

Annual report

FOR THE YEAR ENDED 30 JUNE 2019

COUNCIL FOR 2018/2019

President
A.S. Macfarlane

President Elect
M.I. Mthenjane

Vice Presidents

Senior
Z. Botha

Junior
I.J. Geldenhuys

Immediate Past President
S. Ndlovu

Honorary Treasurer
V.G. Duke

Co-opted Member
R.T. Jones

Members of Council

C.C. Holtzhausen	N. Singh
W.C. Joughin	A.G. Smith
G.R. Lane	M.H. Solomon
E. Matinde	D. Tudor
H.K. Musiyarira	A.T. van Zyl
G. Njowa	E.J. Walls
S.M. Rupprecht	

Branch Chairpersons

Botswana Branch	Vacant
DRC Branch	S. Maleba
Johannesburg Branch	D.F. Jensen
Namibian Branch	N.M. Namate
Northern Cape	F. Nieuwenhuys
Pretoria Branch	R.J. Mostert
Western Cape Branch	L.S. Bbosa
Zambian Branch	D. Muma
Zimbabwean Branch	C.P. Sadomba
Zululand Branch	C.W. Mienie

Past Presidents serving on Council

R.D. Beck	J.L. Porter
J.R. Dixon	S.J. Ramokgopa
M. Dworzanowski	M.H. Rogers
H.E. James	D.A.J. Ross-Watt
R.T. Jones	G.L. Smith
G.V.R. Landman	W.H. van Niekerk
C. Musingwini	R.P.H. Willis

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. International Liaison
6. Management and Administration.

1. Interests of Individual Members

J.R. Dixon, Chairperson

As at the end of the 2019 financial year, total membership across all categories stood at 4792, representing a decrease of 285 on the previous year's figure. Of this number, 3608 are based in South Africa and a further 1004 from our country branches in Southern Africa, where healthy growth was seen in Namibia and Zambia. The balance is made up of members scattered across the globe. The decrease in members is reflective of conditions in the South African mining industry, with more unemployment in technical occupations and people moving either into alternative industries in South Africa or moving internationally.

Student membership again showed growth, increasing by 37 or 2.0% this year with students now making up 38.5% of total membership. The focus on our youth and Young Professionals remains a cornerstone strategy for the long-term health of the Institute. Council continues to encourage the initiative of offering support to our members that are financially stressed, either through deferred fees or in exceptional cases, by waiving the annual fee. The number of people receiving this assistance is 0.2% of membership compared with 1.02% last year, which reflects the continuing pressure facing our membership in the mining industry.

Table 1

Total SAIMM membership analysis year-on-year

Membership grade	End 2017/2018	End 2018/2019	Net Gain/Loss
Honorary Life Fellow	49	48	-1
Honorary Fellow	2	2	0
Life Fellow	7	7	0
Fellow	351	329	-22
Retired Fellow	172	190	18
Life Member	1	1	0
Member	1 541	1 401	-140
Retired Member	122	122	0
Associate	910	746	-164
Retired Associate	12	12	0
Student	1 810	1 847	37
Company Affiliate	100	87	-13
Total	5 077	4 792	-285

Table II
Country /Branch membership analysis for 2018/2019

Country Branches	2017/18	2018/19
Botswana	74	57
Namibia	63	91
Zambia	186	190
Zimbabwe	685	651
Total	1 084	1 004

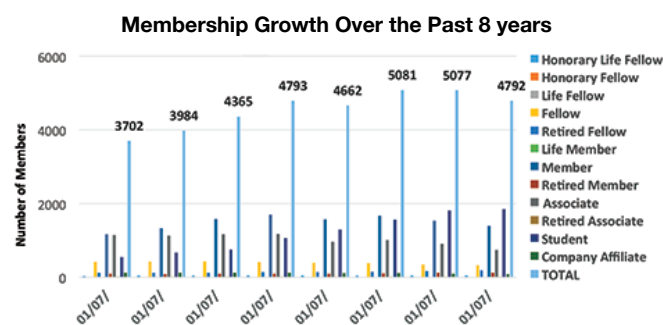


Figure 1—South African membership – annual growth

It is with great sadness that we have to report the passing of some of our members, many whom have played pivotal roles in the Southern African mining and metallurgical industries.

Members who sadly passed on during 2018/2019		
Deceased	Election date	Membership Grade
Adriaan Albertus van Jaarsveld	18 September 1998	Associate
Andrew William Jameson	06 March 1975	Associate
Philip John Donne Lloyd	28 August 1968	Retired Fellow
Carel Aron Roode	28 August 1968	Fellow
Kenneth Michael Steenkamp	18 September 1981	Retired Member
Robert Edward Franklin Cowley	10 April 1964	Retired Fellow
Frederick DeVries	24 April 1987	Retired Fellow
Frank Fenwick	03 May 1966	Retired Member
John Arthur Luckmann	20 October 1989	Retired Fellow
Dieter Robert Chelius	10 May 1957	Retired Member
Raymond John Thomas Butler	21 May 1976	Retired Member
Charl Petrus Celliers	19 February 1988	Member

In addition to membership growth, fee collection has remained a focus for the Committee. Maintenance of contact with members remains a challenge. Membership and conference fees have been kept well below inflation parameters to ensure that our members continue to get value for their fees. Unfortunately, it is expected that annual increases will need to be more aligned with cost increases in the coming years.

I wish to extend my personal thanks to the members of the Committee for their commitment and support during the past year.

Maintaining a quorum at the Membership Committee has proved a challenge in the past year, despite teleconferencing. In the coming year thought will be given as to how the process can be further streamlined.

On behalf of the Membership Committee and of this Portfolio, we will strive to support our incoming President and Council in meeting their objectives and seeking new ways to support our Members.

1.1 Membership Committee

J.R. Dixon, Chairperson

A.T. Chinhava (YPC)

G.V.R. Landman

K.M. Letsoalo (YPC)

T. Mahomedy (YPC)

T.M. Mmola (YPC)

S. Ndlovu

J.C. Ngoma

S.J. Ramokgopa

M.H. Rogers

D. Ross-Watt

G.L. Smith

T.R. Stacey

W.H. van Niekerk

R.P.H. Willis

Membership

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

Requirements for Corporate Membership

HONORARY LIFE FELLOW: An Honorary Life Fellow shall be a person whom the Institute specifically desires to honour in consideration of services rendered to the Institute, to science, or to industry. Honorary Life Fellows shall have all the privileges of Corporate Members.

- The election of an Honorary Life Fellow shall take place at a Council meeting, due notice having been given at the preceding Council meeting of Council's intention to nominate a person as an Honorary Life Fellow. The election shall require the majority vote of Corporate Members of Council present at a Council meeting
- The election of an Honorary Life Fellow shall be announced at the following Annual General Meeting of the Institute
- An Honorary Life Fellow will have all membership fees and subscriptions waived.

FELLOW: A candidate for admission to or transfer into the category of Fellow shall:

- Be at least 35 (thirty-five) years of age
- Have, for a period of at least 5 (five) years, been practising in a senior technical position in mining or metallurgical undertakings, or in governmental, educational, or research organizations concerned with those industries, or
- Have, for a period of at least 5 (five) years, been practising as a consultant in the skills of mining and metallurgy, and
- Be practising his/her profession at the time of application, satisfy Council that he/she is a fit and proper person to become a Fellow, and Council shall be satisfied that his/her qualifications, training, and technical experience justify such professional status, and
- Have been a Member of good standing for 5 (five) years and have promoted the interests of the SAIMM through:
 - Serving on committee structures, and/or
 - Publishing in the *SAIMM Journal* or conference proceedings, and/or
 - By other means acceptable to Council.

MEMBER: A candidate for admission to or transfer into the category of Member shall:

- Be at least 25 (twenty-five) years of age

- Have, for a period of at least 2 (two) years, been practising in a responsible or senior technical position in minerals and metals industry undertakings or in governmental, service, educational, or research organizations concerned with those industries, or
- Have, for a period of at least 2 (two) years, been practising as a consultant in the minerals and metals industries, and
- Be practising his/her profession at the time of his/her application, satisfy Council that he/she is a fit and proper person to become a Member, and Council shall be satisfied that his/her qualification, training, and technical experience justifies such professional status.

Requirements for Non-Corporate Membership

COMPANY AFFILIATE: Companies involved in or associated with the mining and metallurgical industries are eligible for admission to the category of Company Affiliate.

HONORARY FELLOW: Honorary Fellows shall be persons of distinction in public service, science, or the arts and shall be elected or re-elected by Council for the current year. They shall enjoy all the privileges and rights of members, except those of holding office and voting.

ASSOCIATE: A candidate for admission into the category of Associate shall:

- Be at least 18 (eighteen) years of age, and
- Be involved in minerals and metals industry undertakings or in governmental, service, educational, or research organizations concerned with those industries, but not meet the requirements to be registered as a Corporate Member
- Satisfy Council that he/she is a fit and proper person to become an Associate Member.

STUDENT: A candidate for admission into the category of Student shall:

- Be a person in the third or further year of being educated or trained in a manner approved by Council to occupy a technical position or associated with the minerals or metals industries
- Satisfy Council that he/she is a fit and proper person to become a Student Member
- Remain a Student Member only while he/she is being educated in a manner approved by Council
- Confirm their membership at the beginning of each academic year by submitting proof of registration at their applicable tertiary institution. Failure to submit proof of registration will result in termination of membership
- Not remain a Student Member after the end of the Institute's financial year in which he/she attains the age of 28 (twenty-eight) years. Council may relax the provisions of this clause in such cases as it considers appropriate.

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.

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 Affiliateship is tax deductible
- Have ample opportunity to send delegates to attend technical meetings to obtain information and to benefit from the experience of others.

1.2 Young Professionals Council

Portfolio Holder: S. Ndlovu

K.M. Letsoalo, Vice Chairperson

G. Dabula, Vice Chairperson

A.S. Nhleko, Immediate Past Chairperson

N. Tshiongo-Makgwe, Secretary

A.T. Chinhava, Treasurer

I.J. Geldenhuys*

K. Mosebi

L.T. Lumbwe

S. Ndlovu*

T. Mahomedy

G. Nxumalo

S.F. Manjengwa

S.M. Rupprecht*

T.M. Mmola

C. Setuke

R.P. Molehe

F. Uahengo

**Observers*

Strategy Focus for 2018/2019

In the 2018/2019 term the Young Professionals Council (YPC) identified two key performance areas intended to guide each portfolio on its major deliverables. This did not replace the strategy documents but provided guidance to the various teams on what should be achieved to ensure that the long-term objectives of the YPC are attained in future. Part of the focus included initiating YPC activities in Namibia, Botswana, and Zimbabwe. The YPC also strove to ensure that adequate funding is generated to support the planned activities.

Namibia

The YPC Namibia Branch started off well in 2018 with a roadshow held in Rosh Pinah on 11 July 2018. A subcommittee of eight members was established after the roadshow. The team assisted in the organizing of a well-attended networking dinner held in Windhoek on 7 May 2019. The objective was to stress the importance of affiliating to a profession body and raise awareness of YPC activities in Namibia. The event also provided the young professionals with information on how to become technically involved through publications. The dinner was attended by approximately 40 young professionals from both mining academic institutions and industries in Namibia. Preparation are underway to host a technical conference in August 2019.

The Branch continues to reach out to all young professionals in the country and aims to have representatives in all the relevant regions to facilitate its activities. Through the leadership of Ms Foibe Uahengo and the YPC-Namibia Branch Champions, presentations to young professional are scheduled to take place in Swakopmund and Karibib.

Zimbabwe

The membership recruitment drive targeted students from tertiary institutions offering mining and metallurgy programmes, comprising the University of Zimbabwe, Midlands State University, Manicaland State University, Zimbabwe School of Mines, and Gwanda University. Much effort was concentrated on recruitment at Gwanda University, which is a fairly new institute in the league of universities offering Earth Science programmes. A student leadership committee at each tertiary institution coordinates all the SAIMM activities and recruitment. Further efforts were concentrated on the retention of students and their transition to Associate Membership grade. Total youth membership is currently at 80%, consisting mostly of students.

The SAIMM's influence in institutions improved significantly as a result of improved engagement through the YPC.

Most of the engagement was through partnership with universities concerning the successful launch of the Young Persons' Lecture Competition in Zimbabwe in collaboration with IOM3. The finalists proceeded to represent Zimbabwe and Southern Africa at the world competitions held in Port Elizabeth, South Africa in October 2018.

Furthermore, the Branch facilitated the participation of two young professionals to present technical papers at the Young Professionals Conference held in Johannesburg. In promoting research and development amongst the youth, two research papers were presented by students at the annual Zimbabwe Branch Conference in 2019. The Champion of the YPC-Zimbabwe Branch is Mr Adrian Chinhava.

Botswana

The YPC-Botswana was established in 2018/2019 through the Championship of Kabelo Mosebi. The main object of the Branch in the year under review was to recruit young professional in the region and establish communication with the SAIMM Botswana Branch. Over 16 young professionals were identified and recruited to the SAIMM.

YPC Activities

The YPC organized several events that are seen as being important in developing young professionals in general and in developing the capacity to deliver on the needs of the young professional members of the Institute.

Education Working Group

The YPC continues to support initiatives that focus on attracting learners to fields of study associated with the minerals industry. The YPC participated in the Sci-Bono Career Guidance events giving career guidance to high-school students. The YPC also ran a raffle at the SAIMM Banquet to raise funds for the Scholarship Trust Fund.

