

Annual report

FOR THE YEAR ENDED 30 JUNE 2012

Council for 2011/2012

President

J.N. van der Merwe

President-elect

G.L. Smith

Vice-Presidents

Senior

M. Dworzanowski

Junior

J.L. Porter

Immediate Past-President

G.V.R. Landman

Honorary Treasurer

J.L. Porter

Members of Council

N.A. Barcza

C. Musingwini

R.D. Beck

J.C. Ngoma

N.G.C. Blackham

G. Njowa*

J.A. Cruise

R.G.B. Pickering

C. Deacon

J.L. Porter

W. de Graaf

D. Rae###

J.R. Dixon

S.J. Ramokgopa

V. Duke

M.H. Rogers

J.J. du Plessis

S. Rupprecht**

M. Dworzanowski

C. Smith#

F.M.G. Egerton

G.L. Smith

P.A.P. Fouche

M.H. Solomon

A.M. Garbers-Craig

T.R. Stacey

M.F. Handley

D. Tudor#

R.T. Jones

T. van den Berg***

W.C. Joughin

D.J. van Niekerk

G.V.R. Landman

W. van Niekerk

A.S. Macfarlane

M. Veti****

R.P. Mohring

J. van Zyl Visser####

M.J. Mothomogolo

D. Wardle*****

A.F. Mulaba- Bafubiandi**

R.P.H. Willis

D. Munro

***** Observer SACEA

* Co-opted Members

Observer SACPS

** Representing non-corporate

Observer GSSA

members on Council

Observer SANIRE

*** Observer MMMA

Observer IMSSA

**** Observer AMMSA

Observer MVSSA

***** Observer SACMA

Branch Chairmen

Johannesburg Branch

V. Duke

Namibian Branch

B.M. Litana

Pretoria Branch

W. Degraaf

Western Cape Branch
Zambian Branch
Zimbabwean Branch
Zululand Branch

J. Petersen
H. Zimba
W. Kutekwatekwa
W.R.J. Erasmus

Past-Presidents serving on Council

| | |
|--------------------|------------------|
| N.A. Barcza | J.C. Ngoma |
| R.D. Beck | R.G.B. Pickering |
| J.A. Cruise | S.J. Ramokgopa |
| J.R. Dixon | M.H. Rogers |
| F.M.G. Egerton | T.R. Stacey |
| A.M. Garbers-Craig | W.H. van Niekerk |
| R.P. Mohring | |

Key objectives of the Institute

To initiate and give effect to the means whereby the requirement for technology and scientific knowledge of the minerals and metals section of the southern African economy is satisfied, and to represent and promote the interests of its members.

Arrangement of this Report

In accordance with the current management policy, this report on the activities of the Institute is presented under eight main headings:

1. Interests of Individual Members
2. Technical Meetings
3. Publications
4. Regional Development
5. Engineering Science and Technology in South Africa
6. State Liaison
7. International Liaison
8. Management and Administration.

1. Interests of Individual Members

Portfolio Holder: J.N. van der Merwe

Key Performance Areas

Just to recapitulate what the SAIMM does and how it serves the interests of individual members, the SAIMM:

- *Assesses the qualifications, experience, and the level of responsibility of applicants for membership, and allocates a membership certificate in an appropriate grade as a means of granting appropriate professional and technical status to individuals who practise in the minerals and metals sector*
- *Prepares and publishes career guidance brochures, bursary handbooks and audiovisual programmes, optional school curricula material, etc., and participates in activities to encourage learners to select careers in the minerals and metals sector of the southern African economy*

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- Arranges conferences, colloquia, schools, and seminars where technical information on mining, metallurgical, and related issues is disseminated. Both members and the general industry benefit from these interchanges
- Guards the professional interests of engineers, scientists, technologists, and technicians by providing a corporate voice and by representing their interests on bodies such as the Engineering Council of South Africa (ECSA)
- Through representation on ECSA, assists with the evaluation of curricula at universities and technikons with a view to improving the level of education of graduates and diplomates, and ensures that the courses are relevant to the needs of the minerals and metals sector
- Makes awards, in the form of medals, prizes, and certificates, in order to recognize technical excellence, to stimulate a sense of pride in high standards of performance, and to encourage individuals involved in the minerals and metals sector to share the results of their work through publication. The following are eligible for SAIMM awards: individuals for the very highest achievements in the southern African mining and metallurgical industry, SAIMM members and non-members for papers of the highest standard published in the Journal or other SAIMM publications, and students from universities and technikons for exceptional academic performance
- Arranges technical excursions, banquets, and other social events to create opportunities for professional association and fellowship for its members.

In terms of membership spread across the southern African region, South Africa still predominates with total membership standing at 3008. This is broken down as follows:

| | |
|--------------------------------|-----|
| ➤ <i>Fellows</i> | 313 |
| ➤ <i>Life Fellows</i> | 3 |
| ➤ <i>Honorary Fellows</i> | 2 |
| ➤ <i>Honorary Life Fellows</i> | 34 |
| ➤ <i>Retired Fellows</i> | 109 |
| ➤ <i>Members</i> | 864 |
| ➤ <i>Life Members</i> | 1 |
| ➤ <i>Retired Members</i> | 85 |
| ➤ <i>Associates</i> | 952 |
| ➤ <i>Retired Associates</i> | 11 |
| ➤ <i>Company Affiliates</i> | 127 |
| ➤ <i>Students</i> | 507 |

The SADC region has a total of close to 331 members. Of these 2 are in Nigeria, 3 in Mozambique, 2 in Mali, 6 in Lesotho, 148 in Zimbabwe, 57 in Zambia, 1 in Swaziland, 7 in Tanzania, 53 in Namibia, 4 in Ghana, 5 in Congo, 1 in Uganda, and 42 in Botswana.

I would urge more professionals in the minerals and metals industry within sub-Saharan Africa to join our Institute so that they can share in the benefits that many of our members are already enjoying.

1.1 Membership Committee

J.N. van der Merwe

N.A. Barcza

R.D. Beck

J.L. Porter

M.H. Rogers

| | |
|--------------------|--------------------|
| A.N. Brown | D.A.J. Ross-Watt |
| J.A. Cruise | G.L. Smith |
| A.M. Garbers-Craig | T.R. Stacey |
| M.F. Handley | O.K.H. Steffen |
| G.V.R. Landman | J.N. van der Merwe |
| N.C. Machingawuta | D.J. Van Niekerk |
| R.P. Mohring | W.H. Van Niekerk |
| J.C. Ngoma | R.P.H. Willis |
| R.G.B. Pickering | M. Woodhall |

Membership

The SAIMM membership comprises engineers, metallurgists, chemists, physicists, geologists, certificated managers, and technikon diplomates, all of whom have an interest in the fields of mining, extractive metallurgy, metals technology, and other related areas.

Corporate members are classified as follows

HONORARY LIFE FELLOW: must have rendered services to the Institute, science, or industry.

FELLOW: (Minimum age 35 years.) A person eligible for election or transfer into the class of Fellow shall be any minerals professional employed for a minimum of five years in a senior technical position of responsibility, provided that the candidate has had ten years' combined technical tertiary education and appropriate experience, or experience only.

MEMBER: (Minimum age 25 years.) A person eligible for election or transfer into the class of Member shall be employed for a minimum of two years in a technical position of responsibility, provided that the candidate has had five years' combined technical tertiary education and appropriate experience, or experience only.

Non-corporate members are classified as follows

COMPANY AFFILIATE: companies associated with mining or metallurgical industries are eligible for membership.

HONORARY FELLOW: persons of distinction in public service, science, or the arts.

ASSOCIATE: a person eligible for election or transfer into the class of Associate shall be any person with a recognized industry qualification, within the disciplines of mining, extractive metallurgy, or metals technology.

STUDENT: a full-time student or postgraduate student at a university, technikon, or any other educational institution approved by Council, who is being trained to occupy a technical position in the mining or metallurgical industry or associated organizations.

Membership Roll

Members of the Institute are divided into Corporate and Non-Corporate Members, all of whom are entitled to attend and speak at meetings. Only Corporate Members are entitled to vote. All applications for membership or transfer require one proposer and one seconder.

RESIGNATION: A member may resign from the Institute by sending his or her written resignation to the Secretary together with payment of any monies due.

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Table 1

Summary of new applications and membership movements for 2011/2012 and comparison of membership grades and total membership 2011/2012

| Membership grade | Members July 2011 | New members | Transfers in | Transfers out | Reinstatements | Resignations | Deceased | Struck off | Net gain/ (loss) | Members June 2012 |
|----------------------|-------------------|-------------|--------------|---------------|----------------|--------------|----------|------------|------------------|-------------------|
| Honorary Life Fellow | 34 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 36 |
| Honorary Fellow | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Life Fellow | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | 7 |
| Fellow | 420 | 0 | 15 | 9 | 1 | 2 | 1 | 3 | 1 | 421 |
| Retired Fellow | 137 | 0 | 7 | 0 | 0 | 6 | 6 | 1 | -6 | 131 |
| Life Member | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Member | 1075 | 132 | 14 | 19 | 15 | 13 | 4 | 34 | 91 | 1166 |
| Retired Member | 97 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 2 | 99 |
| Associate | 1148 | 159 | 13 | 14 | 21 | 27 | 2 | 154 | -4 | 1144 |
| Retired Associate | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Student | 380 | 182 | 0 | 13 | 1 | 1 | 0 | 0 | 169 | 549 |
| Company Affiliate | 132 | 5 | 0 | 0 | 3 | 6 | 0 | 4 | -2 | 130 |
| Total | 3 448 | 478 | 55 | 55 | 41 | 57 | 14 | 196 | 252 | 3700 |

RETIRED MEMBERSHIP: A Fellow or Member who has *bona fide* retired from active business may retain membership at a reduced subscription providing he or she has been a member for 20 years. Members can contact the Secretary to establish the number of years of service prior to submitting a written request for Retired Membership to the Institute.

STUDENTS: A candidate may remain a Student member only while he or she is being educated or trained in a manner approved by the Council.

When he or she no longer qualifies as a Student member, he or she shall automatically be transferred to the category of Associate. Students are reminded to forward a copy of their degree certificates to the Institute on graduation.

A candidate may not remain a Student member after the end of the Institute's financial year in which he or she attains the age of twenty-eight years, unless the Institute receives written confirmation from the university or technikon that the Student member is still a full-time student.

CHANGE OF DETAILS: It is essential that members contact the Institute without delay about change in designation, change in employer, payment address, or change in postal address. Without this the communication link to members is broken. Also, members must ensure that, where subscriptions are paid by a company, the Institute has on record the correct payment address.

Benefits of membership

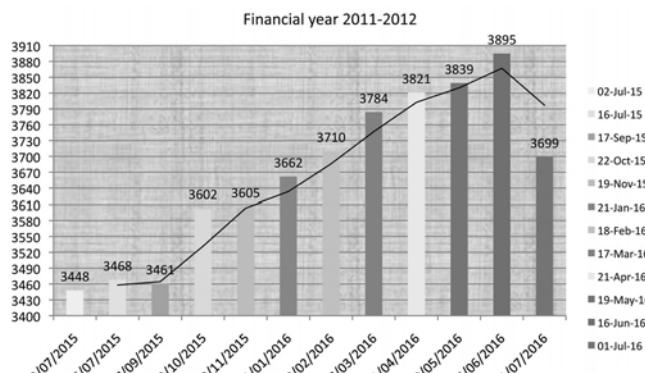
Individuals derive various benefits from membership of the Institute:

- Contact with fellow members
- Special reduced fees when attending congresses, symposia, colloquia, conferences, schools, discussion groups, etc.
- Notices of events promoting technology transfer, which also satisfy the need for continuing education
- A monthly *Journal* with a balanced content and of high technical standard, which serves as a communication medium to keep members informed on matters relating to their professional interests

- Participation in technical excursions, banquets, and other social events, which create further opportunities for professional association and fellowship
- Tax deduction of membership fees in most cases
- Reduced registration fees for professional registration through the Engineering Council of South Africa.

Companies that become Members of the Institute

- Benefit from the opportunities to exchange knowledge, particularly about new developments and research
- Receive the Institute's publications of international conferences held in South Africa, as well as monographs on a variety of subjects and regular copies of the monthly *Journal*
- Are entitled to send two non-member employees to mining and metallurgical schools, colloquia, congresses, visits, and excursions at Member rates
- Receive newsletters and notices about all Institute activities
- Benefit from the fact that Company Affiliation is tax deductible
- Have ample opportunity to send delegates to attend technical meetings to obtain information and to benefit from the experience of others.



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1.2 Career Guidance and Education

J. Dixon, Chairman

G. Gips

P.J. Knottenbelt

G.V.R. Landman

J. Morgan

G. Oliver

L. Petrick

I. Wermuth

The Career Guidance and Education Committee focused on two main activities this year; namely, the building of a mining and metallurgy exhibition at the Sci-Bono science centre in Newtown and attending at science school festivals around South Africa.

The committee decided to focus on two science festivals, namely, the Sasol TechnoX in Sasolburg and the Sci-Fest Africa in Grahamstown. Participation took the form of poster displays of the various mining and metallurgical career options, a short presentation and video on mining and metallurgy, and interactive logic games to convey the concept that the same logic needed to solve the puzzles would be applied in the mining and metallurgical fields.

The permanent exhibition at Sci-Bono science discovery centre in Newtown has been slow and steady in its progress. A super tyre from a mine truck was secured together with core samples and a cocopan. Various other items that will make up the exhibition are being collected. Information boards on mining, mineral processing, and metallurgy will be on display.

1.3 Promotion of the SAIMM

Portfolio holder: J.N. van der Merwe

The SAIMM has ventured into new territory in the last financial year by means of social media and literally, in floor space. A SAIMM profile was established on LinkedIn, Facebook, and Twitter with tentative connections being made with students on Facebook, our own members through LinkedIn, and mining media organizations via Twitter.

