburg during October 1987.