The Education Working Group (EWG) was involved in hosting a soft skills workshop at the University of the Witwatersrand (Wits) in April 2019. The workshop was aimed at equipping delegates with curriculum vitae and covering letter writing skills. Other planned workshops for the 2019 academic year include technical writing and entrepreneurship. The purpose of these workshops is to prepare well-rounded graduates for the minerals industry.

On 23 August 2018, mining and metallurgy students from the University of Johannesburg (UJ) and Wits participated in the annual Johannesburg Branch student debate, with the theme of 'Techno-economic discussion on exotic/high-tech metals' with the emphasis on their applications in emerging technologies. Graham Stripp was the debate convenor.

On 4 August 2018 the YPC, in partnership with student bodies from UJ, hosted a Careers and Leadership Conference held at the University of Johannesburg. The event, which was sponsored by PriceWaterhouseCoopers, was attended by students from Wits, UJ, the University of Pretoria (UP), Vaal University of Technology (VUT), and UNISA.

The SAIMM held the 15th Annual Student Colloquium on 24 October 2018 at Mintek in Randburg. The event included mining and metallurgy technical presentations from students across universities in South Africa, Namibia, and Zambia.

Career Guidance Working Group

The YPC concluded developing the graduate development programme for mining and metallurgical graduates, which is aimed at ensuring that young professionals are trained appropriately. The programme has been presented for comments from various role-players. The YPC, in collaboration with Wits University Mining Engineers Association (WUMEA), gave a presentation to young professionals at the launching of WUMEA's Northern Cape Branch. The aim was to inform attendees about the YPC and subsequently start organizing YPC activities in the region.

Enterprise Working Group

The Enterprise Working Group is mainly focused on ensuring that young professional within the SAIMM have a full appreciation of the business opportunities available in the metals sector and possible funding structures. In partnership with Sandvik and Phambili Solutions, a seminar for young professionals was hosted aimed at sharing supplier development opportunities. The seminar was well attended, and a raffle was held at the event to raise funds for the Scholarship Trust Fund. The seminar was also used to market the Entrepreneurship in Mining Conference, which took place at Riversands on 31 July 2019.

Mentorship Programme

The YPC Mentorship Programme, which is in its fourth year of running, received 22 applications in 2019. The protégés and mentors are based in various countries from Zambia to Canada. The programme allows young professionals to build connections with experienced practitioners and to develop into future leaders of the industry. The programme is considered to be one of the most successful initiatives by YPC, with support from the SAIMM members.

Graduate Employment Database

The YPC is sensitive to the challenge faced by young professionals in finding meaningful and gainful employment in the minerals industry. Over 400 SAIMM members have registered on the Graduate Employment Database (GED) and the SAIMM sends out regular communications to these members alerting them on career, internship, or education opportunities. During the 2018-2019 term, information on four internship, career, and education opportunities was e-mailed through the database. Two applicants from the SAIMM database were successful in their quest for employment.

Social media activity

The YPC aims to ensure that its social media presence is increased by 10% on a quarterly basis. The Facebook following increased from 2888 in April 2018 to 4138 in May 2019. The Twitter following has grown from 1635 to 2011 over the past year. Following the establishment of a YPC Instagram account in January 2018, the profile has grown to just over 291 followers. LinkedIn continues to experience the highest growth in followers, with just over one-third (37%) of the followers being engineers in the mining and metals industry. The YPC continues to provide content that is beneficial to members under 35.

Funding

The YPC funding portfolio had set a target of generating R100 000 in funding and finding a partner that would be able to provide annuity funding. Challenges were experienced in finding

annuity funders, and R70 000 in funding was generated in the 2018-2019 term. The main funders were Sandvik and De Beers, with some funding for the Entrepreneurship in Mining lead-up event being provided by Sandvik.

1.3 Promotion of the SAIMM

Portfolio holder: A.S. Macfarlane

This report covers the activities of the Institute over the 2018/2019 financial year. This has been a difficult year for the Institute, due to the continued contraction of the industry in certain sectors as a result of continued economic challenges in the industry, as well as a cycle in the event calendar where very few large income-generating events were held, resulting in reduced income.

It has also been noticeable that it has been difficult to ensure attendance at Council, TPC, and Subcommittee levels due to the work commitments of our volunteer members.

These indications have influenced our strategic direction, as explained later. However, despite these challenges, the Institute has had an eventful year, with many noteworthy successes as explained in this report.

Strategic Planning for the SAIMM

During the year, focus was placed on developing the strategies of the previous year, so that a firm strategic plan could be established that would direct the Institute for the next 5 to 10 years. As referred to above, the year witnessed a number of challenges and changes which have emphasized the need for constant reassessment of the direction of the Institute. These include the following:

- A reduction in membership, both individual and corporate
- Reduced attendance at some events, while others still attracted significant audiences when the topic was relevant
- A lack of support at events from operational management from industry
- Shifting sands as far as the state of the industry is concerned, with some sectors such as gold and platinum continuing to experience difficulties and contraction
- Changes in policy and legislation, such as the Mining Charter 3, which impact on the direction of the SAIMM and similar institutions
- The rapid transition of the industry towards Industrial Revolution 4.0
- The ever-increasing need and responsibility of the mining industry to become more inclusive and engaged in matters of communities and society as a whole.

Matters such as these give rise to the question of how the Institute remains relevant to its members as well as to the industry, and how strategy shapes the manner in which the Institute maintains its relevancy.

With this in mind, the Office Bearers developed the following strategies to take the Institute forward.

1. Redefining who we are

This strategy requires that the Institute critically re-examines its offerings in terms of relevancy, whether this be the events that are held or the activities that the Institute supports and arranges. This fundamental reassessment of activities then will influence the branding and marketing of the Institute to a wider audience.

2. Modernizing and extending the reach of the SAIMM

This involves recognition of the ever-changing landscape of the industry and the impact of Industrial Revolution 4.0, which in turn means that new professions should be attracted to the Institute. This area also requires that the Institute continues to grow the activities of the Young Professionals Council and the Committee for Diversity and Inclusion in the Minerals Industry, and that the Institute supports the development of entrepreneurs and localization.

3. Keeping in touch with industry

The Institute needs to continue to find ways in which to keep in touch with industry and its changing needs. This will include engagement with industry to develop partnerships that will be of mutual benefit.

4. Extending geographical reach

This strategy requires not only that our branches are more effective, but also that the Institute constantly reassesses the opportunities for new branches to be formed, and new relationships to be established, globally. Already, a partnership with the Turkish Chamber of Mining Engineers is being discussed, and discussions have been held with the Minerals Industry Association of Southern Africa.

5. Creating platforms for dialogue

In this area the Institute, while continuing to hold high-quality technical events, needs to extend its offerings to include events of a topical nature, to encourage dialogue and collaboration among industry stakeholders. Several highly successful events of this type were held in 2019.

6. Strengthening professionalism among members.

The Institute will continue to strengthen professionalism through the enforcement of its Code of Ethics, as well as encouraging professional registration and interaction with other professional bodies.

The development of these strategies into specific action plans has been hampered by the availability of volunteers from Council to meet regularly to progress this initiative. This in itself indicates that a different approach may be necessary to drive these strategies forward in terms of the resources available to do this work.

The SAIMM is not alone in having to address these issues of relevancy and strategy, with the Australian and Canadian institutes having had to deal with the same issues.

In the remainder of the report, under each heading a note describes how the strategic plan will impact in each area.

Financials

As alluded to above, the 2018/2019 year was a difficult one for the SAIMM from a financial point of view. This was partly due to the slower than expected recovery of the industry and the economic situation in the country, which meant that conference attendance was affected, and that membership decreased. In addition, it so happened that the year was one in which only two international technical events were held, being the Sulphuric Acid and Deep Level Mining conferences. This resulted in TPC income being largely dependant on the local events, which were also affected by the downturn. Additionally, some forward payments for future international events had to be made, with these incomes only accruing in the future.

Thus, a kind of 'perfect storm' was created.

The Institute will end the year with a deficit of R9 881, but this includes drawdowns from the investment account of R3 720 000, which were agreed to through Office Bearers and Council, in order to cover deficits and ongoing expenses. While it is disappointing that these drawdowns had to be made, it is important to remember that one of the purposes of the investment fund is to be able to cover these cyclical downturns that occur from time to time. Nevertheless, the investment fund stands at a balance of R28 489 249, having seen a decline of 10% over the year.

In April, a turnaround strategy was developed to deal with the financial situation, and the following actions were put in place.

- A deep-dive into the financial numbers was conducted by the Secretariat to identify any areas of wasteful or unnecessary expenditure.
- Past events were analysed to identify areas where losses occurred. This revealed that certain venue costs were high, and a survey of possible venues was conducted to develop a listing of cost-effective venues for use by TPCs. This is now in use, and further discounts are being negotiated.
- TPCs now actively manage their event budgets to ensure that events do not make losses.
- Budgets will now be zero-based, meaning that these will be based on projections on actual events as opposed to historical projections.
- TPCs are encouraged to develop three-year plans so that cyclicity in terms of cash flow can be forecast and dealt with.
- Outstanding membership fees of over two years that were deemed irrecoverable were written off, with these members being struck off.
- An aggressive drive by the Secretariat resulted in significant recovery of outstanding membership fees (in the one- to two-year window) and outstanding debtor payments.
- Upfront payments are now required for conference attendance.

In terms of strategy going forward, the financial position of the Institute will be enhanced through the following:

- Developing and implementing the strategic plan referred to above, using the immediate Past President portfolio to drive the strategy forward
- Investigation of industry partnerships to increase membership
- Developing 3–5 year plans for event calendars to ensure an even spread of cash flow
- Embracing digital technology to increase efficiency and delivery from the Secretariat
- Using digital technology to increase reach and provide exciting events.

Membership

As a result of the write-off of outstanding debt and the striking-off of long-standing non-paying members, as well as resignations during the year, membership dipped below 5000 to 4982.

These members are still spread across 50 countries, and female membership now stands at 19.4%.

Strategically, a drive is required to increase membership through the following activities.

- Re-examining the value proposition for members and ensuring that this is communicated to members
- Developing a strategy to extend membership in our branches, through liaison and collaboration with the Minerals Industry Association of Southern Africa, which represents all of the Chambers of Mines of Southern Africa
- Extending reach to 'new professions' in the minerals industry
- Using digital technology to deliver quality events to branches
- Supporting the YPC and DIMI to increase membership amongst young male and female professionals.

Publications

Our *Journal* continued to enjoy success as a globally recognized, high-quality publication which disseminates scientific and technical knowledge to the benefit of the minerals industries, as well as to our members.

During the year, our *Journal* had seven themed editions, based on the themes of technical events, with papers from these events being published after peer review. Additionally, the 125th year publication is under preparation for publication, and an edition was published in recognition of the wonderful work done by Professor Richard Minnitt in the area of Mineral Resource evaluation over the many years of his illustrious career.

The student edition continues to showcase the high quality of research work done by our students at the universities, and gives the readers comfort that the future of the industry is in good hands.

During the year the Office Bearers engaged with the Department of Science and Technology to ensure that papers published in the *Journal* are recognized. This was a concern raised by the universities, and the matter was resolved with the DST. Various concerns were raised in communications with the universities, such as the Journal Impact Factor (currently 0.339) and the need to increase the number of international referees and international papers. These are matters for the new Editor of the *Journal* to attend to.

The Institute bids a fond farewell to David Tudor, who has served as the Editor of the *Journal* and Chair of the Publications Committee for the past 11 years. In the words of Professor Rosemary Falcon, who has stepped in to take over the Editorship, 'The SAIMM Journal has achieved great standing in professional and academic circles and his (Dave's) dedication in this role contributed in no small measure to this success.' Strategically, the SAIMM will continue to develop digital means for publication, but the *Journal* will continue to be available in hard copy for those who prefer it that way.

Technical Conferencing

Technical conferencing continues to be the cornerstone of the offerings of the Institute, in terms of delivery to members and industry, and in terms of income.

The technical conferences are coordinated by the Technical Programme Committees, with a conference committee for each event being made up of TPC and/or industry and academic members and the secretariat. These committees ensure the success of the events, and the secretariat ensures high-quality delivery and organization. Without these dedicated people the events would not be the success that they undoubtedly are.

During the year 2018/2019, there were 22 events, comprising 12 conferences, one workshop, six breakfasts, one

short course, one colloquium, and one seminar. Significantly, delegate attendance decreased from 3246 to 1943, which was due to the fact that there were few large international events, as mentioned earlier. This had a profound effect on income.

Noteworthy among this year's conference were the highly successful Copper and Cobalt conference, which attracted 293 delegates and was held in Zambia.

The Geometallurgical conference was held in Cape Town and attracted an international audience, covering many different aspects of this topic and many different minerals. The success of the event indicates the need for this to be repeated, probably on a biannual basis, with a need to involve more work from the mining part of the value chain.

The MineSafe Conference was held in August 2018 as a joint conference between the SAIMM and MPAS. The event was successful, especially the Industry Awards Day which followed the conference. However, it was felt by the organizers that it was time to revamp the conference proceedings, and in this regard MPAS will be holding separate events in the future. On the basis of this, the SAIMM has decided to continue with an International Mine Health and Safety conference, and this will be held at the end of 2019.

A successful international Sulphuric Acid event was held in Swakopmund in March, with delegates from around the world.