The offices were expanded as we took over more office space in the Chamber of Mines building. A new boardroom was created with space for members to work while in transit between meetings if needed.

The SAIMM engaged with sister organizations around the globe via an initiative of the IOM3 to encourage conversation and joint ventures between the AusIMM (Australia), CIM (Canada), SME (USA), and the IOM3 (UK). The invitation to join in remains open to any other comparable organization around the world. The initiative is still in the early planning stage, with a second meeting scheduled for September 2012.

Conferences

The SAIMM conferencing department hosted a total of 15 events in the period July 2011 to June 2012 with a record attendance of 2283 delegates. Through the efforts of the conference staff, 118 non-member delegates completed membership application forms after having attended one of our industry-related conferences.

Geographically, SAIMM events were hosted all over the southern African region with delegates representation from all around the globe including Australia, Austria, Botswana, Canada, China, DRC, Finland, Germany, Namibia, Norway, United Kingdom, USA, Zambia, and Zimbabwe.

The SAIMM partnered with professional organizations such as the ACG, AMMSA, SACMA, and SANIRE for the financial period. Events in partnership included MineSafe 2011, with a record attendance of over 700 delegates, PASTE 2012, and SHIRMS 2012.

The partnership negotiated in 2010 with the Advanced Metals Initiative (AMI), as endorsed by the Department of Science and Technology, hosted the ZrTa2011 conference. This partnership is scheduled to continue until 2013 and a special edition of the *Journal* is dedicated to this partnership.

The SAIMM received invaluable support from our industry partners in terms of conference sponsorship and participation, support that is highly appreciated.

The SAIMM conference department saw the departure of Jacqui van der Westhuizen and the arrival of a new staff member Cameron Nagel.

The conference department looks forward to another successful financial period and to providing our members and potential members with a conference service that will be educational, informative, and network-friendly with superior customer service.

Membership

The SAIMM membership has grown slowly but steadily this year, with 3448 members at the start of the financial year and ending on 3700 in total. This includes 196 members who did not pay their annual fee for 2011/2012 and were unfortunately struck off (blocked).

The struck off members consisted mainly of Associates members, particularly students that had been transferred to the Associate level and people who made use of the offer of free membership up to the end of the financial year that is offered at SAIMM conferences (especially from the Zambia Branch).

Although we did not reach the target of 4000 members in total, we were very close with 3895. We will certainly reach this target before the end of the year 2012.

Everything in our power has been done to get the outstanding subscription fees in:

- Phoning the members
- E-mailing the members
- Contacting the companies
- Debt collection procedure
- E-mail-notification regarding struck off members.

We had a positive response from members when asked via e-mail to update their details

The students have been encouraged to stop using their university email addresses and instead use their personal e-mails, because we often loose contact with them as soon as they complete their studies and graduate.

Problems have arisen with returning post. Despite the correct postal details the post office identifies the addresses as incorrect, especially for the new members. Despite confirming postal details before we send out any mail, there is still a high return rate, particularly for new membership certificates.

Majestic, our bulk e-mailing system, has been in place for over a year now and we are still working to improve the system. The main problem with the system is that many large organizations block bulk email, and we appeal to all members to contact their IT departments to ask them to let SAIMM e-mails through.

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Members have started making more use of the online system to view their profile details and change them on the website, so we have been getting a lot of requests for username and password details for them to access the system.

The SAIMM hopes to improve its online communications with its members, be it via social media or an updated website system, in order to keep its members better informed. So as the advertisement says—WATCH THIS SPACE!

Accounts

The finances of the SAIMM will be elaborated on in the formal financial report, but in a nutshell: the unaudited books closed with revenue below forecast, as was predicted. The revenue breakdown by major departments is:

| | |
|----------------------|---------------------------------------|
| Technical programmes | R12.4 m against a forecast of R15.1 m |
| Advertising | R1.5 m against a forecast of R1.1 m |
| Membership | R2.4 m against a forecast of R2.6 m |

Combined revenues for all categories amounted to R19.4 m against a forecast of R21.0 million, but neither cost of sales nor overheads exceeded expenditure targets.

The investments with AFC had a rollercoaster ride this financial year. Gains and losses followed each other with regularity. The portfolio opened at R20.3 million in July last year and stood at R22.0 million as at the beginning of June 2012. The final figures are pending. As a precautionary measure to support cash flow, R1 million was drawn from interest earned. This was to tide us over into the new financial year when income from conferences and membership will again begin to flow and bolsters our cash reserves at the bank.

Strict credit control has again paid off and the amount owed that exceeds 60 days consists of two sponsorship invoices due in August. This is less than 1 per cent of the total owed of R1.4 million.

Publication department

The *Journal* was published monthly, and continues to include the 'President's Corner' by the Institute's current President Nielen van der Merwe, and the thought-provoking *Journal* Comment by Professor Robinson, although H.R. Phillips, R.D. Beck, and R.L. Paul have all contributed this year. Both of these columns are featured on our website and members and website users are encouraged to log in and comment on these articles.

The total advertising revenue of R1 528 782 was almost 39 per cent over the budget of R1 100 000 set for this year, thanks to the professional and efficient manner of our advertising agent. According to the audit of the ABC Circulation Board, the distribution of the *Journal* has increased to 3 716, which is an 8 per cent increase on the corresponding period last year, an impressive achievement in an era of declining circulation trends.

The new program that had been acquired to process all papers submitted for publishing in the *Journal* is proving to be an excellent method of keeping control of the reviewing process.

The editorial board was expanded to include leading international specialists, with reciprocal opportunities for South Africans to referee papers in other international publications.

The Publications Committee is committed to increasing the impact factor of the *Journal* and has put measures in place that will hopefully have the desired results. A decision was taken to remove the distinction between Transaction and Journal papers that are featured in the *Journal*, and as a result the 'referees and authors guidelines' are being amended to reflect this change of status.

The Institute is also a participant in the OneMine initiative, which is a collaborative effort among multiple societies to build a global database of mining- and minerals-based research, accessible in one place. The *Journal* papers are now available via the database, and SAIMM members also have access to the database via the SAIMM website. The Institute is now listed with the Academy of Sciences of South Africa - SciELO SA, and these initiatives have assisted in doubling the number of visitors to the website (www.saimm.co.za).

Strategy

Strategic initiatives over the last year were aimed at ensuring increased relevance in the geopolitical region we represent and relevance in the mining environment that the Institute will operate in during the next few years. A few aspects are mentioned:

- A BRICS initiative was initiated. The SAIMM reached out to the IMM of India and China, and further options with Russia and Brazil are being investigated. The good relationships with the other Commonwealth and North American mining institutes were sustained
- The SAIMM aims to expand its role to be more co-operative and act as a facilitator to create forums where particular industry issues can be discussed and considered. For example, the MineSafe conference is now organized by the SAIMM, in conjunction with the AMMSA and SACMA and includes active participation of labour and government
- Government relations improved, and the SAIMM now partners with the Department of Science and Technology to host the Advanced Metals Initiative conferences
- To enable members to participate in debates on the economic future for the southern African mining industry, a Minerals Economics Committee was established. The first *Journal* containing papers of a mineral economic nature was published in July 2011
- Since the SAIMM is disseminating technical knowledge and is representing technical excellence in mineral science and engineering through its members, it is felt that a deeper understanding is required of research being done in the region. The SAIMM could start playing a value-adding role in assisting to give direction as to what research is required and then bring research funders and research institutions together to drive cooperative programmes for the benefit of mining in Africa
- A particular example of what this thinking has produced is the 'green mine concept', based on a Chinese initiative that recognizes excellence in mining practice incorporating environmental, human, and resource responsibility, as well as technology implementation and transparency of management processes.

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The SAIMM is now established as being representative of the whole southern African region and is serving the engineers, scientists, and technologists whose work makes mining in Africa a vibrant and active industry benefitting millions of people not only in Africa, but around the globe.

1.4 Awards and Adjudication Committees

Awards and Adjudication Committee—Mining

M.H. Rogers, Chairman

| | |
|------------------|-------------|
| J.R. Dixon | G.L. Smith |
| F.M.G. Egerton | T.R. Stacey |
| R.G.B. Pickering | |

Awards and Adjudication Committee—Metallurgy

| | |
|---------------------------|-----------|
| M. Dworzanowski, Chairman | |
| R.D. Beck | R.L. Paul |
| A.M. Garbers-Craig | |

Honorary Life Fellows

Honorary Life Fellowship is awarded by Council to Corporate Members of the Institute who have rendered outstanding service to the industry or to the Institute over a considerable period. Council has conferred Honorary Life Fellowship on the following persons:

| Pre- | | | |
|------|------------------------|------------------------|--|
| 1923 | A. Aiken | S.H. Pearce | |
| | A.F. Crosse | J.P. Williams | |
| | J. Littleton | | |
| 1923 | J. Moir | | |
| 1930 | H.A. White | | |
| 1931 | P. Cazalet | J.A. Wilkenson | |
| | A. Whitby | | |
| 1932 | J.R. Thurlow | | |
| 1934 | Wm. Cullen | A. McArthur Johnston | |
| | W.R. Feldtmann | G.H. Stanley | |
| | E.H. Johnson | | |
| 1938 | G. Melvill | F.W. Watson | |
| | S. Newton | | |
| 1941 | J. Henderson | | |
| 1943 | Sir R.N. Kotzé | | |
| 1946 | J. van N. Door | T.K. Prentice | |
| | C.J. Gray | R.S.G. Stokes | |
| | Jas Gray | S.J. Truscott | |
| | J.V. Muller | G.A. Watermeyer | |
| | John Orr | J.A. Woodburn | |
| 1951 | W.W. Mein | | |
| 1953 | P.E. Hall | B. St. J. van der Riet | |
| 1954 | C. Biccard Jeppe | | |
| 1955 | P.N. Lategan | | |
| 1958 | R.A.H. Flugge-de-Smidt | | |
| 1960 | G. Hildick-Smith | A.J. Walton | |
| | A.J. Orenstein | F. Wartenweiler | |
| | H.J. van Eck | | |
| 1961 | C.S. McLean | | |
| 1966 | F.G. Hill | F. Meyer | |
| 1970 | H.E. Cross | D.M. Jamieson | |
| | R.C.J. Goode | | |
| 1974 | R.J. Adamson | C.J. Irving | |
| | W. Bleloch | J.F. Reid | |
| | H. Britten | | |

| | | |
|------|------------------------------|---------------------|
| 1975 | M. Barcza | J.T. McIntyre |
| 1976 | J. de V. Lambrechts | A.R.O. Williams |
| 1978 | D.G. Maxwell | V.C. Robinson |
| | J.K.E. Douglas | |
| | D.D. Howat | |
| 1979 | J.P. Hugo | P.W.J. van Rensburg |
| 1980 | Hon. S.P. Botha | R.P. Plewman |
| | Hon. P.G.J. Koornhof | R.E. Robinson |
| | A. Louw | |
| 1982 | M.G. Atmore | |
| 1983 | C.S. MacPhail | |
| 1985 | P.R. Jochens | M.D.G. Salamon |
| | D.G. Malan | |
| 1986 | D.G. Krige | G.Y. Nisbet |
| 1987 | A.N. Brown | |
| 1988 | J.D. Austin | D.A. Viljoen |
| | R.P. King | |
| 1989 | P.A. von Wielligh | |
| 1990 | S. Budavari | G.T. van Rooyen |
| | L.W.P. van den Bosch | |
| 1991 | H. Wagner | |
| 1992 | J. Lurie | |
| 1993 | No award | |
| 1994 | B.C. Alberts | |
| 1995 | R.D. Beck | H.E. James |
| | P.R. Janisch | |
| 1996 | R.J. Dippenaar | |
| | J.S. Freer | |
| | H.G. Mosenthal | |
| 1997 | J.A. Cruise | |
| 1998 | D.A.J. Ross-Watt | |
| 1999 | No award | |
| 2000 | N.A. Barcza | J.R. Dixon |
| | R.P. Mohring | |
| 2001 | M.H. Rogers | D.J. van Niekerk |
| 2002 | L.A. Cramer | R.F. Sandenbergh |
| | C.T. O'Connor | J.H. Selby |
| 2003 | A.A.B. Douglas | P.J. Knottenbelt |
| 2004 | No award | |
| 2005 | F.A. Camisani-Calzolari | |
| 2006 | T.R. Stacey | |
| 2007 | No award | |
| 2008 | E.U.H. Sachse | |
| 2009 | I. Walton | |
| 2010 | R.T. Jones | |
| 2011 | No award | |
| | No awards were made in 2012. | |

Brigadier Stokes Memorial Award

The Brigadier Stokes Memorial Award, which takes the form of a platinum medal, is awarded to an individual for the very highest achievement in the South African mining and metallurgical industry, and is not necessarily based on technical expertise.

The Award was established in 1980, and the previous recipients were as follows:

| | |
|------|------------------------------|
| 1980 | H.F. Oppenheimer |
| 1981 | W. Bleloch |
| 1982 | F.G. Hill |
| 1983 | A.W. Whillier (posthumously) |
| 1984 | D.G. Krige |
| 1985 | R.E. Robinson |

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| | |
|------|------------------------------|
| 1986 | M.D.G. Salamon |
| 1987 | T.F. Muller |
| 1988 | W.J. (Wim) de Villiers |
| 1989 | R.A. Plumbridge |
| 1990 | W.G. Bousted |
| 1991 | P. du P. Kruger |
| 1992 | E. Pavitt |
| 1993 | D.A. Pretorius |
| 1994 | H. Wagner |
| 1995 | O.K.H. Steffen |
| 1996 | B.E. Hersov |
| 1997 | D.W. Horsfall (posthumously) |
| 1998 | B.P. Gilbertson |
| 1999 | L. Boyd |
| 2000 | A.H. Mokken |
| 2001 | T.L. Gibbs |
| 2002 | J. Ogilvie Thompson |
| 2003 | P.V. Cox |
| 2004 | H.J. Smith |
| 2005 | P. Motsepe |
| 2006 | G.T. van Rooyen |
| 2007 | D.H. Laubscher |
| 2008 | T.R. Stacey |
| 2009 | C.J. Fauconnier |
| 2010 | C. O'Connor |
| 2011 | B.C. Alberts |

This year the award is made to R.P. Mohring for his outstanding contribution to the industry over many years.

