

'No one should approach the temple of science, with the soul of a money changer.'
Thomas Browne

Appropriately this issue contains papers from the recent International Coal Processing Conference, which was held in Lexington, USA in April. In past decades this aspect of coal mining was not generally considered as a topic of advanced highly scientific opportunity for forefront research. The well-known methods of wet screening, jigging, and gravity separation were adequate to meet the grade requirements for most coal sales. All the papers are in the 'Journal' section of the issue. This in no way implies that they are not a top level contributions and, in fact in terms of economic importance, they are not only highly relevant, but at least one of the papers on XRT sorting, is remarkable in the sophistication of the techniques and will have, I believe, many novel applications in mineral beneficiation. I should not be surprised and would hope to see many innovative 'transaction' papers on the subject appearing in future issues.

It may be worthwhile to explain to future potential contributors to the SAIMM Journal the essential difference between the criteria for 'Transaction' and 'Journal' papers that appear in our publication. Some historical review of the SAIMM policy over the last century can best explain the devolution of our present policy.

The Journal of the Southern African Institute of Mining and Metallurgy has a long and proud history. Our Institute was founded under the name of Chemical and Metallurgical Society of South Africa on 24 March 1894, by a group of chemists and metallurgists. The name was changed to Chemical, Metallurgical and Mining Society of South Africa early in 1903, and in July, 1956 became The South African Institute of Mining and Metallurgy.

Its establishment at the turn of the last century was to give effect to one of the most important functions of a body of proud professionally trained scientists and engineers. This was to promote, record, and maintain the highest standard of innovative advances in their specialized domain of scientific activity. This was done in the traditions of the Royal Society of the UK, which required researchers to present their innovative work at a meeting of the Institute for discussion, followed by publication if found to be up to standard. Thus the Journal was to record the proceedings of the Institute and to represent accreditation to the new advances that occurred in the respective professions.

Certain minimum standards were established for presentations of new advances, which have stood the test of time and are still valid and much valued. They form the basis of the Transactions criteria. In summary they are as follows:

- Contain a critical review of previous work sufficient to validate the novel features as original work.
- Provide sufficiently detailed description of the experimental methods to be replicated by current and future workers.
- Give consideration to the precision and accuracy of results so the conclusions can be justified in terms of acceptable statistical criteria.
- Demonstrate the validity of the novel deductions and conclusions
- Clear cut and style of writing unambiguous and concise phraseology

- Conclusions that indicate the usefulness of the innovation and, if applicable, an economic evaluation.

As the volume of innovative work and the degree of specialization increased, it soon became impracticable to convene meetings before publication of such advances and the well-known practice of referees was adopted by all publications of the professional institutes and the many commercial scientific publishers who operated globally.

Thus was born the 'publish or perish' syndrome and the sponsorship from government, the promotion at all academic institutions, and the career of researchers depending on the number of accredited publications that appeared under the name of the researcher. As the Internet expanded along with the search engines, the Citation Index appeared as a criterion of the status of authors of papers. This simply meant that researchers should seek out the publishers with the greatest readership and an international reputation so as to provide the maximum probability that an author's paper would be quoted in references. The small circulation of our publication was probably the reason why few transaction papers were submitted to the Institute's Journal. The viability of maintaining such a 'Transactions' based publication became questionable.

While these trends were becoming increasingly prevalent the Institute of Mining and Metallurgy embarked on a pioneering policy in South Africa in arranging colloquia, educational schools, and conferences with an international flavour by inviting top-level guest contributors from overseas. Unlike the regular conventions, these activities were focused on specific topics of current technical interest in South Africa. The first efforts were somewhat tentatively underwritten financially by the SAIMM but they proved to be extremely popular and readily self-supporting. Technically they proved to be extremely valuable in contributing to updating the technical competence of the profession in this country. For example, one of the first such initiatives, the International Open Pit Mining conference and its successors, provided the content of one of the most successful textbooks that is used internationally. Similarly, the repeated winter schools on the Application of Computer Techniques in Mineral Processing presented by Professors Rex Bull and Andy Mular from the Colorado School of Mines and the University of British Columbia initiated the regular APCOM conferences promoted from South Africa. The International Ferro-Alloy Conference in 1974 put the South African ferro-alloy industries on the map as world leaders and INFACON has now become a regular feature. The proceedings of these conferences are invaluable reference items.

The conferences produced a wealth of technology advances, which well justified transfer to our members. Most of this information did not represent the forefront breakthroughs that fulfilled the requirements of a transaction paper, but represented valuable contributions to the topic involved. It was for this reason that the Institute decided to include the category of the Journal papers in the SAIMM publication with the decreasing numbers of acceptable Transaction papers.

This may be an unusual, if not unique, approach for a highly professional organization, but it is an extremely valuable feature for our readership since it enables us to present a coherent account of the innovative advances together with the applied industrial evaluation of such

Traditions, transactions, and technology transfer

Written by RE Robinson

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technology and much other associated information.

Conferencing is today big business and highly profitable if a large number of prominent experts can be mustered into a crowded programme with minimum time allocation to speakers and delegates, at realistic registration fees and acceptable profit margins. The value outcome is usually a few press releases and a collection of CDs in the files of those privileged to attend.

Our publishing of selected proceedings from our conferences in the Journal so that the benefits are available to not only our members but also available on the Internet is beginning to be appreciated, and we hope and would welcome conference organizers to use this platform for professional assessment of major programmes of national importance.

There can be no doubt that the papers are relevant to dealing with the new demands of global warming and environmental dangers.

That there remains much scope for innovative work for postgraduate work in our research institutions is beyond doubt, as evidenced in the papers in this issue. Legally imposed confidentiality is in danger of stifling innovation. I am quite sure that the international intellectual property provisions in the form of provisional patents can obviate the problems and the academic privilege of lodging theses in an open library and choice of the most appropriate publication. I am equally sure that the time-tested criteria of scientific accreditation of professional quality research are still internationally acceptable.

We are moving into a new world of global information transparency and in this vein we offer our publication facility and policy to all those who choose to make use of our dual character.

This is not for profit but in the interests of integrity and status among professional engineers and scientists in the world community.