A New Technology conference and trade show was held at Riversands in June, attracting a large audience of delegates, speakers, and exhibitors.

The other international event, which was, as always, highly successful, was the Deep and High Stress Mining Conference held at Misty Hills in June 2019.

A collaborative event was held in February with the Mining Equipment Manufacturers of South Africa (MEMSA), which showcased local mining, mineral processing, and metallurgical equipment and debated the requirements for compliance on localization in the Mining Charter 3. This followed a successful breakfast event which was held earlier in the year. Several other breakfast events were held during the year on topical issues and subjects, often as part of a larger theme of linked conferences.

The Technical Programme Committees met together on a regular basis to ensure that synergies and opportunities for events between mining and metallurgy were realized. These meetings were used to plan events for the future, to ensure that international events were identified, and to ensure cash flow is optimized.

A joint strategy session was also held, which identified a number of issues going forward, to ensure the success of the TPC programme. These included:

- Digital transformation of events
- Planning and budgeting processes
- Venue optimization
- Marketing of events
- Collaboration with other organizations.

Branches continue to be encouraged to hold events in their regions, assisted by the Secretariat and the TPCs. Some of these events were organized this year, including the Rock Engineering event held in the Democratic Republic of Congo, and the Sulphuric Acid event in Namibia.

In order to increase the number of international conferences taking place Southern Africa, dialogue has been opened with the Australian Institute of Mining and Metallurgy. While mutual

agreement on the desirability of closer collaboration was reached, the details will be discussed at the GMPA meeting in Peru in September.

Additionally a collaborative agreement is being developed with the Chamber of Mining Engineers of Turkey, which has reach across North Africa and the Middle East, for a joint event to be planned.

An event is also being planned with the Minerals Association of Southern Africa, on Efficient Energy in the Minerals Industry in Southern Africa.

Strategically, the SAIMM will continue to diversify its offerings to include topical issues where dialogue and collaboration can be encouraged, so that events have tangible outcomes which can influence policy and the mining ecosystem.

Global Mining Professionals Alliance (GMPA)

The SAIMM continues to be a member of the Global Mining Professionals Alliance.

The GMPA is a collaboration between the leading professional bodies representing the minerals industries around the world and comprises the following organizations:

- Australasian Institute of Mining and Metallurgy (AusIMM)
- Canadian Institute of Mining, Metallurgy and Petroleum (CIM)
- Institute of Materials, Mining and Metallurgy (IOM3)
- Southern African Institute of Mining and Metallurgy (SAIMM)
- Society for Mining, Metallurgy and Exploration Inc. (SME)
- Instituto de Ingenieros de Minas del Peru (IIMP).

The objectives of the GMPA members are to work together to identify and deliver collaborative projects that are of mutual benefit, to share knowledge and resources regarding effective ways to support the professional development of institutional members, and to be a partner of (or commit to joining) the OneMine global mining database.

The GMPA is currently undergoing a process to formalize its existence and increase its effectiveness. Specifically, it is in the process of establishing a website so that communication between members becomes more transparent.

It has also resolved to focus on specific topics of a global nature, to foster dialogue, and offer guidance on these topics. The next meeting of the GMPA (which the SAIMM will be attending) will be in Peru in September. The main topic of discussion at this meeting is the management of tailings, with a view to developing guidelines for management and risk assessment of tailings storage facilities.

The SAIMM has agreed to work together with the AusIMM to improve the effectiveness of the GMPA.

Global Mining Guidelines Group (GMG)

This is an international group that was established to develop standards (where appropriate) and guidelines on matters relating to modernization and innovation. These are largely in the areas of digitalization and IR4.0.

The organization has 89 corporate members and 3481 global participants spread across 38 countries, including South Africa. They have thus far produced nine guidelines.

The SAIMM has been a member for some years, but has this year increased its visibility, firstly by holding an event here at Wits Club. Through our representative, Jean-Jacques Verheaghe, the SAIMM will be taking an increasing role in the GMG to represent Southern African interests.

Collaboration

The name of the game for the future of the industry in Southern Africa is collaboration, and the SAIMM has worked hard on collaboration with a number of organizations during 2018/2019, in line with its strategy. Some of these are as follows.

ECSA

In recent years there have been certain challenges in relation to the Engineering Council of South Africa in terms of the representation of SAIMM on its Council and its various accreditation committees. Various changes that were enacted by ECSA meant that the SAIMM, along with other Learned Societies and Voluntary Organisations (VAs), lost representation on these important committees (that were of interest to members).

A meeting forum for the VAs was established, known as the South African Forum of Engineers (SAFE), of which the SAIMM is a member. It was the purpose of this collective forum to discuss these matters, and to find ways to resolve the apparent impasse.

Recently, ECSA extended invitations to the VAs, including the SAIMM, to participate in certain of these committees, and the SAIMM has nominated two members.

Through SAFE, the SAIMM submitted a list of preferences that SAIMM would want to pursue in future discussions with ECSA. In the meanwhile, ECSA renewed the SAIMM's recognition as a VA.

It is hoped that this represents the start of re-establishing the positive relationship with ECSA that all would want.

Local Professional Organizations

The SAIMM maintains positive relationships with other like-minded professional organizations, among whom are:

- Association of Mine Managers of South Africa (AMMSA)
- Association of Mine Resident Engineers of South Africa (AMRE)
- Geostatistical Association of Southern Africa (GASA)
- Geological Society of South Africa (GSSA)
- Institute of Mine Surveyors of South Africa (IMSSA)
- Mine Metallurgical Managers Association (MMA)
- Mine Ventilation Society of South Africa (MVSSA)
- South African Colliery Engineers' Association (SACEA)
- South African Colliery Managers Association (SACMA)
- Southern African Coal Processing Society (SACPS)
- South African Institution of Chemical Engineers (SAIChE-ICChemE)
- South African Institute of Electrical Engineers (SAIEE)
- South African National Institute of Rock Engineering (SANIRE).

Additionally, in line with the strategy of extending our reach to new professions in the minerals industry, a collaboration agreement has been signed with the South African Geophysical Association, and a similar agreement is under discussion with the South African Council for Automation and Control (SACAC).

Two meetings have been held this year with the presidents of these organizations. The first was to understand what each organization is doing, and how collaboration could be encouraged. Arising from this meeting was the upcoming event on Exploration in Southern Africa, which is a joint event with the Geological Society.

At the second meeting, it was agreed that more formal Terms of Reference be developed for the formation of an association to be known as the South African Minerals Professionals Alliance. This forum will discuss matters of common interest and provide a conduit to take matters to the GMPA.

Minerals Council

In the line of creating closer contact and dialogue, two meetings were held with the Minerals Council. The first was with the Minerals Council Office Bearers, to establish broad agreement on the need for closer ties. The second was with the Executive of the Council, at which more details were discussed of areas of closer collaboration. These included organizing joint events, working with the YPC, establishing closer ties with industry, and university liaison.

Young Professionals Council (YPC)

The YPC is a vitally important part of the SAIMM. During the year 2018/2019 they have been very active, focusing on strategy, education, enterprise, mentorship, a graduate employment database and social media activity.

In terms of strategy the YPC has concentrated on geographical reach, by starting to establish sub-branches of the YPC in Namibia, Zimbabwe, and Botswana. Some 40 young professionals attended an event in Namibia, aimed at establishing a branch there.

In Zimbabwe, the YPC has engaged with the University of Zimbabwe, Midlands State University, Manicaland State University, Zimbabwe School of Mines, and Gwanda University. These engagements are aimed at recruitment as well as assisting students in presentations at a Young Persons Lecture competition in Zimbabwe, the Student Colloquium in Johannesburg, and the annual Zimbabwe Branch conference.

In Botswana, so far 16 young professionals have been recruited into the Botswana YPC.

In terms of the Education Working Group, the YPC has participated at Sci-Bono, hosted a workshop on soft skills at Wits, assisted with the annual student debate, hosted a leadership conference at UJ, and hosted the annual student colloquium. The Group has also developed a draft graduate development programme, which will be presented to Council and the Minerals Council.

The Enterprise Working Group conducted a seminar on entrepreneurship, as a forerunner to a conference in July.

The mentorship programme continues to operate successfully, with 22 new applicants in 2019.

The YPC continues to assist with the placement of unemployed young professionals, having established a database of some 400 candidates.

Regarding social media, the Facebook following for the YPC increased from 2888 in April 2018 to 4138 in May 2019. Similarly, Twitter following has increased from 1635 to 2011. These forums cover content from the minerals industry that is of interest to members under the age of 35.

The YPC has also set itself a target for self-funding. On a target of R100 000 it has so far raised R70 000.

Strategically, the YPC and its activities are an essential component of shaping the future of the Institute, through career and professional development, attraction of the youth to our industry, university liaison through establishing chapters and branches, and entrepreneurial development.

The Committee for Diversity and Inclusion in the Minerals Industry (DIMI)

The DIMI was established in 2017 under the chairmanship of Professor Ndlovu. This Committee was established to explore ways to encourage awareness on issues of diversity and inclusion in the minerals industry, to engage with SAIMM members to encourage diversity and inclusion in SAIMM activities, and to serve as a forum for discussion and dialogue on issues of diversity and inclusion.

This important committee has organized events and presentations on these matters, including mentorship and retaining women in the minerals industry.

Diversity and Inclusion is critical for the future of the Institute and is fundamental to its strategy.

The SAIMM annual banquet

The banquet was held on Saturday 16 March 2019 in the Ballroom at the Sandton Convention. Sandton.

There were 324 guests in total. There were three VIP tables, which included the SAIMM Office Bearers and presidents of kindred organizations. There were 28 sponsor companies ranging from academia and consulting to operations and young professionals.

The SAIMM presented the first-ever long service award to a Council member, to Mr Dirk van Niekerk, who had been a member of Council for 29 years. Mr van Niekerk was very pleased with his award and gave some insight into his years at the SAIMM during his acceptance speech.

Another key event was the presentation of certificates to Fellows who were elected in the preceding year. This process was instituted in 2016 and has become an important part of the proceedings. Another process that continued this year was the invitation and mention of the top five members in the different categories of the Five Star Incentive Programme. These categories are the top five proposers, *i.e.* members who signed up the most number of members during the year; the top five referees of papers for the *Journal* and the top author, *i.e.*, the author who submitted the most number of papers, and whose papers were published in the year.

Entertainment was provided by renowned ventriloquist Conrad Koch and his puppet Chester Missing, who took a light-hearted look at local and international politics. Attendees enjoyed his humour and there was favourable feedback after the banquet.

Guests were also complimentary about the menu and wine selection.

As always, the SAIMM extends its appreciation to the companies who sponsored the event and we look forward to seeing them all at the next banquet.

Scholarship Trust Fund

The SAIMM continues to support the Scholarship Trust Fund, which is a fund aimed at supporting needy students studying mining and metallurgy subjects at university. An annual contribution is made to the Fund, which currently stands at a value of R255 897. Members and Associates are encouraged to donate to this worthy cause.

Staffing matters

There are currently 15 full-time staff and one contractor employed by the SAIMM. The team continued to provide

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extensive and exceptional services in the areas of conferences, membership, publications, and administration. As President of the Institute I extend my utmost gratitude to the team for the exceptionally good work they do for the SAIMM.

During the year the Institute employed Mrs Thato Letebele in the role of communications and marketing liaison.

It is with great sadness that we report the passing on of the previous Accountant, Mr Alf Bettoni, and Mrs Anna Panana, who was the Conference Administrator. Mrs Panana had been with the SAIMM for 30 years on the day she passed on, 30 March 2019.

There were no other major staff changes, and the SAIMM as a whole thanks the team for their continued support and efforts during the year.

Conclusion

In conclusion, as the outgoing President, I can say that it has been a challenging yet very enjoyable year, and I hope that I have been able to give value to our great Institute. It has been a privilege, and honour and a crowning glory to my career to have served the Institute in this capacity.

There is no doubt that the strategy needs to be developed further so that we can continue to make the Institute strong, sustainable, and valuable to our members, and that our Institute can be the envy of the world.

It is only through the tireless dedication of the staff, the Council, the Office Bearers and the members that this can happen.