SAIMM 50 Year Club

The Institute established the 50 Year Club in 1989 to recognize the faithful and loyal support of its senior members with 50 years' unbroken membership. They become members of the club on the 50th anniversary of their joining the Institute. Their names are published each year in the Annual Report and they are presented with a gold lapel badge on a suitable occasion. There are no fees, and the only obligation of members is to wear their lapel badges with pride and affection at all meetings of the Institute. The present members of the club are as follows:

Year to

| June | Member |
|------|------------------------------|
| 1924 | E.C. Polkinghorne* |
| 1926 | R.M. Martin* |
| 1927 | W. Allen* |
| 1930 | E.T. Dunstan* (posthumously) |
| | P.L. Ward* |
| 1931 | F. Bowdler* |
| 1932 | J.E. Laschinger* |
| 1933 | F.D. Cartwright* |
| | E.R.C. O'Connor* |
| | C.H. Coxon* |
| | A.A. von Maltitz* |
| | D.D. McWilliam* |
| 1934 | A.C.M. Cornish-Bowden* |
| | H.E. Cross* |
| | E.F. Laschinger* |
| | E. Margo |
| | O.B. Swallow* |
| 1935 | O. Deane* |
| | T.L. Gibbs* |
| | R.C.J. Goode* |

| | | |
|------|---------------------|----------------------|
| 1937 | F.G. Hill* | A.C. Pigott* |
| | D.M. Jamieson* | J.S. van Zijl* |
| | D.J. Rogers* | L. Walter* |
| | W. Bleloch* | J.J. Klein* |
| | L.A. Bushell* | C.D. Storrar |
| | K.W. Findlay* | |
| 1938 | V.C. Barnes* | C.A. McKechnie* |
| | E.T.S. Brown* | J.A. Nixon |
| | R.S. Cooke* | E. Popplewell* |
| | J.K.E. Douglas | C.G. Sowry* |
| | A.L.A. Forder* | E.W. Thiel* |
| 1939 | G. Armstrong-Smith* | R.S. Pearson* |
| | D.E.R. Ayres* | D.C.J. Squirrell* |
| | E.H.D. Carman | R.F.J. Teichmann* |
| | W.G.H. Jackson* | I.S. van Eyssen* |
| | T.A. Newman | S.J. Venning* |
| 1940 | L.D.C. Bok* | G.D. Gettliffe* |
| | A.W.L. Brereton* | G.G. Stanley* |
| 1941 | A.H.H. Davison* | D. de V. Oxford* |
| | D.J. Forder | E. Pavitt |
| | A.R.C. Fowler* | A.C. Petersen* |
| | H.F.W. Ketelbey* | E.R. Rudolph* |
| | J.D. McNamara* | P.W.J. van Rensburg* |
| | T.F. Muller* | |
| 1942 | R.E. Burnton* | O.L. Papendorf* |
| | R.C. Espley-Jones* | V.O. Steed |
| | N.M. Hayne* | J.E. van Leeuwen* |
| | R.T. Naudé* | W.C. Walmsley* |
| | D.J. Molony* | R.P. Plewman* |
| | J.D. McMorran* | |
| 1944 | A.F. Dick | V.M. Reinecke* |
| | R.B. MacGillivray* | A.S. Swartz |
| | L.J. Prince* | A.H. Taute* |
| | J.F. Reid* | P.B. Weehuizen* |
| | J.L. Curtis* | K.E. Steele* |
| | E.T. Pinkney | |
| 1946 | W.I. Spence | |
| 1947 | G.H. Grange | J.D. Pollard |
| | W.B. Howe | V.C. Robinson* |
| | J. Marr-Levin | A.N. Shand* |
| | C.J. Parr* | G.R. Still |
| 1948 | D.F. Foster | J. Pope* |
| | M.H. Grusd* | N.A. Stacey |
| | P.A. Laxen* | J.A. Tyser |
| | G.Y. Nisbet | |
| 1949 | G.P. Bennett* | J.P. Hugo |
| | J.F. Curtis* | D.A. Immelman |
| | O. Davel | |
| 1950 | D.F. Grieve | R.P. Plasket* |
| | B.E. Hersov | V.C. Ward |
| | D.G. Maxwell | |
| 1951 | D.G. Krige | N.C. Pope |
| | B.H.L. Leach | W.T. Ruhmer |
| | M.J. Martinson | T. Zadkin* |
| | W.D. Ortlepp* | |
| 1952 | A.N. Brown | E.P. Mortimer |
| | M.J. Deats | D.J. Murphy |
| | W. Lurie* | H.J. Stucke* |
| | N. Martincevic | R.G. Williams |
| 1953 | B.G. Fordyce | G.D. Tainton |
| | G. Langton* | J. Uys* |
| | A.A. Sealey | N. Zolezzi |

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| | | |
|------|-------------------|---------------------|
| 1954 | R.C. Bertram | R.B.W. Wiggill |
| 1955 | R.A.O. Chelius* | G.R. Parker |
| | S.P. Ellis | W.B. Parker |
| | C.T. Fenton | |
| 1956 | G.A. Brown | M.A. Madeyski |
| | D.R. Chelius | D. Rankin |
| | M.F. Dawson | G.C. Thompson |
| | L.M. Falcon | |
| 1957 | K. Babich | A.M. Edwards |
| | J.J. Blom | R.C. More O'Ferrall |
| | R. Campbell | N.C. Officer |
| 1958 | J. Dear | B.S. Tattersall |
| | R.H. Swan | P.J. van der Walt |
| 1959 | H.E.K. Allen | H.A.G. Slater |
| | D.C. Brink | G.T. Van Rooyen |
| | G.D. Louw | |
| 1960 | R. Hemp | C.T. Shaw |
| | G. Joynt | L. van den Bosch |
| | B. Moore | H. von Rahden |
| | R.E. Robinson | M. Wishart |
| | C. Roper | |
| 1961 | W.B. Evans | G.S. Lee |
| | R.A. Featherstone | B.J. Love |
| | I.R.H. Forrest | P.J. Muller |
| | J.S. Freer | G.J.C. Young |
| | B.W. Holtshousen | W.J.G. Young |

* Deceased since becoming members of the Club

Gold and Silver Medals

Papers published in the *Journal* from March 2011 to February 2012 by members of the Institute were considered for medals.

Gold Medals

Gold medals are awarded for papers that are of a world-class standard, and judged to be publications that will become key references in their mining or metallurgical field in the future.

Gold Medals were awarded to:

W.C. Joughin, A. Jager, E. Nezomba, and L. Rwdzzi, for their Transaction paper published in the February 2012 issue of the *Journal* entitled 'A risk evaluation model for support design in Bushveld Complex underground mines: Part I—Description of the model'. As non-members, A. Jager and E. Nezomba receives a certificate of merit.

W.C. Joughin, A. Jager, E. Nezomba, and L. Rwdzzi, for their Transaction paper published in the February 2012 issue of the *Journal* entitled 'A risk evaluation model for support design in Bushveld Complex underground mines: Part II—Model validation and case studies'. As non-members, A. Jager and E. Nezomba receives a certificate of merit.

Silver Medals

Silver medals are awarded for papers that make a major contribution to the professions of mining and metallurgy and to the prestige of the Institute.

Silver Medals were awarded to:

J.A.L. Napier and D.F. Malan, for their Transaction paper published in the December 2011 issue of the *Journal* entitled 'Numerical computation of average pillar stress and implications for pillar design'.

Student Prizes

Prizes were awarded to the following students and were presented at faculty prizegiving ceremonies held at the respective universities.

The prize winners were as follows:

University of the Witwatersrand

| | |
|----------------|-------------|
| Mining | Z. Maruma |
| Metallurgy | T. Montong |
| Prestige Prize | A. Gritzman |
| | Z. Khan |

University of Pretoria

| | |
|----------------------|-------------|
| Mining | S. Ferreira |
| Metallurgy | M. Grewar |
| Student Dissertation | S. Ferreira |

University of Johannesburg

| | |
|------------|------------|
| Mining | S. Mashile |
| Metallurgy | P. Mphuthi |

North-West University

| | |
|--------------------|-----------|
| Mineral Processing | J.H. Kemp |
|--------------------|-----------|

University of Cape Town

| | |
|-------------------------------|-----------------------|
| Chemical Eng. (joint winners) | D. Vogel and M. Zondo |
|-------------------------------|-----------------------|

University of Stellenbosch

| | |
|---------------------|-------------|
| Process Engineering | J.H. Cloete |
|---------------------|-------------|

Cape Peninsula University of Technology

| | |
|----------------------|-----------|
| Chemical Engineering | D.I. Kadi |
|----------------------|-----------|

The prizes for the universities of Cape Town and Stellenbosch and the Cape Peninsula University of Technology were awarded at the Western Cape Branch Annual General Meeting on 1 August 2012.

1.5 SAIMM Scholarship Trust Fund

M.H. Rogers, Chairman
R.P. Mohring, Vice-Chairman

J.R. Dixon
F.M.G. Egerton
W.H. van Niekerk

Contributions to the Trust Fund by Individual Members and Company Affiliates amounted to some R324 000. The SAIMM continued its most welcome support of the Trust Fund with a contribution of R200 000. Awards of R354 000 were made to the Universities supported by the Trust Fund.

Growing student numbers studying mining engineering and changes in the curricula being offered to chemical and metallurgical engineering students have resulted in a drastic increase in the numbers of potential beneficiaries of the Trust Fund. To this end Trustees met with representatives from the Universities in order to understand their needs and to confirm a proposed new method for the distribution of funds. In this way Trustees have been able to ensure that the Trust Fund continues to meet its mandate in supporting those needy students who do not have bursaries and depend on family, friends, and part-time work for funding.

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Proceeds from the sales of the DVD documentary on platinum, kindly sponsored by TWP Holdings, continued to flow to the Trust Fund.

The Trustees gratefully acknowledge the support received from members of the SAIMM.

The mining and metallurgical industry currently benefits from the quality and numbers of graduates who have in the past received support from the Trust Fund. Students who receive support are the future innovators, engineers, and managers who will contribute to maintaining and growing the industry to continue to be a productive part of South Africa's economy.

Members are reminded that contributions to the Trust Fund are tax deductible and can be made on line to the Trust Fund's bank account. (SAIMM Trust Fund, FNB, branch code 251705, account number 62227511286).

We look forward to your continued support.

There were no changes to the Trustees during the review period.

1.6 SAIMM Gold Medal Awards

The Southern African Institute of Mining and Metallurgy was pleased to assume the administration of the Gold Medals and Scholarships in 2001, which had previously been the responsibility the Chamber of Mines. All contributions are held in a separate fund within the SAIMM accounts.

A total of four awards is presented to the universities of Pretoria and the Witwatersrand for the best student in the Faculty of Engineering and the best student in the branches of mining or metallurgy, as determined by the universities. The award comprises a gold medal and a postgraduate scholarship to the value of R25 000.

1.7 Banquet Committee

| | |
|---------------|------------------|
| J.R. Dixon | R.G.B. Pickering |
| P.A.P. Fouche | M.H. Rogers |
| R.P. Mohring | |

The 2012 banquet was held for the second year at Gallagher Estate in Midrand. There was no theme for 2012.

The guest speaker was Mr Michael Abrahamson, South Africa's only 'mentalist'. Michael's show incorporated all the elements of mentalism i.e. mind reading, memory feats, mathematical ability, and body language. It was well received and enjoyed by the audience.

With 87 sponsored tables and 3 VIP tables, there were close to 900 guests. The evening was a great success, with many friends and acquaintances catching up with each other and the news within the industry.

2. Technical Meetings

Portfolio Holder: R.T. Jones and J. Porter

2.1 Technical Programme Committee—Mining

| | |
|---------------------------------------|--------------|
| D.D. Munro, Chairman | S. Nong |
| R.T. Jones, Metallurgy Representative | J. Oelofse |
| A. Dougall | G. Oliver |
| P. Ferreira | R. Pickering |
| C. Fredericks | J. Porter |
| G. Guler | S. Rungan |
| R. Hull | S. Ruprecht |
| W. Joughin | |
| G. Landman | |

| | |
|---------------|------------------|
| D. Limpitlaw | B. Sekano |
| D. Munro | C. Smith |
| I. Matunhire | G. Smith |
| A. McFarlane | T.R. Stacey |
| N. Meyer | T. van den Berg |
| J. Mothmogolo | D. van der Berg |
| M. Mthenjane | N. van der Merwe |
| C. Musingwini | I. Wermuth |
| J. Ngoma | M. Woodhall |
| G. Ngowa | |
| C. Musingwini | |

**Co-opted members*

***Resigned*

During the 2011 financial year, the Mining Technical Programme Committee offered significantly fewer schools while maintaining the number of conferences and colloquia. We are, however, looking forward to a promising 2012 with more focus on schools and hosting the prestigious Platinum 2012 conference in September 2012.

The bi-annual Base Metals conference, a three-day conference with a technical tour to the Palabora Mining Company, was hosted in July 2011 at the Hans Merensky Sports Resort in Phalaborwa. This prestigious event drew an audience of over 190 people, making it highly successful for the SAIMM.