1.4 Awards and Adjudication Committees

Awards and Adjudication Committee—Mining

M.H. Rogers, Chairperson

W.C. Joughin	G.L. Smith
R.G.B. Pickering	T.R. Stacey

Awards and Adjudication Committee—Metallurgy

D. Tudor, Chairman

P. den Hoed	R.L. Paul
S. Ndlovu	R. Steward

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
	J. Gray	S.J. Truscott
	J.V. Muller	G.A. Watermeyer
	J. 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
	J. de V. Lambrechts	
1976	D.G. Maxwell*	A.R.O. Williams*
1978	J.K.E. Douglas*	V.C. Robinson*
	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	H.G. Mosenthal*
	J.S. Freer*	
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	

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2009	I. Walton	
2010	R.T. Jones	
2011	No award	
2012	No award	
2013	No award	
2014	G.V.R. Landman	R.G.B. Pickering
	A.S. Macfarlane	
2015	O.K.H. Steffen*	M.F. Handley
2016	R.C.A. Minnitt	S.J. Ramokgopa
	J.L. Porter	G.L. Smith
2017	D. Tudor	
2018	M. Woodhall	
2019	M. Dworzanowski	K.C. Sole
	C. Musingwini	

*Deceased

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
1986	M.D.G. Salamon
1987	T.F. Muller
1988	W.J. (Wim) de Villiers
1989	R.A. Plumbridge
1990	W.G. Boustred
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.T. O'Connor
2011	B.C. Alberts
2012	R.P. Mohring
2013	H.R. Phillips
2014	R.M. Godsell
2015	S.A. Nkosi
2016	M.A. Hermanus

2017	R.A. Baxter
2018	M.S. Teke

This year the award is made to David Lancaster Hodgson 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*	B.M. Roberts*
	J. Levin*	A.a. von Maltitz*
	D.D. McWilliam*	T. Waterman*
1934	A.C.M. Cornish-Bowden*	J.W.V. Mortleman*
	H.E. Cross*	K. Rood*
	E.F. Laschinger*	A. Siff*
	E. Margo	O. Weiss*
1935	O.B. Swallow*	
1936	O. Deane*	A.H. Mokken*
	T.L. Gibbs*	H.L. Munro*
	R.C.J. Goode*	R.M.F. Seawright*
	F.G. Hill*	A.C. Pigott*
	D.M. Jamieson*	J.S. van Zijl*
	D.J. Rogers*	L. Walter*
1937	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*

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	R.C. Espley-Jones*	V.O. Steed*
	N.M. Hayne*	J.E. van Leeuwen*
	R.T. Naudé*	W.C. Walmsley*
1943	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*
1945	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
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.F. Dear*	B.S. Tattersson
	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.W.P. 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
1962	S.I. Du Preez	E. Schmid
	P.J. Heystek	
1963	L. Anderson	J.N. Gallie
	H.K.R. Cahnbley*	J.J. Geldenhuys
	G.C. Clatworthy	T.J. Kotze
	R.E.F. Cowley	A.H. Munro
	J.A.J. De Cuyper	A.G. Netto
1964	J. Douglas	A.W. John
	K. Imre	A. Simon
1965	P. Andersson	W. Mitchell
	J.A. Cruise	D.I. Ossin
	F.S.A. De Frey	M.H. Rogers
	F.M.G. Egerton	E.H.J. Stoyell
	F. Fenwick*	R.S. Traviss*
	M.R. Fuller-Good	J.W. Walls
	P.G. Gaylard	I.C. Watson
	J.P. Hoffman*	J.C.M. Wethmar
	J.P. Loo	
1966	D.A. Arnold	N.F. Peverett
	C. Fauconnier	J.C. Simms
	D.R. Fleming	P.J.C. Smith
	E. Fletcher	O.K.H. Steffen*
	P.G.P. Mrkusic	D.J. van Niekerk
1967	H.G. Albertyn	H.E. Lombard
	N.A. Barcza	M.C.W. Morris
	A.G.C. Merson	W.A. Nairn
	P.J. Cook	A.D. Ochse
	C.V.B. Cunningham	M.v.R. Steyn
	N.C. Joughin	P.S. Wentworth
1968	H.A.D. Kirsten	N.P. Finkelstein
	D.G. Sacco	
1969	I.C. Robinson	G.F. Bainbridge
	W.E. Stumpf	T.K. Whitelock

*Deceased since becoming members of the Club

†Resigned

The Danie Krige Memorial Award

Following discussions at Office Bearers and Council during 2013 it was agreed to honour the memory of and contribution to the minerals industry made by the late Professor Danie Krige.

It was agreed, amongst other activities, to make an annual award of a Danie Krige medal for a qualifying geostatistics paper published in the *SAIMM Journal* of the previous year.

There is no award this year.

Gold and Silver Medals

Papers published in the *Journal* from March 2018 to February 2019 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:

J.W.D. Groenewald, L.R. Nelson, R.J. Hundermark, K. Phage, R.L. Sakaran, Q. van Rooyen, and A. Cizek, for their paper

Annual report

published in the April 2018 issue of the *Journal* entitled: 'Furnace integrity monitoring using principal component analysis: an industrial case study'.

As non-members, J.W.D. Groenewald and A. Cizek received certificates 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:

E. Matinde, G.S. Simate, and S. Ndlovu, for their paper published in the August 2018 issue of the *Journal* entitled: 'Mining and metallurgical wastes: a review of recycling and re-use practices'.

E.L. Forner, J. Scheepers, A.J. du Toit, and G.M. Miller, for their paper published in the November 2018 issue of the *Journal* entitled: 'Copper electrowinning circuit design: optimized costing as a function of cell arrangement, productivity, rectifier size, and throughput'.

and

D.F. Malan and J.A.L. Napier, for their paper published in the March 2018 issue of the *Journal* entitled: 'Reassessing continuous stope closure data using a limit equilibrium displacement discontinuity model'.

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 Engineering	K. Kunene
Metallurgical Engineering	F.P. Marais

University of Pretoria

Mining Engineering	J.H. Maritz
--------------------	-------------

University of Johannesburg

Extractive Metallurgy	M. Mulaudzi
-----------------------	-------------

University of Cape Town

Mineral Processing	D. Ssebunnya
--------------------	--------------

University of Stellenbosch

Mineral Processing	M-A. Smit
--------------------	-----------

Cape Peninsula University of Technology

Chemical Engineering	K. Reddy
----------------------	----------

The prizes for the universities of Cape Town and Stellenbosch and the Cape Peninsula University of Technology will be awarded at the Western Cape Branch Annual General Meeting on 4 September 2019.

SAIMM 5 Star Incentive Programme

The SAIMM 5 Star Incentive Programme was introduced in 2015 to thank members who contribute to the growing membership of the SAIMM and to provide additional benefits to Fellows and Members of the SAIMM.

The top 5 proposers are:

D. Muma
F.C. Nieuwenhuys
A.N. Mainza
C.H. Esterhuizen
D.L. Bantobetse

The top 5 referees of papers published in the *Journal* are:

R. Mitra
M. Dworzanowski
M. Erwee
S.M. Rupprecht
D. Vogt

The authors who has submitted and published the most number of papers in the *Journal* are:

C. Musingwini
J. van Dyk
C.A. Strydom

Top Advertiser in the Journal

The award for the Most Supportive Advertiser in the *Journal* is to be made annually by the SAIMM and is the Institute's way of recognizing the continued and loyal support of those companies that advertise in our *Journal*. The award is made not only on the strength of the amount of money spent by an advertiser, but also on factors like general cooperation, meeting of deadlines, and the timely settling of accounts. Our advertisers make a major contribution to the Institute's ability to provide our members and associates with a quality *Journal*.

The Most Supportive Advertiser for 2018/2019 is Weir Minerals.

1.5 SAIMM Scholarship Trust Fund

J.R. Dixon, Chairperson

A.S. Macfarlane	M.H. Rogers
T.M. Mmola	W.H. van Niekerk

The Trust Fund was able to distribute a total of R240 425 between the eight minerals-industry-related faculties across the country. The SAIMM continued its support of the Trust Fund with a contribution of R220 000. The funds are allocated based on the number of minerals industry students in the four years at each institution as a percentage of the total of 2517 students.

The Young Professionals Council (YPC) has taken the lead in encouraging funding by arranging a drive for donations at the SAIMM Annual Banquet. This has proven to be successful.

The review of the Trust Deed is due to commence to ensure that the SAIMM and the Trustees comply with the relevant legislation applicable to charitable trusts such as ours.

1.6 Complaints Committee

R.C.D. Phillis, Chairperson

M. Dworzanowski	A.J. McDonald
A. Garbers-Craig	

Nothing to report this year.

1.7 Ethics Committee

J.A. Cruise, Chairperson

G.C. Butler	D. Porter
A. Kinghorn	M.R. Tlala

Nothing to report this year.

1.8 The Committee for Diversity and Inclusion in the Minerals Industry Report (DIMI)

Professor S. Ndlovu, Chairperson

The SAIMM established the Committee for Diversity and Inclusion in the Minerals Industry (DIMI) in 2017. The Committee is made up of male and female, emerging and experienced professionals from both industry and academia, who are all passionate about seeing positive changes in the minerals industry.

The terms of reference for the Committee were presented and ratified at the Council meeting in May 2019. The Committee will:

- Actively explore ways that can encourage awareness on issues of diversity and inclusion in the minerals industry
- Engage with SAIMM members to encourage diversity and inclusion in SAIMM activities
- Serve as a forum for the discussion of specific issues facing diversity and inclusion in the minerals industry.

A dedicated web page specifically for the DIMI Committee and its activities will be available on the SAIMM website.

Events planned for the rest of the year include:

- Presentations to final-year university students on the potential challenges of diversity, gender, and inclusion in industry and how to negotiate the workplace in such an environment. These presentations will be done over the course of the second half of the year
- Mentoring workshop with the theme of 'Mentoring beyond exclusivity'. The workshop will focus on how to derive maximum benefits of mentorship for the career advancement of women and persons of diverse social identities. This is scheduled for July 2019
- Breakfast session on retaining of women in the minerals industry. This is scheduled for August 2019
- Presentation of a paper at the International Mine Health and Safety Conference scheduled for October 2019. The focus of the presentation is a look at our sister bodies, the Canadian Institute of Mining (CIM) and the Australian Institute of Mining and Metallurgy (AusIMM) for insights, inspiration, and benchmarks for promoting the interests of diverse inclusivity in the mining workspace. The intended outcome is to select examples that we feel willing and inspired to embrace, ethically and positively, in order to reject or improve on areas that we feel would be more fitting to our own unique challenges, as South Africans and Africans at large.

1.9 Banquet Committee

Z. Botha	A.S. Macfarlane
V.G. Duke	M.I. Mthenjane
I.J. Geldenhuys	S. Ndlovu
R.T. Jones	

The banquet was held on Saturday 16 March 2019 in the Ballroom at the Sandton Convention Centre, Sandton.

There were 324 guests in total. Three VIP tables hosted the SAIMM Office Bearers, and Presidents of kindred organizations. The guests included representatives from 28 sponsor companies ranging from academia, consulting, operations, and young professionals.

The SAIMM presented the first-ever long service award to a Council member, to Mr Dirk van Niekerk, who has been a member of Council for 29 years. Mr van Niekerk was overjoyed with his

award and gave some insight into his years at the SAIMM during his acceptance speech.

Another major event was the presentation of certificates to Fellows who were elected in the preceding year. This process was instituted in 2016 and has become an important part of the proceedings. Another tradition that continued this year was the invitation and acknowledgement of the top five members in the different categories of the Five Star Incentive Programme. These categories comprise the top five proposers, *i.e.* members who introduced the greatest number of new members during the year, the top five referees of papers for the *Journal*, and the top author, *i.e.* the author who submitted the greatest number of papers and whose papers were published during the year.

Entertainment was provided by renowned ventriloquist Conrad Koch and his puppet, Chester Missing, who provided a light-hearted look at local and international politics. Attendees enjoyed his humour and there was favourable feedback after the banquet.

Guests were also complimentary about the menu and wine selection.

As always, the SAIMM extends its appreciation to the companies who sponsored the event and we look forward to seeing them all at the next banquet.

2. Technical meetings

Portfolio Holders: A.S. Macfarlane and Z. Botha

The mining and metallurgy TPCs are managed as two separate committees and, in the previous year, we have been working more closely together and integrating mining and metallurgy in our industry programmes. The report is therefore combined again.

Our thanks to the members of the respective committees for their contributions to a full programme this year.

2.1 Technical Programme Committee – Mining

G.R. Lane, Chairperson

Z. Botha, Metallurgy Representative

R. Armstrong	B. Morena
L. Dimbungu	D. Muma
N. Dirande	C. Musingwini
N. Diyambas	N.M. Namate
W.C. Joughin	A. S. Nhleko
D. Limpitlaw	J.L. Porter
A.S. Macfarlane	S. Pule
A. Mainza	S. Rungan
S. Maleba	S. Rupprecht
H. Marsden	C.B. Smith
S. Matutu	M.H. Solomon
C.W. Mienie	A.L. Swart
R.C.A. Minnitt	M. Woodhall
T.M. Mmola	
*Deceased	

2.2 Technical Programme Committee – Metallurgy

Z. Botha, Chairperson

I.J. Geldenhuys, Co-chairperson

G.R. Lane, Mining Representative

R.D. Beck	M. Motuku
T. Claassens	A. Mulaba-Bafubiandi
P. den Hoed	D. Muma

N. Dirande	N.M. Namate
N. Diyambas	N. Naude
M. Dworzanowski	S. Ndlovu
D. Groot	A.S. Nhleko
R.T. Jones	N. Segapela
A. Mainza	J.H. Selby
S. Maleba	H.A. Simonsen
E. Matinde	K.C. Sole
S. Matutu	J.D. Steenkamp
C. Mienie	P.J. van Staden
T.M. Mmola	

The approved mandate for 2019 remained unchanged and is as follows:

- Innovate
- Facilitate the dissemination of relevant knowledge and experience to the benefit of all SAIMM members and stakeholders
- Facilitate independent fact-based discussion of topics of relevance to SAIMM members and stakeholders
- Foster collaboration in the interests of all our members and global stakeholders
- Encourage SAIMM members and our stakeholders to propose topics of interest for conferences or other events, and provide an independent platform for these events to be held
- Coordinate and support the events programme to ensure overall financial sustainability of the SAIMM.

The past 12 months have been challenging, with a decline in revenue from conferences and events. This is partly due to a drop in the number of large international conferences in this last 12-month period, and to low attendance at other events, which had to be financially supported.

In response to the changing needs of the industry, fewer personnel based at head office, production priorities of operations-based personnel, Generation Z (and now Y) and the digital revolution, the TPC has implemented its 2018 strategy of business breakfasts, forums, smaller events, and digital streaming.

The aim is to have relevant topics to drive thought leadership and collaboration, but with less time commitment required of attendees from industry. This is in response to feedback from industry due to the changing demands on staff.

The business breakfasts have been very popular with delegates as they are topical, feature one or two relevant quality speakers, and require only two hours of time commitment. The aim of these meetings is to drive relevant discussions and collaboration in the industry, and to promote a larger conference on the topic if relevant. Some of the topics addressed this past year have been:

1. **Local is lekker Breakfast**—local supply chain development with regards to Mining Charter 3. This business breakfast led into a 2-day conference, sponsored by MEMSA and the Mandela Mining Precinct, on the development of the local supply chain, which attracted 120 delegates.
2. **PGMS into the Future Breakfast**—the opportunity that fuel cells offer South Africa and the industry. This is part of a series to bring industry, fuel cell development, and government together to drive the development of the PGM market.

3. **Renewable Energy Breakfast**—a follow-on conference event will be held in June 2020 focusing on renewable solutions for an energy-intensive industry.

The move to multiple smaller events has placed additional workload on the SAIMM conference organizing team as well on a few committed volunteers for the organizing committees. A strategic review workshop has identified the following matters for consideration going forward.

1. Volunteers' time is becoming limited and the workload is falling on a few committed individuals – how do we attract the young professionals and future leaders?
2. Focus on relevant topics for one large conference per year
3. Formulate a standard blueprint for breakfasts and smaller events to reduce the workload on volunteers and the secretariat
4. Marketing focus to attract delegates, advertising the relevant topic and speaker list
5. Addition of an annual SAIMM Summit starting in Q1 2020 – this will be a large conference for all members to collaborate, drive the SAIMM's strategic direction and industry needs, and will culminate with the SAIMM banquet.

The SAIMM relies on its members and industry leaders to volunteer their time to sit on the TPC Committees and be involved in conference organizing committees. The changing industry and demands on individuals have seen a decline in participation and a few individuals are now carrying most of the load. We do recognize that time commitment is a challenge and are streamlining the secretariat's role, using digital meeting formats and event planning blueprints to leverage the hours that people can commit to more effectively. These meetings offer a great opportunity to network with leaders in the industry, make oneself known, and make a difference.

The TPCs host all committee and organizing committee meeting via Digital Zoom meetings. Therefore, you can contribute and get involved with event committees from remote locations globally – please reach out to the SAIMM and become involved.

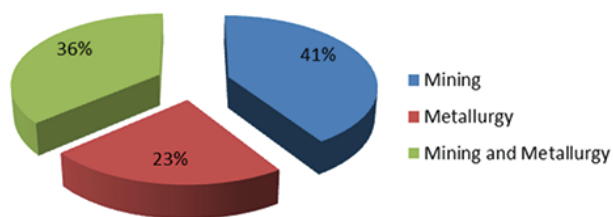
Unfortunately, we still see most conference delegates being from consulting companies, vendors, OEMs, and academics. We therefore appeal to our corporate members and company affiliates to please support the TPC conference programme, as a quality programme can be offered only through the support of members and industry.

You will also see big drive on the SAIMM social media channels (LinkedIn, Facebook, and Instagram), each targeting different member age segments and driving thought leadership, event awareness, and industry dialogue. We appeal to all our members to please 'like' or follow the social media channel appropriate to you and engage and share the content with your network. Engage also with any of the TPC Committee members to collaborate if you wish to host a sponsored business breakfast, mini-forum on a specific topic, or to share leading-edge work being done in the industry.

A total of 22 events were held in the last financial year, totalling 34½ conference days. With the focus on integration of the full mining value stream, eight of these conferences combined mining and metallurgy.

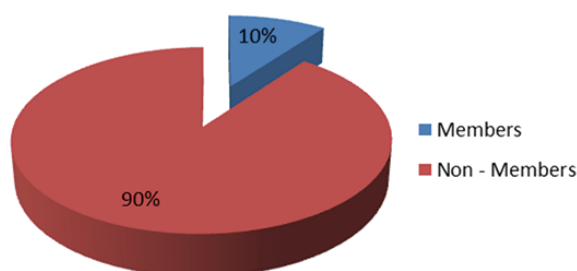
The TPCs fulfil a critical role to members and global stakeholders by providing a platform for innovation, facilitation, and coordination and collaboration regarding industry knowledge. The delivery of this also ensures the financial

Conference by Event Type



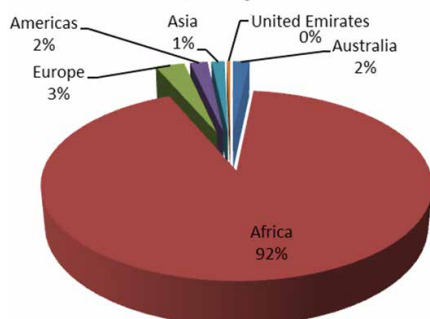
Delegate numbers decreased from 3246 to 2237 for the last financial year, with 90% of the attendees being non-SAIMM members

Attendee Breakdown



The great majority (92%) of the delegates were from South Africa

Attendance by Continent



What is really great to see is the diverse spread of countries that support our conferences

sustainability of the SAIMM, and we are grateful for the industry's willingness to sponsor events to the total of R 4 256 250 during the period.

Thank you to all our members, company affiliates, and other stakeholders for their participation and support during this last financial year.

2.3 South African National Committee on Tunnelling (SANCOT)

H.J. (Ron) Tluczek, Chairperson

C. Viljoen, Vice Chairperson

L. Nene, Chairperson: Young Members Group

G.A. Davis

D. Roos

P.H. Ferreira

T.R. Stacey

I. Jacobs

F.B. Stevens

J. Jansen

J.W. Walls

K. Jordaan

M. Walnstein

M. Lebitsa

A. Widlake

J. Porter

H. Wolfgang

International Tunnelling Association (ITA) News

The International Tunnelling and Underground Space Association (ITA) held its 45th General Assembly along with the 2019 World Tunnel Congress (WTC) in Naples, Italy from 3 to 9 May 2018. Seventy-eight member nations participated in the conference, with Albania, Kenya, and Lebanon becoming the latest member nations. The Congress was attended by over 2500 delegates comprising experts, academics, and civil and tunnel engineers.

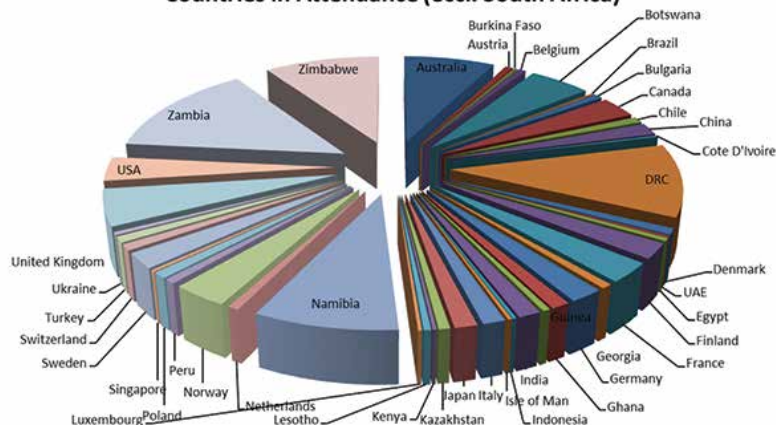
Jinxu Yan (Jenny) from China was voted in as the new ITA President. She is the first female President of the ITA and she succeeds Professor Tarcisio Celestino from Brazil.

South African representatives participate in three of the ITA Working Groups. Ron Tluczek is Vice-Animateur of WG 2 (Research), Chris Viljoen participates in WG 12 (Sprayed Concrete Use), and Monica Wainstein in Working Group 21 (Life Cycle Asset Management). Ron Tluczek, as Chairman of SANCOT, represents South Africa at the General Assembly.

Several reports were published in the previous year from ITA Working Groups, notably:

- WG 2: Guidelines for Design of Segmental Tunnel Linings
- WG 3 in liaison with FIDIC: The Emerald Book – Conditions of Contract for Underground Works

Countries in Attendance (excl. South Africa)



The conference programme for the last financial year is shown below

Schedule of Mining/Metallurgy Technical Conferences, 2018/2019

Type of Event	Date	Title	Convenor
Conference	9-12 July 2018	Copper Cobalt / Base Metals 2018	K.C. Sole
Conference	6-8 August 2018	Geometallurgy Conference 2018	M. Becker
Conference	29-31 August 2018	MineSafe 2018	T. van der Berg
Conference	18-19 September 2018	Young Professionals Conference 2018	S. Nhleko
Conference	10-11 September 2018	Artisinal Small Scale Mining Conference	S.M. Rupprecht
Conference	15-17 October 2018	Furnace Tapping 2018	J.D. Steenkamp
Colloquium	25 October 2018	Student Colloquium 2018	N. Segapela
Short Course	30 October 2018	Short Course: Hydrometallurgical Processing of Cobalt	K.C. Sole
Breakfast	7 November 2018	Renewable Energy Breakfast	I.J. Geldenhuys
Conference	28-30 November 2018	Zimbabwe Branch Event	C. Sadomba
Breakfast	14 February 2019	Local is Lekker Breakfast (Mining Charter)	A.S. Macfarlane
Breakfast	18 February 2019	ASM Breakfast	S.M. Rupprecht
Breakfast	21 February 2019	Electric Vehicles Breakfast with Lara Smith	K.C. Sole
Breakfast	27 February 2019	Fuel Cells Breakfast	I. Geldenhuys
Conference	11-12 March 2019	Sulphuric Acid 2019	T. Claassens
Seminar	2-3 April 2019	GMG Seminar	J.J. Verhaeghe
Colloquium	22-23 May 2019	Mine Planners Colloquium 2019	M. Woodhall
Conference	22-23 May 2019	Local Southern African Manufacturing Expo	A.S. Macfarlane
Breakfast	31 May 2019	Entrepreneurship Pre-conference Dialogue	K. Letsoalo
Conference	5-6 June 2019	New Technology Conference and Tradeshow	A.S. Macfarlane
Conference	24-25 June 2019	Deep Level Mining 2019	W.C. Joughin/P Couto
Conference	26 June 2019	SARES Conference 2019	P. Couto

- WG5: Client's Guide for High Pressure Compressed Air Work
- WG14/15: Handling, Treatment and Disposal of Tunnel Spoil Materials
- ITAtech: Practical Approach for Controlling Blasting Vibration and Optimizing Advance in Tunnelling
- ITAtech Rebuild: Guidelines on Rebuilds of Machinery for Mechanized Tunnel Excavation
- ITA COSUF: Current Practice on Cross-Passage Design to Support Safety in Rail and Metro Tunnels.

These documents are available free of charge on the ITA website for perusal and comment.

The next annual meetings of the ITA General Assembly will be held at the following venues:

Kuala Lumpur, Malaysia, from 15 to 21 May, 2020, during the ITA-AITES WTC 2020 '*Innovation and sustainable Underground – Serving Global Connectivity*'.

Copenhagen, Denmark, from 14 to 20 May, 2021 during the ITA-AITES WTC 2021 '*Underground Solutions for a World in Change*'.

Cancun, Mexico, from 22 to 28 April 2022.

SANCOT News

One of the main focus areas for SANCOT is to promote interaction and closer communication between personnel and companies in the mining and civil industries, and to create a platform where expertise and experience gained in underground excavation can be shared.

To this end, an initiative was implemented in September 2017 where a breakfast talk is given prior to the regular SANCOT committee meetings. The talk is given at the offices of GIBB Engineering and Architecture, who also sponsor the breakfast.

The breakfast talks are held every two months and anyone is welcome to attend. Topics over the last year have included:

- New developments in shaft sinking: Alan Widlake (M&R)
- Completion of a large ocean outfall tunnel in Africa: Mark Woolstencroft (Coleman Tunnelling)
- Geotechnical considerations in recent Scandinavian tunnelling projects: Kari Bro (ROCKMA Systems AB, Sweden)
- Pre-excavation injection for tunnels and shaft sinking: Nick Chittenden (BASF)
- Experiences of a tunnelling engineer – a light-hearted review: Ron Tluczek (GIBB and SANCOT Chairman)
- The use and benefits of utility tunnelling in Durban and Cape Town using recent projects as examples: Frank Stevens (Herrenknecht)
- Horizontal raisebore technology for mining and civil engineering applications: William Roothman (Master Drilling).

Future talks will include topics such as:

- i. Virtual training and assessment of sprayed concrete nozzlemen
- ii. Mechanized shaft sinking – latest technology
- iii. The new FIDIC conditions of contract for underground works – the Emerald Book.

The talks have been well received and are attended by consultants, contractors, academics, students, managers, financiers, and sales personnel.

With several major tunnelling projects on the horizon, SANCOT is looking to increasing its membership and becoming more prominent in the tunnelling/underground industry. Major projects which are either current or imminent are:

Annual report

- (a) The Lesotho Highlands Water Scheme, Phase II, which will incorporate the Polihali dam, the extension of the Muela hydroelectric complex, and the construction of 38 km of water transfer tunnel. This scheme is current and will augment the water supply to the Gauteng area.
- (b) The uMkhomazi Water Transfer Scheme, which will incorporate the Smithfield dam and 34 km of water transfer tunnel. This scheme is imminent and will augment the water supply to the area under the jurisdiction of the Umgeni Water Board.
- (c) Remedial works to the Mohale tunnel, which links the Mohale and Katse reservoirs. This scheme is current and will entail reinstating the grouted annulus behind the tunnel segmental lining.