The first mining-specific event for the period was the MineSafe 2011 conference hosted at the Emperors Palace Convention Centre. The MineSafe 2011 conference was co-hosted by AMMSA and SACMA with the support of the DMR and Unions and the Chamber of Mines. The MineSafe 2011 conference attracted over 300 delegates for the four-day conference. The MineSAFE 2011 Industry awards day attracted over seven hundred delegates who came to pay tribute to industry players in the Health and Safety Sector. As an established SAIMM event the MineSafe 2012 conference is planned for August 2012.

The SAMVAL Colloquium followed in September 2011 at the Southern Sun, Grayston. This colloquium was organized as a result of various international events that created the need for a review of the current version of the SAMVAL Code. The session was aimed at engaging with public opinion on the Code, and identifying the critical issues for review.

The annual SAIMM Student Colloquium gave 139 delegates the opportunity to see the cream of the southern African graduates presenting topical papers prepared as part of their studies. These presenters have now started their careers in the mining and metallurgical industries, and we look forward to further papers of the same quality.

January 2012 saw the SANCOT conference Tunnel and Raise Boring being hosted, with a selection of papers presented highlighting current advances in this field. The upcoming SANCOT conference planned for December 2012 will focus on lessons learnt on major tunneling projects.

The Paste 2012 conference in partnership with the ACG was a highly successful event attracting over 290 delegates to Sun City in April 2012, and presented the latest advances and experiences in this field.

In May 2012, the SAIMM and SANIRE hosted the Southern Hemisphere International Rock Mechanics Symposium (SHIRMS 2012) at Sun City. The Symposium, combined with the South African Rock Engineering Symposium (SARES 2012) attracted an audience of over 160 attendees over the three days

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| Schedule of Mining/Metallurgy Technical Conferences, 2011/2012 | | | | |
|-----------------------------------------------------------------------|---------------------|-----------------------------------------|------------------|------------|
| Type of Event | Date | Title | Convenor | Attendance |
| Conference | 18-21 July 2011 | Base Metals 2012 | P. Fouche | 194 |
| Conference | 15-18 August 2011 | MineSafe 2011 | T. van den Berg | 715 |
| Colloquium | 01 September 2011 | Samval Colloquium | A. McFarlane | 123 |
| Conference | 5-7 September 2011 | Iron Ore & Manganese 2011 | M. Dworzanowski | 164 |
| Conference | 12-14 October 2011 | ZrTa2011 (AMI) | J. Nel | 100 |
| Colloquium | 16 October 2011 | Student Colloquium 2011 | Z. Botha | 139 |
| Branch Event | 01 November 2011 | Zambian Branch Event | T. Claassen | 61 |
| Conference | 7-9 November 2011 | Percolation Leaching 2011 | P. van Staden | 89 |
| Conference | 31 January 2012 | Tunnel Raise Boring SANCOT 12 | J. Porter | 68 |
| | 01 February 2012 | Mineral Ethics Committee | M. Solomon | 73 |
| Conference | 20-22 February 2012 | Thorium 2012 | W. van der Merwe | 59 |
| Conference | 16-20 April 2012 | Paste 2012 | A. Patterson | 292 |
| Conference | 14-18 May 2012 | SHIRMS 2012 | W. Joughin | 165 |
| School | 12-13 June 2012 | Manganese Ferroalloys Production School | J. Steenkamp | 83 |
| | 31 May 2012 | L4 Qualification | A. McFarlane | 92 |

and provided an international forum to present and discuss the latest developments in rock mechanics and geotechnical engineering.

The L4 Mine Planning Qualification breakfast in May 2012 was held to publicize this qualification, which has been developed through the Industry Mine Planning Forum of the SAIMM over a number of years, and which is now ready for registration on the National Qualifications Framework. This event attracted over 90 delegates, a direct measurement of the interest in the qualification.

The events organized by the Technical Programme Committees contribute greatly to the knowledge of the industry, and without the professionalism of the secretariat and organizing committees of each of these conferences, significantly less knowledge transfer would be possible.

I would therefore like to thank the Technical Programme Committee, contributors to the Conferences, Colloquia, and Schools, and the SAIMM Secretariat for their dedication and hard work during the past year and look forward to another successful, educational year, in 2012.

2.2 Technical Programme Committee—Metallurgy

R.T. Jones, Chairman

M. Dworzanowski, Vice-Chairman

H. Bartlett

T. Malefetse

N. Blackham

A.F. Mulaba-Bafubiandi

Z. Botha

N. Naude

L. Chown

J.D. Steenkamp

T. Claassens

H. Simonsen

K.J. Hay

W. van der Merwe

P. den Hoed

P.J. van Staden

P.A.P. Fouche

K. Vreugdenburg

A.M. Garbers-Craig

B.S. Xakalashe

D.R. Groot

The Metallurgy Technical Programme Committee has supported a good selection of topical technical conferences for the continuing education of metallurgical professionals throughout the year. These events provide an important forum for the efficient dissemination of information about new processes and techniques for improvements in the industry, as well as promoting networking between industry professionals working in the metallurgical field. SAIMM conferences generally receive accreditation from the Engineering Council of South Africa (ECSA) for the requirements of continuing professional development (CPD).

Attendance figures this year varied from 59 (for a highly specialized topic) to 292 (for a well-established multi-day international conference). Sponsorship from industry has continued at a very significant level. The support of sponsors is highly appreciated, especially in light of the somewhat depressed economy.

Formal proceedings of high-quality peer-reviewed papers were published for the larger conferences (usually in book form with an accompanying CD). Conference proceedings are also fully published on the SAIMM website, in order to make the information searchable and available to as wide an audience as possible. The SAIMM continues to make their website publications available free of charge to the general public, in recognition of the time and effort freely contributed by authors.

The 2011/2012 year has included a variety of events, and some highlights are mentioned below.

The Sixth Southern African Base Metals Conference was held at the Hans Merensky Resort in Phalaborwa, on the border of the Kruger National Park, during July 2011, and was attended by 194 people. After the three-day conference (involving the presentation of about 40 papers), there was a one-day technical visit to Palabora Mining Company. This series of base metals conferences is now well established

Annual report

(having been held every second year since 2001), and the event had a high level of sponsorship. Previous events were held at Victoria Falls (Zimbabwe), Sun City (South Africa), Kitwe (Zambia), Swakopmund (Namibia), and Kasane (Botswana).

The Western Cape Branch of the SAIMM held their 29th annual Mineral Processing Conference & Workshop in Cape Town in August 2011. This well-established event features close interaction between the local universities and industry.

The Iron Ore and Manganese Ore Conference was held in September 2011. This conference focused on the comminution, beneficiation, and agglomeration of iron ore and manganese ore, and was attended by 164 people.

The World Gold Conference 2011 was held in Montreal in October 2011, in conjunction with the 50th Conference of Metallurgists, organized by the CIM. This event was attended by a number of delegates from southern Africa.

The Advanced Metals Initiative (AMI) of the South African Department of Science and Technology (DST) facilitates research, development, and innovation across the whole value chain in the field of advanced metals. In support of 'New Metals Development', the ZrTa2011 conference was held at Mount Grace in October 2011. ZrTa2011 brought together researchers, industry, and government stakeholders, to share and debate the latest trends, research, and innovative solutions in the field of zirconium, hafnium, niobium, and tantalum metals. A student seminar (covering the full scope of the AMI) was held on the first day of the conference.

The annual Student Colloquium was held during November 2011 at the University of Pretoria. Historically, this event focused on tertiary educational institutions close to Johannesburg and Pretoria, but this year's event was opened up to a much wider range of southern African universities for the first time. This event is subsidized by SAIMM from the surplus funds from other events, in support of the various tertiary educational institutions in southern Africa. This event continued to provide a showcase for students to present their final-year projects. SAIMM provided adjudicators to select the prize winners, based on the criteria of importance, usefulness, innovation, quality, and communication. The student presentations were generally of high quality, and some were published in the SAIMM *Journal*. Generous prizes were provided by SAIMM for the best mining and metallurgy presentations.

Percolation Leaching 2011 was the title of a new conference held in November 2011. This event attracted significant international participation, and was attended by 89 people.

The Industrial Fluidization South Africa (IFSA 2011) conference was held in the Cradle of Humankind during November 2011. The IFSA conference was first held in 2002, and has been held every three years since then. The core focus of the conference is the industrial application of fluidized-bed technology in fields such as the treatment of minerals, energy generation/conversion, and petrochemicals.

A Thorium symposium was held in Cape Town in February 2012, and was attended by 59 people. This event dealt with current and emerging technologies for thorium, and explored the possibility of using thorium as a replacement for uranium in the generation of nuclear power. The scope of the symposium included geology, mining, processing fundamentals, operational practices, and environmental issues.

The SAIMM conference team organized the Paste 2012 conference in April 2012. This is a large well-established international conference, and was attended by 292 people.

A school on Manganese Ferroalloy Production was held in June 2012. Professor Merete Tangstad from the Norwegian University of Science and Technology (NTNU) presented a two-day course covering the theory and practice of FeMn and SiMn production. The course was attended by 83 delegates.

In addition to the events actually organized by the SAIMM, there was also SAIMM participation in the organizing committees of a number of overseas international events, as well as co-sponsorship of events (which also entails publicizing the events to SAIMM members).

The TPC-Metallurgy committee continued to be supported by a group of highly capable members, and many enjoyable meetings were held during the year. SAIMM's conferencing team is to be commended for their highly professional approach in handling conference arrangements, resulting in many favourable comments from attendees. The combined effort of all these people has resulted in a number of worthwhile technical events being provided for the benefit of the metallurgical community of southern Africa.

2.3 South African National Committee on Tunnelling (SANCOT)

J.A. Cruise, Chairman

| | |
|----------------|--------------------|
| A. Boniface | J.L. Porter |
| G.N. Davis | E.J. Sellers |
| P.H. Ferreira | T.R. Stacey |
| A.L. Griffiths | H.J. Tluczek |
| W. Joughin | J.N. van der Merwe |
| M. Lebitsa | C. Viljoen |
| E.A. McCarter | A. Wilson |

**Co-opted members*

***Resigned*

The South African National Committee on Tunelling (SANCOT) falls under auspices of the SAIMM. SANCOT, in turn, is the body recognized as representing South Africa in the International Tunnelling Association (ITA).

South Africa was represented by Andrew Wilson (official delegate) Sasha Valenta, and Hardus Muller. Messrs Wilson and Muller took part in the meetings of the ITA Working Group 3 Contractual Practice, where Hardus presented a study on the applicability of the NEC3 model contract for use in subsurface construction work. This study was sponsored by the ITA; the first time that the association has provided funds for this type of work. It was very well received and will be developed into a publication by the working group. Mr Sasha Valenta presented a paper on 'The 1332MW Ingula Pumped Storage Scheme: Description of the Most Challenging Aspects' that was co-authored with Messrs Taylor and Wilson.

The papers presented either orally or as poster exhibits reflected a wide range of topics covering many advances in tunneling design and construction, particularly in mechanized tunneling. From the southern African perspective it was interesting to see the emphasis on urban tunneling and the challenges encountered.

Some changes to the statutes and by-laws of the ITA were approved. There were reports from the various committees and working groups, as well as other associations with whom the ITA has close relations.

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There was also intense lobbying by Germany, Denmark, and Croatia to host the General Assembly in 2015, with Croatia emerging the winner. Brazil announced that the 2014 General Assembly will now be held in Iguacu as the 2014 football World Cup has interfered with plans to hold it in São Paulo.

A number of site visits and functions were offered giving ample opportunity for networking. Overall it was a very interesting and successful conference. Although there were only three of us from South Africa there was much interest in the progress of current large projects and those planned, particularly Lesotho Highlands Phase 2.

SANCOT's vertical tunnelling initiative

In December of 2009 SANCOT organized a seminar entitled 'The Future of Vertical Tunnelling'. This event and other industry events stimulated further discussions about the challenge of returning to historical shaft sinking advance rates while progressing in the quest for zero harm is today's challenge. Broadly, this has been met with the use of better planning tools, communication methods, mining technologies, and improved construction techniques. However, it was also acknowledged that these new methodologies were not being captured in a way that makes them available to the global construction industry to further safety performance.

The ITA's reaction to the formation of the SANCOT Working Group (WG)

When SANCOT was making arrangements for the (safety in) Vertical Tunnelling seminar, contact was made with the Animateur of the ITA H&S WG to see what interest they might have in it. The Animateur expressed great interest in the event. The ITA WG acknowledges that they have given little attention to this field and are looking to SANCOT to give them a lead on this important topic. The new working group seeks to provide an independent forum in which the latest ideas on improving shaft sinking safety practice and construction methods can be aired and disseminated to the mining and construction industries as a whole, through the formal ITA structures.

Progress to date

Once the mandate was received from the ITA to proceed, a wide consensus was sought by SANCOT from industry. To assist SANCOT, the Centre for Mechanised Mining Systems at Wits University was approached to act as an independent facilitator. The first meeting of the new working group has been scheduled for the end of July 2012.

3. Publications

Portfolio Holder: M. Dworzanowski

D. Tudor, Chairman

| | |
|---------------|---------------|
| R.D. Beck | R.T. Jones |
| J. Beukes | C. Musingwini |
| P.A.P. Fouche | R.E. Robinson |
| M.F. Handley | N. Singh |
| W.C. Joughin | T.R. Stacey |

3.1 Journal

Monthly publication of the *Journal* was maintained, with a special edition to celebrate 50 years of the School of Mining

Engineering at the University of Pretoria in December 2011 and the special Student Edition in April 2012. The monthly print run stood at 3 850 copies in June 2012.

The breakdown of the papers published is as follows:

| Transaction | July 2011–June 2012 | | July 2010–June 2011 | |
|----------------|---------------------|------------|---------------------|------------|
| | Mining | Metallurgy | Mining | Metallurgy |
| Transaction | 17 | 17 | 12 | 25 |
| Journal | 38 | 25 | 28 | 30 |
| Technical note | 1 | 2 | 0 | 1 |
| Total | 56 | 44 | 40 | 55 |
| Combined Total | 100 | | 95 | |

Major progress has been made by the *Journal* coordinator, Edith Dube, during the year in removing the backlog of papers in the system. The introduction of a computer-based program to monitor the progression of papers from receipt of the initial manuscript to publication has helped in this regard.

The proofreading responsibility was taken over by Antony Cowey, whose meticulous attention to detail has in no small way contributed to maintaining the quality of the *Journal*.

The International Board of Referees was established. The Board, whose expertise is called on from time to time, consists of:

- Herman Potgieter—Manchester Metropolitan University (UK)
- Mike Nicol—Murdoch University (Australia)
- Roussos Dimitrakopoulos—McGill University (Canada)
- Erkan Topal—Curtin University (Australia)
- David Dreisinger—University of British Columbia (Canada)
- Hani Mitri—McGill University (Canada)
- Essie Esterhuizen—NIOSH Research Organization (USA).

Advertising revenue for the year amounted to R1 528 782, which is a significant increase on the previous year. Our advertising executive, Barbara Spence, is to be congratulated on this achievement, but we are circumspect about maintaining this level of advertising revenue in the future, given the current state of the world's economy.

The Publications Committee has debated at length the current composition and format of the *Journal*. There is a recognized need to streamline the refereeing process, without sacrificing quality, and at the same time continue to enable the academic fraternity to gather the rewards and recognition that they deserve and strive for. It is anticipated that the incoming Council will have the opportunity to ratify the proposed changes.

The move towards an 'open access' system for the electronic communication and retrieval of information has gathered momentum on a global basis. The SAIMM is part of that initiative, and the SAIMM has 4250 papers on the OneMine system, where it has scored the highest download ratio (pro-rata) of all the papers that are available across a variety of organizations and their publications.

The African Journal Archive, funded by Carnegie Corporation of New York and managed by South Africa-based Sabinet, has arranged for the digitization of old African journals. The older versions (pre-1969) of the SAIMM *Journal* will be scanned under this scheme and made available at www.ajarchive.org as well as on the SAIMM website.

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The *Journal* is now available on the Scientific Electronic Library Online (SciELO SA: www.scielo.org.za) database. SciELO SA is managed by the Academy of Science of South Africa (ASSAf: www.assaf.org.za), funded by the South African Department of Science and Technology and endorsed by the South African Department of Higher Education and Training (DHET). The SciELO SA project falls under the Scholarly Publishing Unit of ASSAf.

SciELO SA is South Africa's premier open-access (free to access) searchable full-text journal database in service of the South African research community. The database covers a selected collection of peer-reviewed South African scholarly journals.

The publications team of Dawn van der Walt, Zuliakha Malgas, and Edith Dube has continued their good work in producing the *Journal*, despite having to deal with the occasional printing and distribution hiccups.

It is with regret, however, that we lose the services of Edith Dube at the end of July 2012. We wish her well in her new career. We welcome Kelly Matthee as Edith's replacement to the position of Journal Coordinator.

4. Regional Development

Portfolio Holders: G.L. Smith

M. Dworzanowski
P.A.P. Fouche
J. Porter

M.J. Mothomogolo
J.N. van der Merwe

Key Performance Areas

To promote the interests of members based in different regions, the SAJMM:

- *Supports the establishment and maintenance of branches to satisfy the local needs of its members for professional association and the exchange of technical information*
- *Co-operates with other member societies of AS&TS and with associations and interest groups that have close ties with operating mines and metallurgical plants by holding joint technical meetings and collaborating in the field of publication.*

4.1 SAIMM Branches

4.1.1 Johannesburg Branch

V. Duke, Chairman

| | |
|--------------|---------------|
| I. Ashmole | M Mokgojwa |
| D. Bant | G. Oliver |
| N.R. Calvin | X. Pan |
| V. Duke | G. Ralph |
| C. Heili | K. Richardson |
| R. Heins | G. Stripp |
| M. Mabaso | S. Thema |
| S. Mashinini | J. Upshall |
| N. Makhado | M. Woodhall |
| M. Mthenjane | |

Introduction

I am pleased to report on the activities of the Johannesburg Branch of the SAIMM for the period July 2011 to June 2012. The past year has been notably different to the previous year in that while our events remain well attended, the mix between students and all other members present on the evenings changed. Many more students attended than previously, and accordingly the costs have increased to the extent that we finished the year in the red. It was nevertheless pleasing to see the interest from our students both on the committee and at events where they reportedly have enjoyed the diverse range of topics.

Committee

Membership of the committee has been relatively stable, but with an increase in representation from student members and consulting professionals.

Russell Heins, Didi Bant, Nyadzeni Makhado, and Makhoba Lekota joined our committee during the year, and together with the rest of the committee supported our efforts and I thank them for their contribution.

This being said, however, I would like to record my specific gratitude to Ginette Oliver, Ian Ashmole, Graham Stripp, Julian Upshall, and Mike Woodhall for their commitment and active

| Past year technical presentations: Johannesburg Branch of the SAIMM: 2011/2012 | | | | | |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------|---------------------------------|----------------|-----------------|
| Date | Title | Presenter | Sponsor | Responsibility | Venue |
| 2011-07-21 | Mineral processing pilot plants using drill core to better represent a deposit | T. Elliot | Stewart Inspection and Analysis | J. Upshall | Military Museum |
| 2011-08-18 | The nuclear crisis | S. Connell | SAIMM | | Military Museum |
| 2011-09-15 | Panel discussion: Possible Solution to the acid mine drainage Problem | R. Doyle, T. Sims A. Turton, J. Maree | SMS PKH and UWP | | Military Museum |
| 2011-11-17 | Presentation on gold in Zimbabwe | J.G. Taylor | | | Military Museum |
| 2012-02-16 | Coalition for eco-efficient comminution | E. Lewis-Gray | Gekko Systems | | Military Museum |
| 2012-03-15 | Automated mine optimization system | X. Pan | Sound Mining Metallurgy | | Military Museum |
| 2012-04-19 | Rock related safety in South African Mines—are we making progress? | D. Adams | Anglo American | G. Ralph | Military Museum |
| 2012-05-17 | Sensor based sorting operations | L. von Ketelhodt | Commodas Ultrasort | | Military Museum |

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engagement on the committee, and acknowledge that without their efforts the year's pipeline of technical presentations would not have materialized.

Although not on the committee, I would be seriously remiss if I failed to equally thank Anne-Marie McCrate, my personal assistant, and our catering team of Wow Caterers and the staff of the Military Museum, who never fail to perform on the day and have all exceeded my expectations on every occasion.

On behalf of both myself and the committee, I would also like to register a special thanks to the SAIMM Secretariat for their dedicated support of the Johannesburg Branch.

It is pleasing to see that we now have a better representation in terms of gender, race, and qualifications on our committee. This ends my second year as Chairman and I would like to wish the incoming committee everything of the best during the coming year.

Events

The table captures the specific range of technical topics that the Johannesburg branch was fortunately able to enjoy.

All of the presenters had to field a good deal of audience participation, which included students from both the University of Johannesburg and the University of the Witwatersrand. The Branch's programme for the coming year promises to be as eventful, so watch this space.

Finances

Despite many of the events being profitable, we still ended the year with an overall deficit between the cash received from sponsors other than the SAIMM (i.e. R57 400.00) and the actual costs incurred (i.e. R81 319.81).

This deficit amounts to R23 919.81, which is lower than the contribution of R28 850.81 received from the SAIMM. There is a payment of R9 500.00 still outstanding which should materialize during July 2012.

In closing, I look forward to the coming year and to the activities of the Johannesburg Branch under the leadership of a new Chairman.

4.1.2 Pretoria Branch

W.W. de Graaf, Chairman
D. Gudmanz, Secretary

| | |
|-----------|--------------|
| A. Cronje | R. Raphukula |
| K. de Wet | C. Siyasiya |
| N. Naude | J. Steenkamp |

The SAIMM Pretoria Branch in the period July 2011 to date organized monthly seminars in conjunction with the Department of Mining Engineering and the Department of Material Science & Metallurgical Engineering at the University of Pretoria. Presenters from both the university and industry were hosted, with the audience being mainly students, lecturers, and industry professionals.

Historically, the Pretoria Branch being mainly a student branch, one of the primary goals of the new committee is to involve more industry professionals from the greater Pretoria area. Many mining and metallurgical professionals work and reside in and around Pretoria and the seminars are great opportunity for networking between industry and the university on a more informal basis. The branch also plays an important role in recruiting and increasing the membership for the Institute.

A number of mini-colloquia events were organized during the year, with some of the highlights including:

- A presentation by the incoming President of the SAIMM, Professor Nielen van der Merwe, with the topic of his presentation: Future of the South African Mining Industry and the Roles of the SAIMM and the Universities
- The influence of shear stress and weak contacts on pillar behaviours, by Jannie Maritz. The evening was also celebrated with the unveiling of the Minova SA-sponsored discussion room, with all the third- and fourth-year mining engineering students attending
- More on the implementation of a matte-level measuring sensor at Lonmin's Marikana Smelter, by Trevor Goff. The evening's drinks and snacks were sponsored by the Agellis Group
- The threat of rapidly rising electricity prices and low security of supply, presented by Mike Roussouw. The social event after a very interesting and informative talk was sponsored by Xstrata
- Vertical shaft sinking projects at Implats, by Lucas Mackay. The evening's refreshments were sponsored by Implats.

The Branch is planning to have its AGM in August, where I expect the committee to remain the same for the next year. A special word of appreciation to the committee for their support and commitment during the year.

Also a special word of thanks to all the sponsors that have generously sponsored the various evenings' refreshments. Finally, I would like to thank Daleen Gudmanz for all her hard work in the background making sure that the events run smoothly.

We are looking forward to a number of interesting topics to be presented for the coming year. Please keep a look out for the SAIMM flyers that will be sent from time to time to advertise the upcoming events.

4.1.3 Western Cape Branch

R.D. Beck, Chairman
J. Petersen, Vice Chairman
T. Ojumi, Secretary/Treasurer

| | |
|-----------------|-------------|
| M. Aziz | A. Mainza |
| D.A. Deglon | C. O'Connor |
| C. Dorfling | J. Sweet |
| J.-P. Franzidis | E. Thyse |
| T. Madzimbamuto | |

The activities of the Branch continued with the format of previous years. The annual Mineral Processing Conference held in August comprised 48 oral presentations from industry and academia, 24 shorter presentations and accompanying posters, and 11 posters without presentations. Although the title of the conference has always been Mineral Processing, the topics have increased to cover all aspects of mineral processing and extractive metallurgy, which reflects the developments made in the teaching and research activities of the universities in the Western Cape. This particularly is notable in the field of hydrometallurgy. The conference was attended by 160 delegates.

The conference was preceded by the usual workshop, which in 2011 was entitled 'Effluent Treatment and Values Recovery and Mitigation of Environmental Impact'. A range of topics on this important subject was discussed.

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An annual dinner and Branch AGM were held during the conference.

The SAIMM Prestige Prizes for the best final-year students in mining and metallurgy were presented at the 2011 conference dinner by Nielen Van der Merwe, the President-elect of the SAIMM. The recipients were Hebert Nyakunuhwa (UCT), Charl Cilliers (Stellenbosch), and Wynand du Plessis (CPUT).

The Student Evening was held on the 3 May. This event for final-year students from the universities in the Western Cape aims to promote the professional role that engineers play in industry, and the role of professional registration and those of voluntary associations like the SAIMM. This year's event was held at UCT. Richard Beck presented the aims, objectives, and value of membership of the SAIMM and ECSA. Alan Muir, Vice-President Metallurgy for AngloGold Ashanti supported these objectives while giving an entertaining and informative talk on what is expected of a chemical/metallurgical engineer in the minerals industry.

A 'Spotlight' was published in the January 2012 issue of the *Journal* covering the character and activities of the Branch since its formation in the late 1980s.

Consideration is being given to how other Members of the SAIMM in the Western Cape, beyond those involved in academia, can be involved with the Branch. The numbers of these seem to have increased with retirees moving to the Cape. An email to Members asking for input met with a limited response. In an initial move, all Members have been invited to the AGM and dinner at the annual conference on 2 August 2012.

Meg Winter, who has administered the Branch since its inception, has decided to retire. Her replacement is Clare Pomario. Meg is working closely with Clare to ensure a trouble-free handover of activities. Meg has become a 'household' name in connection with the Western Cape Branch and annual conference. We thank her for all her hard work over the years and wish her well in her easier life!

4.1.4 Zambian Branch

S.C. Mulenga, Chairman
H. Zimba, Secretar

The Zambian Branch held an event on 3 November 2011. This event was fully sponsored by Outotec and a total of seven technical papers were presented. The event was graced by the SAIMM President Professor Nielen van der Merwe, who gave an opening speech which highlighted the activities of SAIMM. 81 delegates attended the event and 21 new membership applications were submitted.

SAIMM Council meeting

The Zambian Branch attended both the February and May 2012 SAIMM Council meetings, and in both cases the Branch secretary, Mr. Henry Zimba, represented the Branch. The Branch is ready to attend the remaining council meetings in August and November 2012. While attending the May 2012 SAIMM Council meeting the secretary had an opportunity to attend the Johannesburg technical presentations on 17 May 2012.

Zambian Branch committee meeting

The committee had a meeting on 3 May 2012, and the minutes of this meeting were sent to the mother body in Johannesburg.

Those present were:

Sixtus Mulenga—Chairman

Eric Theron—Vice chairman

Henry Zimba—Secretary

The meeting was called to plan a Zambian event which will be held between July and September 2012.

Please note that this is the current committee of the Zambian Branch as most of the original members have changed work places.