Three Working Groups are active within SANCOT:

- WG 14: Vertical Tunnelling
- WG 21: Life Cycle Asset Management
- A third Working Group is looking at hosting the ITA WTC in Cape Town, South Africa in 2024. This is as a result of numerous enquiries that Ron Tluczek received at recent ITA World Tunnel Congresses, and there would appear to be a lot of international support to hold a WTC in Africa, and specifically in South Africa.

Currently, SANCOT is looking to prepare a publication that will highlight the various topics that have been presented and discussed at the SANCOT breakfast talks.

3. Publications

D. Tudor, Chairperson

R.D. Beck	C. Musingwini
P. den Hoed	S. Ndlovu
M. Dworzanowski	P. Neingo
B. Genc	H. Potgieter
W.C. Joughin	N. Rampersad
H. Lodewijks	T.R. Stacey
R. Mitra	M.R. Tlala

3.1. Journal

The breakdown of papers published during the year and previous years is as follows:

Year	Mining	Metallurgy	Other	Total
2017	87	41	7	135
2018	64	72	5	141
2019	62	67	0	129

Of the 129 papers published in 2018/2019, 53 were from outside South Africa. The rejection rate of papers received was 28%.

There were eight themed editions of the *Journal* during the year.

Advertising revenue for the year was some 13% below last year's figure. The continuing decline in advertising revenue is a direct reflection of the challenges that face the mining industry as a whole.

A gradual reduction of the monthly print run from 1775 to 1000 copies was achieved during the year. This was as a result of more members opting to receive an electronic copy of the *Journal* and a conscious effort to reduce the mailing of the *Journal* to overseas members.

The potential publication of a number of books covering a range of topics remains in the early stages of production. '*Johannesburg and its Holey Mining Heritage*' and the 2nd

edition of '*Minerals and Metal Extraction*' were well advanced at year-end.

The award for the Most Supportive Advertiser in the *Journal* for the year 2018/2019 is to be made to Weir Minerals

The introduction of the Open Journal System (OJS), which can be viewed at <https://saimmjournal.co.za>, has been well received by both authors and referees. Authors and reviewers are required to register on the OJS and this has enabled a substantially paper-free process to manage the progress of a paper from submission to publication. There are encouraging signs that the time between submission of a paper and publication is getting shorter. Refining of the system to suit all the needs of the *Journal* continues.

We are indebted to our members who undertake the onerous task of refereeing papers. The meaningful feedback that the referees provide to the authors of papers has contributed enormously to maintaining the standard of the content of the *Journal*.

With Dave Tudor's imminent relocation to the UK, the position of Editorial Consultant to the *Journal* is to be filled by Professor Rosemary Falcon.

The publications team of Kelly Matthee and Zuliakha Malgas, with occasional input from Dawn van der Walt, has continued its good work in producing the *Journal*.

4. Regional Development

Key Performance Areas

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

- Supports the establishment and maintenance of branches to satisfy the local needs of its members for professional association and the exchange of technical information
- Cooperates 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 Botswana

No report was available at the time of going to print.

4.1.2 DRC Branch

S. Maleba, Chairperson

No report was available at the time of going to print.

4.1.3 Johannesburg Branch

D.F. Jensen, Chairperson

R. Heins, Vice Chairperson

K. Clarke, Secretary

G. Dellas	D. Porter
D. de Wit	D. Powell
M.F. Handley	N. Rampersad
C. Heili	S.M. Rupprecht
H. Jantzen	G. Stripp
A. Kinghorn	R. Tluczek
M. Mtetwa	B. van Houten
S. Nhleko	

I am pleased to report on the activities of the Johannesburg Branch of the SAIMM for the period from 1 July 2018 to 30 June 2019.

Journal List of Referees

Mitra, Rudra	Den Hoed, Paul	Linzer, Lindsay	Rampersad, Nirvana
Dworzanowski, Marek	Deng, Juishuai	Lodewijks, Henk	Rider, Phillip
Erwee, Markus	Dimitrakopoulous, Roussos	Lomborg, Ken	Ross, Victor
Rupprecht, Steven	Dingemans, Dave	Lorig, Loren	Sandenbergh, Roelf
Vogt, Declan	Dixon, Roger	Lubbe, Salmon	Saungweme, Willis
Abbasy, Farzaan	Dohm, Christina	Madani, Nasser	Shackleton, Natalie
Akdogan, Guven	Dougherty, Heather	Malan, Francois	Shava, Privilege
Aldrich, Chris	Dreyer, CJ	Maritz, Jannie	Snyders, Cornelius
Anthonisen, Chris	Du Plessis, Karl	Martin, Derek	Snyders, Neil
Baartjes, Neale	Durrheim, Ray	Marx, Wynand	Sole, Kathy
Bada, Samson	Edwards, Anita	Matinde, Elias	Spiteri, William
Bahrami, Davood	Erasmus, Lourens	McGeorge, Norman	Stacey, Thomas
Bals, Alexander	Esterhuizen, Essie	Michael, Nicol	Steenkamp, Joalet
Ban Beek, Burger	Falcon, Rosemary	Michell, Karen	Stenzel, Gerhard
Barakos, Georgios	Feroze, Tariq	Miller, Graeme	Stripp, Graham
Barcza, Nic	Fillion, Marie-Helene	Minnitt, Richard	Swanepoel, Stefan
Barker, Ian	Fornasiero, Daniel	Mmola, Tshepo	Tanner, Phil
Bartlett, Huijgh	Fourie, Phillip	Mohamed, Khaled	Terbrugge, Peter
Beck, Richard	Furtney, Jason	Morris, Dave	Thakurdin, Sudhir
Bergmann, Carl	Gamal, Rashed	Motsa, Bongani	Thomas, Huw
Birtles, Andrew	Garbers-Craig Andrie	Moult, Steve	Tlala, Mpho
Blackham, Norman	Genc Bekir	Mousset-Jones Pierre	Tudor, David
Bluhm, Steven	Gomez, Patricio	Mtegga, Hudson	Turton, Anthony
Bosman, Jeremy	Goodall, Craig	Mulenga, Francois	Uludag, Erhan
Bradshaw, Steven	Grobler, Hendrik	Musingwini, Cuthbert	Van Drunick, Wayne
Brake, Rick	Hammerschmidt, Joerg	Napier, John	Van Dyk, JC
Brown, Michael	Handley, Matthew	Ndlovu, Selo	Van Niekerk, Dirk
Bryson, Leslie	Hattingh, Teresa	Njowa, Godknows	Van Wyk, Etienne
Button, Mark	Hewson, Robert	Nolet, Isabelle	Vander Merwe, Josias
Cadden, Alastair	Hinde, Adrian	O'Connor, Donald	Vander Merwe, Nielen
Canbulat, Ismet	Hockaday, Lina	Olivier, George	Velasquez, Raul
Carmichael, David	Holtzhausen, Cornelia	Parker, John	Vos, Cornelius
Carstens, Riaan	Hundermark, Rodney	Paterson, Tony	Vreugdenburg, Kobus
Clausen, Elisabeth	Jenks, Patrick	Peattie, Richard	Wagner, Nicola
Cole, Peter	Jones, Rodney	Petersen, Jochen	Walls, Jeane
Corin, Kirsten	Joughin, William	Phillips, Huw	Wanless, Mark
Crundwell, Frank	Kalala, Johnny	Pistorius, Chris	Watkins, Eric
Cunningham, Claude	Kapageridis, Ioannis	Pistorius, Pieter	Watson, Bryan
Cunningham, Gordon	Katakwa, Tawedzegwa	Potgieter, Herman	Webber-Youngman, Ronny
De Graaf, Wolter	Kotze Hanlie	Power, David	Wermuth, Ivan
De Jager, Kobus	Lane, Gary	Priest, Graham	Whitefield, David
De Korte, Johan	Lars, Lindstad	Radcliffe, Peter	Woodhall, Mike
Deglon, David	Limpitlaw, Daniel	Ram, Rahul	Yahyaee, Mohsen
		Ramontja, Thibedi	Yilmaz, Halil

Annual report

Firstly, I am devastated to have to report that the SAIMM Johannesburg Branch suffered the brutal loss of our Friend, Colleague and Chairperson – the late John Luckmann on 27 December 2018. Our SAIMM Chairman - Alastair Macfarlane delivered a very well received speech at the funeral, which was very well attended by SAIMM colleagues. Danie Jensen was elected as follow-up Branch Chairperson.

The Johannesburg Branch's main activity was to organize technical presentations on a monthly basis from July 2018 to June 2019, excluding the December – January holidays. These technical presentations were generally held on the third Thursday of each month, at the premises of Worley in Melrose Arch. During the period under review, the Branch Committee succeeded in securing six high-profile technical presentations, plus one students' debate which was held on 23 August 2018, at which record attendance was recorded.

The Johannesburg Branch is proud to report membership totalling 1846 – consisting of 1387 branch and 459 student members. During the past year we lost 150 branch and no student members. On the positive side, we gained 40 branch and 17 student members.

The Branch greatly values students' involvement in its presentations, and notes that many of those attending, have chosen to become Student Members of the Institute, with a good conversion ratio to Associate Membership after graduation. Student attendance was understandably constrained over the current session by external events influencing transport, and is of course subject to academic commitments.

The challenging economic situation continues to put pressure on sponsorship received, whilst the Branch's success in encouraging student participation may be expected to impact on the costs associated with the technical presentations and associated networking events. The Committee has therefore endeavoured to continue to control costs, with the most significant measure being the change in approach to sponsorship undertaken by the late John Luckmann, as well as the rest of the active Johannesburg Branch Committee as a very close-knit team, under the leadership of the current Chairperson.

We are proud to advise that the Johannesburg Branch Technical Presentation register is already fully committed up to 16 March 2020.

Events

The Branch Committee has been able to secure 16 sponsors to support the SAIMM Johannesburg Branch events in the 2018/2019 session. The sponsorships received and accounted for, thus ensured that the cost of the full programme of technical presentations held between July 2018 and June 2019 was fully funded.

The Branch commenced the 2018/2019 session on 19 July 2018 with a technical presentation entitled 'The Industrial Energy Efficiency Project South Africa, with South African Case Studies' presented by Alfred Hartzenburg, Project Manager: Energy Systems Optimisation, from National Cleaning Production Centre (NCPC - CSIR) and fully sponsored by NCPC - CSIR.

The Johannesburg Branch Annual Student Debate 2018, entitled 'Battle of the new technology metals', followed this on 23 August 2018. The Wits & UJ Students were clearly well prepared, which resulted in a lively and interesting debate, led by Dr Graham Stripp with Elias, Sihe, Tshepo, and John. The event was fully sponsored by Anglo Operations, Wits University, University of Johannesburg, DetNet, SRK, Shaft Sinkers, Consulmet, BSM Black, Traxys Africa, and Deloitte.

On 18 October 2018, Jacques van Wyngaard from Woodgrove Technologies Inc. addressed the Branch on the subject of 'Staged Flotation Reactor (SFR) Technology'. Woodgrove Technologies Inc. provided full sponsorship for this event.

We commenced the SAIMM Johannesburg Branch New Year on 14 March 2019 with a presentation entitled 'From Feasibility Study to Project Execution and everything in-between' given by Chris van der Merwe, Director: Mineral Resource Management & Technical Services of PCBS Resource Solutions – Klerksdorp, fully sponsored by PCBS Resource Solutions.

Following this, on 18 April 2019, Murray Jooste, Consultant at WEIR Minerals Africa (Pty) Ltd spoke on the subject of 'In the mining industry, mineral process specialists identify the root cause of plant failures to be the centrifugal slurry pumps'. WEIR Minerals Africa (Pty) Ltd provided full sponsorship on this occasion.

On 16 May 2019, Alastair Macfarlane - Director at Mandela Mining Precinct – CSIR spoke on the subject of 'Development and activities of the Mandela Mining Precinct'. Mandela Mining Precinct – CSIR committed for full sponsorship on this occasion.



From left: Johannesburg Branch Committee: Adam Wilkinson, Meshack Mtetwa, Andrew Kinghorn, Kelly Clarke (*Branch Secretary*), Danie Jensen (*Chairperson*), Russel Heins (*Vice Chairperson*), Nirvana Rampersad, Graham Stripp, George Dellas, Sihesenkosi Nhleko. Insert pictures from left: Heinrich Jantzen, David Porter, Steven Rupprecht

The last technical presentation for the year held on Thursday 20 June 2019, considered the topical issue of 'The Digitalisation of the Drill and Blast process for Surface mines' with Gideon Slabbert - BlastLogic Product Manager - Africa from MAPTEK. MAPTEK provided full sponsorship on this occasion.

Finance

The Committee reports that for the year ending 30 June 2019 we succeeded in achieving our objective of fully funding the planned twelve-month programme of Branch activities, with a modest surplus of 21 905.42 with two Invoices of 22 869.57 still outstanding, from a total invoiced amount of R124 931.31.

AGM

The Johannesburg Branch AGM was held on 25 July 2019, immediately following the conclusion of the final Branch meeting of the 2018 -2019 session.

The current Chairperson welcomed Branch Members and guests.

After confirmation of a valid quorum, eleven members of the Branch who had been nominated to serve on the Branch Committee for 2019/2020 were duly elected by a show of hands. This brings the total Johannesburg Branch Committee members to thirteen taking into account the new Chairperson and Branch Secretary, elected earlier this year after the passing away of previous Chairperson.

Johannesburg Branch Committee 2019/2020

Danie Jensen and Kelly Clarke were confirmed in their positions to serve as Branch Chairperson and Branch Secretary, respectively. Russell Heins was elected as Branch Vice Chairperson.

Adam Wilkinson was welcomed as a new member of the Committee for 2019/2020 session, while the Chairperson said farewell to Barris van Houten, Christian Heili, Derick de Wit, Matthew Handley, David Powell, and Ron Tluczek as members and co-opted members, most of whom emigrated during the past year from the Johannesburg Branch constituency. He went on to thank them for their invaluable contribution to the outgoing Committee. He also expressed his appreciation of the role of the SAIMM Secretariat, including Sam Moolla, Kea Shumba, Dennis Makondesa, Prudence Ntumeleng, and Portia Malatji, in the co-ordination and administration of Branch events.

A very successful AGM concluded with welcome words of encouragement from the Chairperson stating the importance of the current Committee as a knowledgeable and steadfast team, taking the Johannesburg Branch of the SAIMM to the next level in future development.

4.1.4 Namibian Branch

N.M. Namate, Chairperson

B. Sililo

F. Uahengo (YPC Coordinator)

The year 2019 has seen various outputs in terms of success and challenges.

The Young Professionals Council (YPC) has been a tremendous success and is the most active organ of the Branch. Participation at the Mine Expo was the high point and the YPC hosted a networking dinner on 7 May 2019, which was well attended and well supported by various companies.

Generally, the year has seen enthusiasm grow and many members now are keen to participate in Branch activities.

Membership Recruitment

The Branch received increased interest from potential members, but as is usually the case, all interest was from the young.

The SAIMM YPC Namibia promoted their activities well with the support of the Branch among students and staff at various locations in the country. Plans are at an advanced stage to hold an exhibition and an AGM in August to renew the YPC Executive Committee. This is also proposed to be an annual event. Participation by young professionals has greatly improved and the roadshows have borne fruit

Events

Mining Expo

The Branch participation at the Mine Expo at the Windhoek Show Grounds from 7 May to 8 May 2019 was a success.

Participation was, as is usual, under the auspices of the Namibia University of Science and Technology (NUST) and the Branch was hosted at their Chamber of Mines complimentary booth. This event was used as an opportunity to network with the young professionals.

The roadshows to increase membership concluded with presentations in the south of Namibia at Rosh Pinah. The current Chair, Ms F. Uahengo, did a fantastic job encouraging potential members to join. A reasonable number of application forms were completed and returned to her for further processing.

It is worth noting that there is a parallel organization competing for membership with the SAIMM, but the Branch has responded well to this challenge.

4.1.5 Northern Cape

F. Nieuwenhuys, Chairperson

I. Lute, Vice Chairperson

N. Buthelezi*, Secretary

D. Batobetse†

W.J. Mans

M. Luther

A. Scullard

*Relocated

†Resigned

Branch Strategy

The main focus is on creating awareness of the SAIMM and encouraging membership through the running of events.

Increase SAIMM awareness (Marketing)

- Word of mouth (inter-organization)
- Facebook page
- Internet
- Local newspapers
- Posters/gazebos/banners
- Magazine articles

Sponsored evening events

- Supplier marketing
- Technical knowledge sharing
- Benchmarking

Site visits

- Technical knowledge sharing
- Benchmarking

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Networking/socializing platforms

- Educational-social events
- Networking events

Technical presentations

- Technical knowledge sharing
- Innovation/collaboration
- Brainstorming
- Technical library tour/demonstration

KPI tracking (NC Branch)

- Membership numbers
- Events execution
- Marketing activities

Mining Expo participation (Northern Cape)

- SAIMM promotional stand
- SAIMM exposure/marketing

NCMMA alignment

- Management team support
- Keeping abreast of shared technical issues.

Membership

The Northern Cape Branch currently has a total of 51 registered delegates/members (as per updated list), 51% of which are Members, 27% are Associates, 20% are Students. and 2% are Retired Members. Female representation is 12% of total.

A concerted effort is required to improve both female and student representation.

It should be noted, however, that new applications are not taken into account and as such the total number of members is being under-reported. The addition of new applicants to the list should be reflected by the time of the NC Branch AGM.

Events

Annual General Meeting

The 2017/2018 Annual General Meeting was sponsored by Assmang Khumani Iron Ore Mine and held on 3 August 2018 at the Uitkoms guest house in Kathu.

The Annual General Meeting for the 2018/2019 year will be held on Friday 23 August at Namakwari Lodge and will again be sponsored by Assmang Khumani.

Sponsored evening events

Three evening events were held, sponsored by:

- Mine RP: 19 September 2018
- Applied Vehicle Analysis (AVA): 17 April 2019
- RPM Global: 15 May 2019.

Site Visits

Unfortunately, no site visits were possible due to lack of support from mining companies in the region.

Educational-social events

Unfortunately, no events were held due to lack of sponsorship.

Non-SAIMM events

A Mining Expo was held in June 2019 at the Kathu Public High School. The organizers remain willing to provide the SAIMM with a stand in exchange for Branch support through member attendance. Promotional material and support was provided by the SAIMM secretariat.

Major Challenges

- Member accessibility to events – the Northern Cape covers a large geographical area
- Member engagement/involvement. To be addressed through more frequent events and contact opportunities
- Minimal support from mining management teams. To be addressed by closer alignment with the NCMMA
- Lack of an official venue for committee meetings.

Financial

The costs for events run to date remain fully covered by the sponsors, although events are not yet generating income.

General

The 2018/2019 year has been one of the most, if not the most, successful years for the Northern Cape Branch to date, as regards the number of events held. We have seen an increase in attendance at the events as well as in applications for membership received at or after events. The forthcoming year will see the Branch strategy remaining similar to that during 2018/2019. However, more effort will be put into organizing events outside of the Kathu region in order to increase awareness of the SAIMM and encourage membership. A specific focus on female and student membership is expected to influence the selection of events for the coming year.

4.1.6 Pretoria Branch

R.J. Mostert, Chairperson

G. Ngema, Secretary

W.W. de Graaf

N. Naudé

The primary focus areas this year was to attract new membership from students and other interested parties. The previous SAIMM President, Professor Selo Ndlovu, was therefore invited to present a talk to mining and metallurgical engineering students at the University of Pretoria, elucidating the benefits of student membership. The talk was held and good interest generated. In two other events, a previous SAIMM President, Professor Rodney Jones, presented papers to metallurgical students from junior to senior levels. These events were again used to attract new student members.



The speaker at the 19 September 2018 evening meeting on 'Additive manufacturing of advanced metallic components and the Fourth Industrial Revolution', Ms Malika Kodja and the SAIMM Pretoria Branch Chairman, Professor Roelf Mostert.

An evening meeting was held which dealt with the Fourth Industrial Revolution in metallurgy and materials engineering, with a special emphasis on additive manufacturing through metal 3D printing. The Department of Metallurgical Engineering of the University of Pretoria sponsored the social part of the event. The event was well attended (approximately 40) and new members were attracted to the SAIMM.

4.1.7 Western Cape Branch

L.S. Bbosa, Chairperson

A. Nesbitt, Vice Chairperson

M. Tadie, Treasurer

C. Pomario, Secretary

M. Winter, Finance

R.D. Beck

M. Becker

J.A. Cruise

D. Deglon

C. Dorfling

A. Mainza

T. Ojumu

J. Petersen

C. Sweet

J. Sweet

M. Solomon

Geometallurgy Conference

The main activity of the WC Branch in 2018 was the Geometallurgy Conference. The organizing committee was chaired by Adjunct Professor Megan Becker and coordinated by the SAIMM WC Branch together with the Geological Society of South Africa (GSSA) and the Mineralogical Association of South Africa (MINSA). The event was very successful, drawing a wide range of papers from within and outside South Africa. An interactive workshop, led by presenters from Outotec, preceded the conference and attracted 38 people. The main conference was attended by 90 delegates from 13 different countries. Five keynote addresses, 19 papers, and a panel discussion covered the two days.

Students Evening

The WC Branch organized the annual Student Evening 2018, an opportunity for final-year undergraduates to learn about the activities of the SAIMM and engage with seasoned members. Students from the Cape Peninsula University of Technology (CPUT), University of Stellenbosch (SUN), and University of Cape Town (UCT) attended the evening, which included a prizegiving and a keynote talk from SAIMM President Alastair Macfarlane. Following the event, several students from all three institutions completed application forms to join the SAIMM as Student Members.

Minerals Research Showcase 2019

In 2019, the WC branch will be organizing a second Minerals Research Showcase, primarily aimed at providing postgraduate students at Western Cape institutions with an opportunity to present their work. This event is planned to coincide with a visit from the International Minerals Processing Congress (IMPC) Council members such that several can attend. In addition, the annual Student Evening is planned for September 2019.

IMPC 2020

Plans are ongoing for the 2020 International Mineral Processing Conference, which is a major event on the international calendar. The call for papers will begin in August 2019.

Thanks

My thanks to all Branch Committee members, particularly Margreth Tadie, for their efforts during the year.

4.1.8 Zambian Branch

D. Muma, Chairperson

C. Mwale, Vice Chairperson

W. Munalula, Treasurer

C. Ngulube

H.imba

There has been considerable membership growth in the past eight months at the levels of Associate Member and full Member, despite of a number of challenges facing the mining industry in Zambia. From August 2018 to July 2019 about 12 new members were recruited from mining companies and academia.

Activities

Few activities were held in the 2018/2019 year apart from the joint SAIMM /Deswik Copperbelt Conference and Workshops, which took place on 21 and 22 November 2018 in Chingola. This event resulted in the direct recruitment of six mining professional members. The planned activities for 2019/2020 will be finalized at the branch AGM, which has been rescheduled to 2 August 2019, to be held at the Copperbelt University in Kitwe.

An awareness campaign on the objectives of the SAIMM Young Professionals Council (YPC) commenced in May 2018 and continued into early 2019. Mr Gabriel Luzendu (senior process metallurgist at Mufulira Copper Refinery) has taken on the role of Branch representative. The paper for the 2019 YPC Student Colloquium is scheduled to be submitted by end of July 2019.

4.1.9 Zimbabwean Branch

C.P. Sadomba, Chairperson

S. Matutu, Outgoing Chairperson

O. Zvarevashe, Secretary

W. Kutekwatekwa, Treasurer

M. Hungwe, Youth Development

A. Chinhava, Youth Development

Professor Dzinomwa

S. Ndiyamba

S. Gaihai

C. Tahwa

Professor Ityokumbul

Membership

The membership recruitment drive targeted students from tertiary institutions offering mining and metallurgy programmes, comprising the University of Zimbabwe, Midlands State University, Manicaland State University, Zimbabwe School of Mines, and Gwanda University. Much effort was concentrated on recruitment at Gwanda University, which is a fairly new institute in the league of universities offering Earth Sciences. A student leadership committee at each tertiary institution coordinates all the SAIMM activities and recruitment. Focus was concentrated on retention of members as it was very difficult to recruit new members due to the harsh economic situation in Zimbabwe. Total membership is currently at 676.

Year-on-year distribution of membership is tabulated below:

Membership type	2017/2018	2018/2019	Change
Fellow	5	4	-1
Life fellow	-	1	+1
Associate	88	87	-1
Corporate	128	127	-1
Retired	-	1	+1
Student	455	456	+1
Total	676	676	-

Conference

An international conference on The Future of Mining in Zimbabwe – Expectations and Opportunities was successfully held from 28 to 30 November 2018 at Harare Cresta Lodge. The conference was well attended throughout the three days, with 102 delegates, 36 of whom were complimentary from sponsoring companies, service providers, and dignitaries from the Ministry and the President's Office. Forty-four delegates were selected from five major institutions. There were 38 presenters and thematic chairs, giving a total attendance of 220. The Arcadia lithium project tour attracted 86 delegates on the third and final day of the conference. The conference offered an opportunity to network and interact on different platforms, with a cocktail evening on the first day and a question-and-answer session with the Minister of Mines and Mining Development, the Hon. Winston Chitando, on the second day.

Youth Development

The SAIMM's influence in institutions improved significantly as a result of the activities of the Young Professionals Council (YPC). Branch activities included the successful launch of the Young Persons Lecture Competition in Zimbabwe in collaboration with IOM3. The finalists proceeded to represent Zimbabwe and Southern Africa at the world competitions held in October 2018 in Port Elizabeth, South Africa. Furthermore, the Branch facilitated the participation of two young professionals to present technical papers at the Young Professionals Conference held in Johannesburg. In promoting research and development amongst the youth, two research papers were presented by students at the annual Zimbabwe Branch Conference.

Finance

There were dramatic changes to the prices charged by service providers due to changes in the economic environment, where the US dollar traded at an average of 1:3 to the RTGS or bond on the parallel market. The total revenue for the period to December 2018 was RTGS\$47 500.00 against total expenses of RTGS\$43 180.00, leaving us with a balance of RTGS\$4 320.00. The expenses for the year spiked from \$21 029.56 in 2017 in response to the parallel money market changes. No changes were made to the expected income from sponsors and delegates as the packages and delegate fees were the same as 2017, in line with the official money market rate of 1:1 to the local currency. This left the Branch financially strained. For the period January to April 2019 the Branch expenses were RTGS\$4 154.87, leaving a balance of RTGS\$165.13.