4.1.5 Zimbabwean Branch

W. Kutekwaterkwa, Chairman

The Zimbabwe Branch of the Institute was launched on 7 May 2010 in Harare. This inaugural event was attended by 127 delegates.

Events

In the period under review, the Branch organized a full day conference at the School of Mines in Bulawayo on 19 July 2011, where nine technical papers were presented and 115 delegates attended. The conference was kindly sponsored by Zimplats, Videx, Zimasco, Metallon Gold, Atlas Copco, and Sandvik.

On 2 December 2011, 26 members visited the Zimplats' Selous Metallurgical Complex and Hartley Steep Dip Trial Mine.

Lastly, on 13 July 2012, another 26 members were hosted by the Scientific & Industrial Research & Development Centre (SIRDC) in Harare.

Membership

Membership has grown significantly over the years as shown below, and an improvement is expected in Branch activities during the coming year.

| Year | Total members |
|------|---------------|
| 2008 | 29 |
| 2009 | 41 |
| 2010 | 59 |
| 2011 | 103 |
| 2012 | 147 |

Branch Committee

A new Branch committee for 2012/2013 was commissioned on 13 July, 2012. The committee comprises:

Shepherd Gaihai, *Chairman*

Simon Mandoza, *Vice Chairman*

Wenceslaus Kutekwaterkwa, *Past Chairman*

and Louis Mabiza, Mufulatela Gumbie, Tapfumaneyi Gowera, Elias Matinde, and Martin January as committee members.

The focus for the coming year will be on quarterly mine visits and writing of technical papers by young and seasoned mining professionals alike.

4.1.6 Zululand Branch

W.R.J. Erasmus, Chairman

E. Clare

C. Minnie

B. Marimba

K. Selby

The Zululand Branch of the SAIMM had a great year in 2011 and 2012. There were no major conferences in the area this year.

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A further aggravating factor was the fact that due to the Government Cabinet reshuffles, there were three Ministers of Public Works in three years. In order to resolve the issue, the Minister at the time sought a compromise solution, which was to reduce ECSA's Council's term of office from four years to three years. Again, during this unnecessary process, much time and energy was wasted on matters not relating to engineering.

PAC Metallurgy

The mission of ECSA is to ensure, through a co-operative process of quality assurance, that persons entering the profession are educated and trained according to widely accepted standards, so as to be able to render a professional service for the benefit of the public and the country as a whole. The Professional Advisory Committees (PACs) of ECSA contribute to this mission by considering matters specific to the discipline and also contribute to wider policy matters as required.

During 2011/2012 the PAC Metallurgical Engineering Committee again considered applicants for registration as Professional Engineers by means of paper evaluations and interviews, in which volunteers from the SAIMM participated. The requirement for Continuing Professional Development (CPD) of Professional Engineers for all registered persons opens up opportunities for the SAIMM to support the profession by the offering of seminars and conferences. This contributes to the CPD category 1 developmental activities. The Committee wishes to record its thanks to the organizing committees and the secretariat of the SAIMM for the issuing of CPD certificates.

6. State Liaison

Portfolio Holder: D.J. van Niekerk

6.1 Outcomes-based Education and Training (OBET)

Mining Qualifications Authority (MQA)

The main achievements for the Mining Qualifications Authority (MQA) as Sector Education and Training Authority (SETA) for the South African Mining and Minerals Sector (SAM&MS) for the year under consideration, include the following:

- The Classification of Mines Task Team (CoMTT) of the SGB for Mining and Minerals (M&MSGB) has succeeded in developing a draft Occupational Health and Safety-related Risk-based model to classify mines. This model is intended to be used to determine, among others, the appropriate competency standards for practitioners at mines for levels 4 through 8 on the National Qualifications Framework (NQF). The model has been distributed for comment and ratification to interested and effected parties in the SAM&MS
- QCTO-compliant profiles are being finalized for mining occupations (practitioners) inclusive of Team Leader, Miner/Rockbreaker, Shift Supervisor (Shift Boss/Mining Foreman), and Mine Overseer/Operations Overseer. Following the ratification of the progression of Mining Profiles/Occupations, the respective Community-of-Expert-Practitioners (CEPs) has developed the said draft QCTO-compliant qualifications
- The work of the Certificated Engineering Steercom has been resumed following an engagement between the Chief Executive Officer of the MQA and a Mines'

Professional Associations (MPAs) delegation. The Steercom, assisted by two working groups, will develop appropriate and generic Stage 2 (professional development) programmes intended to be used by employers in the SAM&MS to develop Managers and Engineers.

Mine Planning and Design (MP&D)

The main achievements pertaining to Mine Planning and Design Practitioners in the SAM&MS include the following:

- ABEEDA Associates was appointed by the MQA to undertake a needs analysis for generic and portable MP&D competency standards for Levels 2 through 8 on the NQF for use by the SAM&MS. The report concluded that there is a confirmed need to develop appropriate practitioners in the SAM&MS for Levels 4 to 8 on the 10-level National Qualifications Framework (NQF)
- The M&MSGB has established an appropriate community of Expert Practice (CEP), which has developed a draft Level 4 QCTO-compliant qualification for Mine Planner
- It should be noted that MP&D practitioners substantially practising engineering work (yet to be legislated) at the professional levels would need to be registered in the appropriate professional category in terms of Section 18(2) of the Engineering Profession Act 2008 Act 46/2000:
 - i. Engineering Technician: well-defined engineering work (Level 6 on the NQF)
 - ii. Engineering Technologists: Broadly-defined engineering work (Level 7 on the NQF)
 - iii. Engineering (Level 8 on the NQF): complex engineering work (Level 8 on the NQF).

The Engineering Standards Generation Body (ESGB)

The main achievements of the ESGB for the year under consideration include the following:

- The ESGB has established a task team that will investigate the appropriateness of using Quality Council for Trades and Occupations (QCTO)-compliant qualifications for the training and development (Stage 2) of engineering practitioners in the professional categories
- The ESGB in collaboration with the Mines' Professional Associations (MPAs), of which the SAIMM is a member, has developed a Position Document: Toward a New Model for Certificated Engineers
- The ESGB has successfully completed five generic Engineering Technology qualifications.

Outstanding/unresolved OBET-related issues

The following OBET-related issues need to be resolved:

- The development of OBET-compliant training and development (Stage 2) programmes for Certificated Managers and Engineers in the SAM&MS
- Replacement of the Government Certificates of Competency (GCCs) for Managers and Engineers with registration in the appropriate category with the Engineering Council of South Africa (ECSA) as the appropriate and preferred means of regulating the Engineering Professional in the SAM&MS (refer 'Toward a New Model for Certificated Engineers')

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- Compulsory licensing (authorization) and registration in the SAM&MS
- Compulsory currency-of-competency in the SAM&MS
- The appropriateness of using QCTO-compliant qualifications for the training and development (Stage 2) of Engineering Practitioners in the professional categories through a system of internships and concomitant learnerships
- The development of appropriate generic and portable OBET-compliant competency standards at Levels 5 to 8 on the 10-level National Qualifications Framework for Mine Planning and Design Practitioners in the SAM&MS and
- The finalization and implementation of the Classification-of-Mines in the SAM&MS.

Regulation of the engineering profession in the SAM&MS

The progress made with the regulation of the Engineering Profession includes the following:

- In terms of section 20.(1)(b) of the Built Environment Act 2000, Act No 43 of 2000 'the Council must consult with any person, body or industry that may be affected by the identification of Engineering Work'
- In terms of section 20.(2) of the Built Environment Act the Council must, after consultation with the Competition Commission and in consultation with the Councils for the professions, 'identify the scope of work for every category of registered person'
- The registration of the said 'Proposed IDoEW Regulations' has to date been delayed by the Council for the Built Environment (CBE) now for a period in excess of 2 years. A Joint ECSA and CBE Task Team have been established to resolve the current impasse in regard to the IDoEW
- The CBE has decided to refer the issues relating to the impasse back to the consultant who prepared the Identification of Work Policy document
- Geology, Mine Environmental Engineering, Rock Engineering, Mine Surveying, and Mine Planning and Design practitioners who 'substantially perform identified engineering work' are expected to be the most affected by the implementation of the IDoEW regulations
- The ECSA Council has, as a parallel initiative relating to the Identification of Engineering Work, published an 'Advisory Note: Identification of Engineering Work Advisability and Legal Requirements for Employing Registered Professionals to Perform Engineering Service'. This may be viewed on the ECSA (www.ecsa.co.za) website.

Potential implications: regulation of the engineering profession

- When the Identification of Engineering Work Regulations are promulgated and implemented, persons who perform Identified Engineering Work as defined and take responsibility for such work will be compelled to register in the appropriate category with ECSA
- The chief executive officer of ECSA has undertaken to engage the Departments of Mineral Resources, Labour, and Transport to consider the inappropriate and anomalous overlap that will be caused between the two

regulatory mechanisms for Certificated Engineers when the IDoEW regulations are promulgated and implemented.

7. International liaison

Portfolio Holder: G.V.R. Landman

Key Performance Areas

To achieve its objectives, the SAIMM

- *Participates in and represents South Africa on bodies such as the Mining, Metals & Minerals Society (TMS), and together with Mintek on INFACON*
- *Appoints corresponding members in areas such as Australasia, Botswana, Brazil, Canada, Chile, Europe, the Far East, Ghana, New Zealand, United Kingdom, and the United States of America, and interacts with sister institutions in other countries to promote international exchange of scientific and technical information.*

7.1 APCOM

F.A. Camisani-Calzolari, Chairman

M. Mattera, Member

The Illawarra Branch of the Australasian Institute of Mining and Metallurgy (AusIMM), in association with the University of Wollongong, hosted the 35th Applications of Computers and Operations Research in the Mineral Industries (APCOM) Symposium during the week 24–30 September 2011.

APCOM is an international forum for the presentation, discussion, and examination of state-of-the-art and emerging technologies in the fields of computer and operational research methodologies applied to coal mining and the minerals industry.

The technical programme of 35th APCOM Symposium represented a balanced mix of traditional areas of exploration, geostatistics, mine design, production planning, investment analysis, artificial intelligence, simulation, mine automation, rock mechanics, mineral processing, and data management systems. Over 80 peer-reviewed technical papers and seven keynote presentations were presented during the four-day Symposium.

The International APCOM Council award for a US\$3000 scholarship for a student who published the best paper in operations research was presented to Dalin Cai, a PhD student in the School of Civil, Mining and Environmental Engineering, University of Wollongong. The second International APCOM Council's award for the person in the host country who had contributed the most in the field of operations research applications in minerals industries was presented to Associate Professor Ernest Baafi, University of Wollongong, who was also the organizer of the Symposium.

157 national and international delegates, including South Africans, participated in the Symposium.

The APCOM Council meeting was held on 29 September 2011. Major resolutions were the election of the new Council Chair and the choice of venue for the next Symposium. Professor Sean Dessureault was elected as the International Council Chair for the period 2011–2015, replacing the previous chair Professor Sukumar Bandopadhyay. The next symposium, (the 36th APCOM) will be held in a major hotel in Porto Alegre, Brazil, some distance from the city. The Symposium will be

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supported by the Brazilian Institute of Mines. The symposium will run over three days and will be preceded by two to four workshops. There will be a section of the symposium devoted to 'Advanced Technology relating to Mining', and a feature of the Symposium will be a panel discussion (open forum).

Proceedings are available at <http://www.ausimm.com.au/publications/publication.aspx?ID=12946>

7.2 INFACON

N.A. Barcza, Chairman

International Committee on Ferroalloys

The INFACON Congress was founded in South Africa in 1974 by the SAIMM, Mintek, and the Ferroalloy Producers Association (FAPA). The first INFACON was held in Johannesburg. INFACON has already been held three times in South Africa, the last occasion being in Cape Town in 2004. The next Congress, INFACON XIII, will be held in Almaty in Kazakhstan in 2013.

The International Committee on Ferroalloys (ICFA) was formed by the SAIMM, FAPA, and Mintek. Mintek provides the secretariat for ICFA.

The primary objectives of ICFA are to promote the holding of the INFACON Ferroalloy Congress every three years in appropriate locations and to ensure that the high technical standard is maintained.

ICFA arranges the meeting of representatives from ferroalloy-producing and consuming countries during each INFACON to discuss the relevant technical content for INFACON and decide on the country that will host the subsequent INFACON Congress. Prospective host countries are invited to make submissions in advance to ICFA accordingly. Criteria for selection include the appropriate professional standing of the organizing entity, the suitability of the location, and the necessary level of local and regional support from stakeholders such as industry, government, and relevant technical institutions.

The current members of ICFA include: ABRAFE (Brazil), CSM (Chinese Society for Metals – China), IFPEO (Europe including Scandinavia), IFAPA (India), JFA (Japan), TFA (North America), FAPA (South Africa), and invited attendees include Russia, Kazakhstan, and the Ukraine.

INFACON has been hosted and organized by:

- Brazil (1) in 1986, in Rio de Janeiro (ABRAFE)
- Canada (1) in 2001, in QuébecCity (TFA)
- China (1) in 1998, in Beijing (CSM)
- Finland (1) in 2010, in Helsinki (Outotec)
- India (1) in 2007, in New Delhi (IFAPA)
- Japan (1) in 1983 in Tokyo (JFA)
- Norway (1) in 1995, in Trondheim (SINTEF)
- South Africa (3), in 1974, 1992, and 2004 in Johannesburg (1), Cape Town (2) (FAPA, Mintek, and the SAIMM)
- Switzerland (1) in 1980, in Lausanne (IFPEO)
- USA (1) New Orleans in 1989 (TFA).

INFACON contributes to the exchange of research and development information by publishing refereed papers covering the major and minor ferroalloys. Participants include universities and technical colleges, research and development organizations, suppliers of services, engineering, and equipment, and in particular the ferroalloy industry.

INFACON XIII was awarded to Kazakhstan during INFACON XII at the ICFA meeting in Helsinki held in June 2010. The website for INFACON III is <http://infacon13.kz/>. INFACON XIII will be held in Almaty from June 9–14 2013.

The host organization for INFACON XIII is the Abishev Chemistry and Metallurgy Institute based in Karaganda, Republic of Kazakhstan. Professor Manat Tolymbekov is the Chairman and Mr Sergey Kim the Congress Secretary. The organizing committee for INFACON XIII has been formed and is following the lead of INFACON XII in establishing an Extended Technical Programme Committee with participation from previous INFACON organizers and stakeholders, including ICFA. Outotec has already provided valuable assistance to the INFACON XIII organizing committee at the two meetings held to date. The next meeting is during the first week in November in Almaty.

The theme of INFACON XIII—'Efficient technologies in Ferroalloy Industry'—reflects needs and challenges that all ferroalloy producers are now facing. Rapid growth of ferroalloy production in recent years, deterioration of mineral and energy resources, and toughening of environmental policy are calling for a rational approach to the management and utilization of available natural resources. The INFACON XIII organizing committee invites authors and experts of science and industry to Almaty to share their views and ideas on how to improve ferroalloy technologies and make them more efficient.

The organizing committee invites prospective participants to the Congress to use this excellent opportunity to get to know Kazakhstan, its people and nature, and to experience ancient traditions of 'Eastern' hospitality in the land of snow-capped mountains and endless steppes.

Key dates are as follows:

- 1 April 2012: First call for papers
- 30 September 2012: Final submit of abstracts
- 1 October 2012: Submission of manuscripts
- 1 December 2012: Final acceptance (corrections)
- 1 February 2013: Final provision of papers
- 9–12 June 2013: INFACON XIII Congress.

The SAIMM is the custodian of the INFACON Bursary Fund, which contributes primarily to postgraduate research and development in the field of ferroalloys. The Fund was established from the surplus generated from the previous INFACON XI Congress in South Africa. Contact the SAIMM directly for further details.

INFACON XIII Contacts:

Organizing Committee:
Professor Manat Tolymbekov, *Congress Chairman*
Mr Sergey Kim, *Congress Secretary*
sergey_kim@inbox.ru

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ICFA Contacts:
Mr Tom Curr, *Secretary General*
ICFA c/o Mintek
Tom.Curr@mintek.co.za
Dr Nic Barcza, *Chairman*
ICFA
nicb@mintek.co.za

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Details of the INFACON XIII Committees are provided below.

The SAIMM does not have an INFACON Committee; merely a representative on ICFA the International Committee on Ferro Alloys (ICFA). A Committee is appointed only as and when INFACON is held in South Africa.

Members of Congress Committees:

Organizing Committee

- Professor Manat Tolymbekov (Chairman), Chemical-Metallurgical Institute
- Professor Sailaubay Baisanov, Chemical-Metallurgical Institute
- Dr. Natalya Lu, Chemical-Metallurgical Institute
- Dr. Svetlana Efremova, National Center
- Mrs. Natalya Popova, Chemical-Metallurgical Institute
- Mrs. Sholpan Abdrikhanova, Chemical-Metallurgical Institute
- Ruslan Sultangaziev, Chemical-Metallurgical Institute
- Dr. Sergey Kim (Congress Secretary), Chemical-Metallurgical Institute.

Programme Committee

- Acad. Abdurassul Zharmenov (Chairman), National Center
- Dr. Alma Terlikbaeva, National Center
- Professor Manat Tolymbekov (Chairman), Chemical-Metallurgical Institute
- Professor Sailaubay Baisanov, Chemical-Metallurgical Institute
- Dr. Svetlana Efremova, National Center
- Dr. Natalya Lu, Chemical-Metallurgical Institute
- Dr. Sergey Kim (Congress Secretary), Chemical-Metallurgical Institute.

Extended Programme Committee

- Acad. Abdurassul Zharmenov (Chairman), National Center
- Professor Manat Tolymbekov, Chemical-Metallurgical Institute
- Dr. Nic Barcza, ICFA (International Committee on Ferro Alloys)
- Professor Vladimir Zhuchkov, Institute of Metallurgy, Russian Academy of Sciences
- Professor Michael Gasik, Aalto University
- Professor Sergey Grischenko, Ukraine Ferroalloy Association
- Dr. Asmo Vartiainen, Outotec Oyj.

7.3 SAMREC/SAMVAL

E. Swindell, *Chairman*

G.L. Smith, *Vice Chairman*

| | |
|-----------------------|-------------------|
| A. Bals | S. Grobler |
| D.H.L. Booyens | D. Kruger |
| F. Camisani-Calsolari | K. Lomberg |
| A. Clay | C.D.A. Loxton |
| K. Davies | A. Macfarlane |
| A. de Bruyn | O. Moumakwa |
| J.R. Dixon | D. van Niekerk |
| S. Foya | J. van Zyl Visser |

During the period under review the SSC met regularly, with the exception of the December 2011 meeting, which was cancelled due to the lack of a quorum. The principle activities of the SSC during this period were as follows:

- The reactivation of the SAMREC Working Group. This Working Group had fallen in a state of inactivity, but eventually a meeting was convened and a new Chairman was appointed. The Group has now once again commenced dealing with the business at hand, which includes the following papers:
 - i. Reporting of Inferred Resources (near complete)
 - ii. Reporting standard and format of mineral resources (near complete)
 - iii. Competent person
 - iv. Independence
 - v. The definition and reporting of exploration results
 - vi. The standardization of terms and definitions with CIRSCO
 - vii. The Readers Panel Mandate.
- The SAMVAL Working Group has been particularly active, and following a highly successful one-day seminar in Johannesburg a regular process of monthly meetings, which are being well attended, has commenced. The business of the Working Group has focused upon the international element of the SAMVAL Code, and the Chairman of the Working Group has attended two meetings in Australia where the furtherance of the Valuation Codes internationally has been debated and gained considerable momentum. It is envisaged that an equivalent of CIRSCO will be developed for the Valuation Codes, possibly in association with the International Valuations Standards Council
- SSC members attended the CIRSCO meetings and reported back regularly, thereby maintaining SSC representation on CIRSCO at the proper level. Feedback from this has resulted in various bodies of work for the SAMREC Working Group, which are being attended to. Changes and reviews by overseas associations such as in Canada and Australia were monitored closely and engagement occurred as required
- A proposal for the reactivation of the Oil and Gas Working Group is under consideration
- The IAS awards are to be awarded this year after a suitable judging process.

All ROPO matters have been attended to. A request for a change to the constitutions of the SAIMM and GSSA that would tighten up on the use by members of the GSSA and SAIMM ROPO status for Competent Person reporting purposes has been processed by the respective societies. Confirmation of their inclusion is awaited.

8. Management and administration

Portfolio Holder: J.N. van der Merwe

The Secretariat consists of:

Miss Julie Dixon (Manager)
Mr Alf Bettoni (Accountant)
Miss Jacqui E'Silva (Membership database coordinator and Branch administrator)

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Miss Caron Lance (Junior Conference Co-ordinator)
Miss Portia Malatji (Accounts Assistant)
Mrs Zuliakha Malgas (DTP Operator)
Miss Nazli Mamdo (Publications Co-ordinator)
Miss Kelly Matthee (Journal and Subscriptions Co-ordinator)
Miss Cameron Nagel (Senior Conference Co-ordinator)
Mrs Ginette Oliver (Membership Application Processor and
JHB Branch Coordinator)
Mrs Anna Panama (Conference Assistant)
Mrs Carol Scott (Switchboard/Receptionist)
Mrs Apathia Sello (Administration Clerk)
Miss Keabetswe Shumba (Assistant to the Institute Manager)
Mr Raymond van der Berg (Head of Conferencing)
Mrs Dawn van der Walt (Head of Publications)
The SAIMM, office bearers, and Council record their
appreciation to the above for their service.

8.1 Finance

J.L. Porter, Honorary Treasurer

The message behind this year's financial report has to be your Institutes successful on-going efforts to promote, invest in, and develop our activities throughout Southern Africa. At the same time, the Institute has worked to contain the cost of your membership and attendance of conferences, etc. in an increasingly stressed economic environment for the local mining industry.

At the beginning of the 2012 year, with the approval of Council, Office Bearers introduced a set of defined projects as part of the operating budget. The objective was to create visibility of these activities to Council throughout the year and to better manage the funding of these projects. As mentioned in my report last year, funding was to be through the use of our accumulated AFC Investment Portfolio. A further decision, made early in the year as a matter of policy, was not to cut back on the quality of events run by the Institute. These two decisions were key drivers in terms of our financial results for the year.

Of technical note: wording and style used in the audited financial statements for 2012 is different to our historic reporting standard. This is as a result of your Institute's Auditor complying with modern accounting practice. There is no impact on the reporting of historical and comparative numbers.

To get to the numbers; in my report last year I stated:

'At this point I think that it is prudent to caution our members that the performance of last year is not likely to be repeated.'

Whilst the 2010 to 2011 financial year saw a set of record financial results, the 2012 financial year has required close management by the SAIMM staff as Office Bearers worked to achieve the President's plans for the year.

I am pleased to report that we have, for the most part, been modestly successful.

Key metrics for the year relative to 2011 are as follows:

- Assets: R26 695 874 (down 1.5%)
- Equity: R25 313 164 (up 0.9%)
- Liabilities: R1 381 710 (down 32%)
- Revenue: R16 441 264 (down 19%)
- Cost of sales: R12 242 795 (down 14%)

- Operating expense: R7 752 819 (up 60%)
- Operating surplus: (R2 197 227) (down 196%)
- Total surplus: R46 710 (down 99%).

Clearly, some comment is required on the salient changes in performance relative to last year:

- Assets: The SAIMM has been carrying a cumulative loan of R636 882 to the Scholarship Trust Fund. We have now converted this to a donation. The effect of this change on Total Assets was 2.3% year on year
- Liabilities: This reflects better management of creditors
- Revenue: A drop of R3.8 million was mostly due to the smaller number of 'headline' conferencing events in the year. To quote once more from last year's report:

'The reasons are that there are not as many large events in the year ahead

- Cost of sales: This was managed down relative to the number of conference events. Included is our expenditure for Branch travel of R746 000 which has increased year on year by 67.6% due increased activity within SADEC
- Operating expenses: This year the following extraordinary expenses were included:
 - R438 000 in management fees
 - R281 000 AFC management fees
 - R1 015 000 in donations
 - R151 000 sale of assets
 - R153 000 One mine subscription.

Without these items the annual increase would have been 8.6 per cent—slightly above inflation.

The balance sheet shows that non-current assets rose by 1.6 per cent to R19 091 526 (R18 790 093). Growth is largely as a result of our investment activities growing by 5.1 per cent to R18 933 627 after drawing down R1.0 million to fund these projects:

- SCI Bono: R250 000
- Wits Mine Planning: R400 000
- SAIMM Office: R293 000
- Branch travel: R746 000.

It is also worthwhile noting that the total investment growth is made up of:

- Fair value adjustment: R1 456 608
- Interest: R787 329.

The net result of maintaining growth projects with constrained income is a surplus of just R46 710, including the modest growth of 5.1 per cent in our investments.

One of the major efforts undertaken to maintain a healthy bank and call account of R6.198 million, was the strict control of debtor accounts to within 60 days overdue. This policy has paid off and significantly impacted on the financial well-being of the Institute. At year end our debtor's position stood at some 6 per cent—an historical record low.

So, it would seem that the guiding philosophy for our 2012/13 financial year will be 'SEMPER CENSUM NE SUPERET' (Google it!!).

AFC Investment Portfolio.

A word about our portfolio is warranted.

The investment portfolio had a roller-coaster ride this financial year. Monthly gains and losses followed each other. The portfolio opened in July 2011 at R20 330 million and

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closed in June at R21 308 million; an overall gain of R977 000 but, as a precautionary measure to support projects, council approved the withdrawal of R1 million from interest earned which should be added to this figure.

It might be of interest here to give a resume of the history of our investment with AFC. The late SAIMM President Alaister Douglas originally introduced John Cruise, then Hon. Treasurer, to Dee Campouroglo (SAIMM AFC Account Manager) at a time when the Institute was trying to recover from a disappointing investment experience.

The original mandate was signed by John on 3 March 2000 and Dee took over the investment portfolio with an initial amount of R1 361 746. Contributions since have amounted to R9 340 541 and withdrawals to date have been R3 195 000. The market value as at the end of June was R21 308 million which means investment returns after 12 years are R14 566 814, after all costs.

Well done Dee and AFC.

In closing:

Thank you to Alf Bettoni, our accountant, Robert Kitching our auditor, Julie Dixon our Manager and all of the wonderful SAIMM staff for assisting me as your Honorary Treasurer.

New Members

Members

N. Banda, E. Bashitiawo, A.J. Bester, G. Bezuidenhout, L.G. Bolivar Aponte, A.J. Boshoff, K.J. Botes, S.B. Burelli, B. Buthelezi, F.T. Cawood, K. Changunda, F. Chigwanhire, L. Chimbera, P. Chimunhu, Q.D. Chingoka, G. Chinoda, A. Chitake, P. Chitsiku, S.A. Coetsee, R.D. Cromarty, R.W. Dey, C. Dick, F.M. Dyerenge, C. Dzichavakwa, M. Fakude, M.Z. Ferreira, N.P.C. Fox, R.C. Funnell, A.S. Gaihai, R.W. Gardiner, S. Goto, P.K. Goyal, B.M. Gozhora, L.M. Gray, E. Gwaze, F. Hatinawedu, L.P. Hlahla, M.T. Hlambelo, T.W. Hlongwane, M. January, V.R. Jewaskiewitz, L.W. John, O.T. Johnson, B.J. Jones, P.J. Kekana, S.S. Kgosiemang, R. Khatri, L.A. Korff, M. Kota, P. Kutsira, A. Lebedev, C.M. Lotz, G.C. Madzima, M. Mahlangu, F. Maipisi, S. Makuvaza, S. Manamike, O. Mapengo, D. Mapundu, A. Marini, J.H. Marsh, D.J. Martin, P. Marufu, A.B. Mashingaidze, M. Mateveke, E. Matinde, V.M. Matshikiza, T. Mhiti, R. Mhlari, D. Milanzi, L.H. Modise, Z.S. Mojaki, B.L. Mokoatle, M.R. Monnapula, K. Morolong, K.E. Mosarwe, M. Mothengu, T.J. Motswaledi, E.M. Moyo, T. Moyo, N. Mphathiwa, D. Mtombeni, M.D. Mtshengu, D. Mugwagwa, V.G. Mulaudzi, L.S. Munyoro, P. Muramba, P. Musarandega, E.I. Musimwa, E. Musonda, A.M. Mutileni, U. Naidoo, N. Naude, M.P. Ndanganeni, G.J. Nel, C. Nell, L. Nkala, C. Ntsomeng, P. Nyamande, T.W. Nzima, G.B. Ockhuizen, P. Opelokgale, G.M. Pearson, A. Pillay, L. Prinsloo, A.S. Ramolotja, M. Ramonotsi, U. Rampersad, R.P. Ramphore, M. Reisinger, A.P. Samantaraya, S. Segula, A.F. Shanji, J. Siame, T.B. Sichori, M.C. Sinyabuwe, M.C. Sinyabuwe, R.I. Taje, C.J. du Preez Van Niekerk, R.A.H.M. Van Nieuwenhoven, P.M.F. Watson, B.P. Watson, C.M. Ziwodziwa.

Associates

F. Adzizi, E. Alberts, C.J. Anderson, L.M. Baloyi, K. Bence, J.C. Beyeme Zogo, B. Bhattacharyya, C.A. Biley, C.P. Boonzaier, M. Borrett, B. Botes, H.S. Buchhorn, J. Burger, D.S. Capovila,

T.P. Cardoso, W. Cele, D.R. Chetty, A.P. Chibanda, E. Chisakulo, T. Chongo, V. Chongo, L.C. Coetzee, A. Cope, C.F. De A. Da Corte, B. Daka, I. De Jesus, P. de Oliveira, L. De Salles Leal Filho, M.K.J. Diale, N.M. Dieudonne, M. Dube, L.J. Eksteen, H.M. Ereche, A.P. Esterhuizen, A. Faisal, D.A. Gallo, G.T. Gambiza, H. Gopal, Z. Harber, V. Homela, K.L. Insulander Bjork, O.J. Jabane-Bauwens, D.J. Jacobs, J.P. Jansen Van Vuuren, M.S. Kabwe, R.J. Kadanthode, T. Kadowonda, F. Kalala, S. Kalo, F. Kapika, Z. Khan, G. Khosa, N.K. Khwanda, A. Kogelbauer, C. Kriek, B. Kruger, D. Kuamba, N.D. Lombard, R.T. Louw, S. Lungu, J.H. Maartens, L.A. Mabhalu, D.W. MacNamara, K.O. Madire, P.T. Madzingira, L.T. Magidimisa, J. Mahlangu, N.N. Malila, G.T. Mapakame, A. Mapako, W. Maphosa, C. Masuret, A. Mathenjwa, P. Mathole, T.A. Matsebedi, S. Matthee, G.S. Mhasho, M. Michello, G. Mitshabu, T.A. Mokebe, J.L. Mokgawa, M.W. Mokhosi, T.T. Moraba, R.A. Morgan, M.G. Mthalane, A.P. Mtshizana, L.E. Mualusi, F.M.L. Mulaudzi, E.J. Mulder, D. Mulenga, T.A. Munyaradzi, J. Mutale, S. Muteb, C. Muzerengi, T.E. Muzinda, P. Mwape, J.M. Mwase, C. Mweemba, F. Mwelwa, K. Nago, D.L. Nardini, V.S. Natarajan, Z. Ndese, A.M. Neale, P.N. Neingo, D.J. Nel, N. Nel, H. Ngarivume, M.V. Nhlapho, P.D. Nicklin, P.R. Nieuwoudt, M.B. Nkwini, R.P. Ntoagae, L.L. Ntsane, J.S. Ntsoelengoe, G. Nwaila, N.S. Nxumalo, K.F. Nziyane, O. Olaniran, A. Osman, M.J. Papo, A.K.G. Patel, V. Patni, B.N. Patty, S.Z. Petho, J. Pillay, D. Pretorius, M.R. Prinsloo, S. Putsoane, P. Ramsaywok, P. Refsnider, D. Rossouw, R. Rumbu, S. Rusere, J.T. Samuels, S. Sandres, A.J. Scholtz, T.J. Seboko, B.K. Sedumedi, N. Sehloho, A.I. Shaw, H.N. Sholande, B. Siame-Mwasa, S. Singh, R.B. Siwale, M. Siwelwa, D.J. Skosana, J. Smith, H. Springer, W.F. Steyn, M.V. Surmon, C. Tembo, T. Tlhobo, I.Z. Tonzetic, K.S. Tsiga, M. van Rooyen, A.H. Vosloo, M. Wailesi, B.R. Williams, F. Zambika, K. Zimba.

Students

O. Akanji, P.A. Aluvilu, K.I. Aphane, E. Behrens, S.D. Bhomela, C.M. Bilankulu, M.N. Bokako, J. Botha, M.S.F. Brodner, A. Cherkaev, S.R. Cullum, T. Dibate, K.M. Dinale, E.A. Dithejane, S.B. Dlamini, A. Falch, M.C. Feliti, U.R. Gajoo, W.E. Gama, L. Gethe, Y. Ghorbani, B.R. Gomolemo, J. Goveia-Assafrao, M.G. Grewar, S.P.D. Gunn, D.J. Haasbroek, H. Hagini, I. Huysamen, D.V.V. Kallon, H.S. Katti, L.M. Kgadima, Z. Khumalo, A.Y. Kipayko, K.J. Kobe, L.M. Kola, M. Kolo, A. Kramer, J.A. Kruger, J.J. Kruger, K.R. Kupa, M.D. Lekgethwane, M.Z. Lekgothoane, R.P. Letsoalo, R.J.S. Letswalo, N.L.A. Limburgh, C. Liversage, T.J. Maapoga, T.N. Mabuza, Z.C. Madonsela, L. Mafiri, G. Mahlalela, D. Mahlase, P.L. Makhoba, L.P. Makhubu, D. Makili, T.J. Makwela, M.M. Malebana, R.C. Malebye, N.M. Maleka, A. Malivha, Y. Maluleke, R.E. Maphalla, N. Maphotsa, K.T. Maphunye, M. Mapitsing, A.K. Marake, J.J. Maré, Z.M. Maruma, N.D. Masehla, M.N. Mashego, M.J. Mashilo, N. Masiagwala, S.I. Masindi, V.C. Mathebula, M.V. Mathiba, M. Mathivha, S. Matoko, M. Matsapola, L. Matumba, V. Mavhunda, K. Mbata, M.S. Mboweni, S. Mdondolo, B.M. Mfadala, S.B. Mkhwanazi, N.E. Mmekwa, K.K. Moalusi, M. Modika, K.O. Mogorosi, N.C. Mogoru, G.T. Mohapi, N.M.R. Molabe, E.L. Moleko, I.M. Molekwa, K. Moothi, K. Morai, S. More, M.V. Moroamohwebedu, T.J. Motaung, T.R. Moyane, F. Moyo, P.P. Mphuthi, M. Mpofu, E. Mponya, M.P. Mthimunye, K. Mtshulana, D.T. Mudau, J.M. Mukendwa, B.M. Mukhola, R.R. Munyai, W. Mutaleni, N.I. Mutilitha,

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S.B. Ndlovu, T. Neduvhuledza, T. Nefolovhodwe, M.H. Nesser, T.W. Nevhatalu, T.S. Ngcobo, L.R. Nkoana, B.S. Nkosi, M.L. Nndwambi, K.J. Nyama, N. Olivier, M. Opperman, L.P. Oreboleng, D.R. Phaladi, T.I. Phallane, M. Phasha, O.J. Phefo, T.N. Phuthi, F. Pilusa, C.D. Postma, S.A.J. Potgieter, C.M. Rabothata, M. Rakoma, M.L. Ramarumo, M.S. Ramashala, J.M. Ramokgopa, L.J. Ramosito, M.P.S. Rampedi, K.Q. Rampyapedi, R.R. Raphukula, P.K. Raseloma, B. Rasetlola, L.C. Ratshilumela, W.D. Roodt, M.S. Seabela, S. Sepepane, K. Sera, I. Serepa, S.M. Shilo, T.S. Shuuya, L.V. Sibande, M.L. Siko, K.P. Simba, T. Siobo, R. Sirwali, I.G.T. Smith, J.M. Stewart, T.J. Strydom, R. Sule, T. Suping, D.C. Swanepoel, W.F. Teessen, L.M. Tema, B.S. Tepanyekga, K.G. Thantsha, M.S. Thebe, S.M. Thema, J. Timane P.Q. Tjatja, C.J. Tonkin, M. Tshibete, L. Tshikororo, M.P. Tshwaane, L.J. Tsotetsi, S. Van Der Walt, J. Van Staden, A.P. Van Wyk, S. Zondo.

Company Affiliates

BSI Resources, Ludowici Africa, MRM Mining Services, Rosond (Pty) Ltd, Sound Mining.

Resignations

Fellows

J.M. Barton, M. Mudge.

Retired Fellows

P.B. Columbine, A.B. Cook, C. Grobbelaar, C.J. Isaac, W.C. Mather, J.L. Nel.

Members

F.J. Castelyn, A. Cowey, M.H. Cramer, F.J. Du Toit, D.A. Elder, S.A.C. Hockaday, R. Kruger, V.V. Mashego, G.C. More O'Ferrall, P. Naidoo, K. Ndjibu, M. Swart, N.C.D. Trevarthen, B.H. Wade.

Retired Members

J.M. Goodwin, J.A. Ryder.

Associates

D. Boshoff, R. Escherich, P. Fourie, C. v.W. Haasbroek, G. Harper, P.S. Hlabela, M. Janse van Rensburg, F. January, H.P. Kapolo, H. Cornelius, J.J. Kroon, A.J. Kruger, D.J. Kruger, I. Magagula, J.S. Mahlaba, D.B. Marshall, L.M. Mufamadi, K.S. Osasan, C.L. Phillips, D.M. Raby, R.R. Ross, T.D.B. Rudd, N. Sabelo, T. Singh, M. Sivhidzho, W.J.M. Welding, G.J. Wurts.

Students

W.E. Poole.

Company Affiliates

Air Products SA (Pty) Ltd, B E Morgan Associates (Pty) Ltd, Flowrox (Pty) Ltd, Fraser Alexander Group, Knight Hall Hendry, Sedgman South Africa.

Members transferred to Higher Grade

Transfer from Member to Fellow

A.P.W. Briggs, G.A. Coutinho, A.W. Dougall, J.M. Halhead, R.A. Heins, B.W. Holtshousen, W.T. Kutekwatekwa, B.A. Montpellier, I.M. Mthenjane, J. Mungoshi, M.F. O'Brien, D. Roets, B.R. Tinniswood, M.R. Tlala.

Transfer from Associate to Member

E.S. Andrews, N.L. Baartjes, W. Banda, P.J. Chetty, T.T. Chigova, M. Chirisa, M.H. Fowler, P.N.J. Houman, P. Kluge, C.L. Kühl, M. Le Roux, I.G. Lute, J.F. Mackenzie, J. Makotsi, M.R. Mohring, T.D. Mokaila, K.R. Mosimane, M.M. Motloung, R.P. Motsie, N. Mtimkulu, G.A. Norton.

Transfer from Student to Associate

O.A. Bello, H. Chisango, S.P. Govo, K. Kabezya, D. Lusinga, F.K. Mdluli, T.G. Mhuriyengwe, J. Mishra, M.M. Mokgojwa, K. Molabe, T.R. Ramongalo, M.P. Sekhuto.

Transfer from Student to member

P. Mpunzi.

Members who retired

Fellows

R.H. Dent, A.E.W. Fletcher, J.W. Jacobs, K.C. Owen, R.L. Paul, S. Venter, P.M.T. White.

Members

D.T. Bell, W.P. Channon, D.A. Nixon, J.A. Robertson.

Deceased

Fellows

G. Annandale.

Retired Fellows

G. Maude, D.W. Moffat, D.J. Mulligan, J.A. Tyser, P.M.T. White, R.J. Whyte.

Members

M.N. Carter, J.M.A. Geldenhuys, P. Gericke, S.J.J. Van Heerden.

Life Fellow

C.T. Shaw.

Associates

M.J. Khoase, G.L. Waller.

Members who were reinstated

Reinstated as a Member

M.H. Cramer, N.L.V. James, W. Nkhata, M.W.F. Seeger, M. Steinmann, L.C.K. Tolmay, M.S. Van Heerden, F.M.C.D-C. Vieira.

Reinstated as Associates

O.A. Bello, K. Ghoussias, M.A. Kabemba, K. Kabezya, A. Lubbe, L.M. Mabokela, J. Mahlangu, A. Maier, N.S. Malapane, A.E. Mavhungu, F.K. Mdluli, L.-L. Mothapo, D. Pretorius.

Reinstated as a Fellow

F.P.S.F. Guilherme, D. Roets.

Reinstated as Company Affiliate

Engineering Project Company Ltd, Fraser Alexander Group, SNC Lavalin (Pty) Ltd. ♦