The government authorized foreign currency accounts to use US dollars separate from the RTGS/Bond towards the end of 2018, and members started paying the rand equivalent for membership fees in US dollars during the period March 2019 to June 2019. Members started paying into the FCA Nostro account and the total balance as at 30 April 2019 was US\$484.00.

The closing balances as at 30 April 2019 were as follows:

RTGS account – \$165.13
FCA USD account – \$484.00.

Effective 24 June 2019, the government of Zimbabwe banned the use of multiple currencies for local transactions and legislated that with immediate effect, the Zimbabwe dollar would be the only legal tender to be used in the country. The Branch is struggling to keep up with the changes in the economic environment, which have eroded all the savings, and has requested permission to use membership fees trickling in to

remain operational. The Branch continues to operate an account under the Chamber of Mines of Zimbabwe as it could not meet all the requirements for opening an independent bank account. The implications of the latest change to the financial environment are still being evaluated countrywide and the Branch will give an update on the operational modalities in due course

Branch Events

The Branch planned three technical visits for the year 2019.

The first was held at Zimasco's Mutorashanga Mining operations, located about 117 km from Harare, on 7 June 2019. Twenty members took the opportunity to attend the visit, which consisted of a technical presentation on the mining and processing of eluvial chromite.

The next Branch technical visit will be to the Mupani project – the newly commissioned portal at Zimbabwe Platinum Mines in Selous – where delegates will tour both surface and underground operations. This is scheduled for 23 August 2019. The final technical visit for 2019 will be to Mimosa Platinum Mine on 25 October 2019.

4.1.10 Zululand Branch

C. Mienie, Chairperson

E. Clare	R. Kutama
W. Jordaan	P. Strydom

The Branch was not active during the first quarter 2019 and is going through a process of rebuilding, starting with a new Committee. Only the Chairman and one member are left from the previous Committee – the others were either transferred, re-employed elsewhere in South Africa or abroad, or have retired. The selection of Committee members (bringing in younger blood) is taking longer than anticipated but should be complete by end July-August.

News/Conferences

The Zululand Branch is represented on the organizing committee for the 11th International Heavy Minerals Conference, which is scheduled for 5–7 August in Cape Town.

Branch Activities

Branch Committee meetings

- The Branch Committee meeting was held on 26 June 2019.

Technical meetings/events

- No technical meetings were held during the period under review.

Activities planned for the year ahead

- Finalization of Committee – end August
- Third quarter technical presentation
- Fourth quarter technical presentation / plant visit
- Social – end of year wine or whiskey tasting.

5. International liaison

Portfolio Holder: S. Ndlovu

There is nothing to report this year.

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, the UK, and the USA, and interacts with sister institutions in other countries to promote the international exchange of scientific and technical information.*

5.1 APCOM

C. Musingwini, Chairperson

In 1961, four American universities – the University of Stanford, the University of Arizona, Pennsylvania State University, and the Colorado School of Mines – started the APCOM series of conferences. APCOM's main focus is to promote the application of computers and operations research in the minerals industry. APCOM has evolved to become an international forum for presenting, discussing, and examining state-of-the-art and emerging technologies in the minerals industry. The international APCOM symposia are run every second year at different locations around the world. APCOM has become a major driver of innovation in the minerals industry, facilitating the advancement of computer applications and operations research techniques in solving complex problems. Improved mineral resources estimation (and geostatistics by extension) and process optimization have been major themes in APCOM.

Since its inception, APCOM has introduced *inter alia*, investment planning, project evaluation, and management, as well as mining 'process optimization' to achieve higher productivity, including other key operational aspects such as optimization of material flow, equipment utilization and dispatch, and real-time monitoring. Now 'digitalization' in mining expands this technology trend by the use of information technology, 'big data', and communications in order to improve coverage of all the phases in mining projects, project developments, and operations along the mining value chain. This spans the entire spectrum from mineral resource estimation, mine planning and optimization, through to mineral processing. APCOM also recognizes the need for mining companies to better understand how digital technologies, including autonomous vehicles, drones, and the Internet of Things (IoT), may influence the way they do business.

The success of the APCOM symposia has been made possible by the ever-growing contributions and cooperation from its members and supporters from both academia and industry. Consequently, several breakthrough innovations in mining have originated from the sharing of ideas at APCOM conferences. These include geostatistics and mining process optimization. As highlighted above, another key role of APCOM is its promotion of in-depth dialogue and collaboration between industry and academia.

The International APCOM Council consists of the following members:

Professor Kadri Dagdelen (Colorado School of Mines, USA)
Professor Sukumar Bandopadhyay (Society for Mining, Metallurgy and Exploration, Inc., USA)
Dr Ernest Baafi (Australasian Institute of Mining and Metallurgy, Australia)
Dr Winfred Assibey-Bonsu (Gold Fields Ltd, Australia),
International APCOM Council Chairperson
Dr Julian Ortiz (Universidad de Chile, Chile)
Dipl. Ing. Christoph Mueller (Minerals Tech Industry, Europe)

Professor Antonio Nieto (University of the Witwatersrand, South Africa)

Professor Cuthbert Musingwini (Southern African Institute of Mining and Metallurgy, South Africa)

Professor Roussos Dimitrakopoulos (Canadian Institute of Mining, Metallurgy and Petroleum, Canada)

Professor Dr.-Ing. Oliver Langefeld (TU Clausthal, Germany).

The 39th APCOM Symposium

The 39th International Symposium on the Application of Computers and Operations Research in the Mineral Industry (APCOM) was organized by the Wrocław University of Technology, and took place from 3 to 7 June 2019 in Wrocław, Poland. About 200 delegates participated in the conference. The 39th APCOM covered several technology topics grouped in the following five streams:

1. **Geostatistics and Resource Estimation**—A stream focused on mineral resources characterization and Mineral Reserve estimation, providing several leading-edge and peer-reviewed papers by world-class practitioners from leading mining companies and research institutes.
2. **Mine Planning**—Focused on the latest IT-supported techniques in mine planning, uncertainty reduction, geomechanics, modelling, simulation, and the most recent software technology.
3. **Scheduling and Dispatch**—A stream focused on long- and short-term scheduling optimization, the application of neural networks and genetic algorithms as well as risk mitigation, and related software systems. The theme also covered the impact of IoT, big data, and 'gamification' on mining fleet scheduling.
4. **Mine Operation in Digital Transformation**—This stream covered mining equipment-related topics in the area of LHD transport, drilling, and longwall operations, underground communications, and new digital technologies in mine safety, as well as product quality optimization.
5. **Emerging Technologies and Robotics in Mining**—A technical stream focused on the use of unmanned aerial vehicles (UAVs) in mining, the benefits of upcoming technology in robotics, mechatronics, and communications, as well as changes in machine design through digital transformation.

The APCOM Executive Committee confirmed their support for organizing the 40th APCOM 2021 in South Africa, hosted by the SAIMM in conjunction with the School of Mining Engineering at the University of the Witwatersrand. The theme of the 40th APCOM 2021 is 'Minerals Industry 4.0: The Next Digital Transformation in Mining'.

APCOM host cities since the 1980s

1986 University Park, Pennsylvania, USA
1987 Johannesburg, South Africa
1989 Littleton, Colorado, USA
1990 Berlin, West Germany
1992 The University of Arizona, USA
1993 Montreal, Quebec, Canada
1995 Brisbane, Australia
1996 University Park, Pennsylvania, USA
1997 Moscow, Russia
1998 London, UK

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1999	Colorado School of Mines, Golden, USA
2001	Beijing, China
2003	Cape Town, South Africa
2005	Tucson, USA
2007	Santiago, Chile
2009	Vancouver, Canada
2011	Wollongong, Australia
2013	Porto Alegre, Brazil
2015	Fairbanks, Alaska, USA
2017	Golden, Colorado, USA
2019	Wroclaw, Poland
2021	Johannesburg, South Africa

5.2 INFACON

R.T. Jones, Chairperson

I.J. Geldenhuys, Secretary General

The International Ferro-Alloys Congress (Infacon) was founded in South Africa in 1974 by the SAIMM, NIM (now Mintek), and the Ferro-Alloys Producers' Association (FAPA) when the first Infacon was held in Johannesburg. Infacon events are overseen by an international governance structure that is now known as the International Committee on Ferro-Alloys (ICFA), which has representation from major countries that produce and consume ferro-alloys. ICFA has the primary objectives of promoting the holding of the International Ferro-Alloys Congress every three years in appropriate locations around the world, and ensuring that the high technical standard of papers and presentations is maintained. Mintek provides the secretariat for ICFA.

Infacon is known as the premier technical conference serving the international ferro-alloys industry. Congresses have been held in twelve different countries around the world. Previous events have taken place in the following locations:

1974:	Infacon I – Johannesburg, South Africa
1980:	Infacon II – Lausanne, Switzerland
1983:	Infacon III – Tokyo, Japan
1986:	Infacon IV – Rio de Janeiro, Brazil
1989:	Infacon V – New Orleans, USA
1992:	Infacon VI – Cape Town, South Africa
1995:	Infacon VII – Trondheim, Norway
1998:	Infacon VIII – Beijing, China
2001:	Infacon IX – Quebec City, Canada
2004:	Infacon X – Cape Town, South Africa
2007:	Infacon XI – New Delhi, India
2010:	Infacon XII – Helsinki, Finland
2013:	Infacon XIII – Almaty, Kazakhstan
2015:	Infacon XIV – Kyiv, Ukraine
2018:	Infacon XV – Cape Town, South Africa

The next congress, Infacon XVI, will be held in Trondheim, Norway from 6–9 June 2021, and will be chaired by Aud Nina Wærnes. The planning and organization of the conference is already underway, and a meeting was held with the local organizing committee in May 2019, including a site visit to the Clarion Hotel and Congress venue located adjacent to the harbour in Trondheim. Post-congress visits to various ferro-alloy smelters and places of cultural and scenic interest will be held. Further details are available from the conference website at <http://infacon16.com>.

Infacon is set up on the principle that the sharing of technical information benefits the industry greatly. The publication of scientific and engineering work is vital. The Infacon series of congresses is well known for the quality of its papers, due largely to the considerable work that is put into reviewing papers. ICFA has a policy of making papers from all Infacon events, current and past, freely available *via* open access, and these are available online.

ICFA Contacts:

Chairperson: Professor Rodney Jones rtjones@global.co.za

Secretary General: Isabel Geldenhuys IsabelG@mintek.co.za

Infacon website: <http://www.pyrometallurgy.co.za/Infacon/>

5.3 SAMCODES Standards Committee (SSC)

S.M. Rupprecht	Chair
T. Marshall	Deputy Chair
M. Mullins	Past Chair
S. Moolla	Administrator
M. Engelbrecht	Scribe
K. Lomborg	SAMREC/CRIRSCO
A. Van Zyl	SAMVAL
P. Dekker	SAMOG
T. Steele-Schober	SAMESG
R.J. Dixon	SAIMM/ CRIRSCO
S. Siwela	GSSA
A. de Bruyn	JSE
R. Ingram (Solid Minerals)	Readers Panel
A. Clay (Oil & Gas)	
A. Bals	SAGC
L. Koorsse	IMSSA
N. Kramer	SAOGA
C. Dohm	GASA
M. Booyesen	Law Societies of South Africa
K. Davies	SAICA
B. Williamson	IASSA
M. Tsanwani	Council for Geoscience
S. Mabaso	DMR
O. Moumakwa	
C. Teffo	Minerals Council South Africa

Observer Organizations

P. Rampersadh	SACNASP
G. Botha	
ECISA	
M. Kabai	Financial Sector Conduct Authority (FCSA)
K. Motjale	
G. Grobler	General Council of the Bar

The SSC continues to build on the excellent foundation that has been laid over the past decade, and particularly under the leadership of the immediate past Chair, Tania Marshall.

The SSC has strengthened its relationship with our Patrons, with our extended Institutes, and with Securities Exchanges in South Africa and abroad. We have built on our foundation through continuing our strong education and promotion portfolio, through ensuring that our governance procedures are in place and working smoothly, and through promoting the SAMCODES Way both in South Africa and abroad.

Our relationship with the JSE has been strengthened, particularly through the Readers Panel new mandate, and through co-branding with the JSE wherever possible.

SAMCODES Committee Activities

Ken Lomborg, Andrew van Zyl, and Teresa Steele-Schober are the Chairs of the SAMREC and SAMVAL Code Committees and the SAMESG Guideline Committee respectively. Peter Dekker is the Chair of the SAMOG Committee.

SAMREC Committee

- The Committee continues to engage with the South African Bureau of Standards (SABS) to assist in updating SANS 10320:2004, which is now out of date and out of step with both SAMREC and with international developments. The final draft is nearly complete and will soon go out to all interested and affected parties for comment.
- The SAMREC Group is making good progress towards completing the SAMCODES app. The app should be ready for roll-out by the end of 2019.
- The Committee continues to promote the SAMREC Code through various public educational and promotional events, as discussed further in this report. A conference is scheduled for 2019 which will address new reporting issues such as graphite, tailings dams, rare earths, *etc.*

SAMVAL Committee

- The Committee continues with the work on registration with statutory bodies
- IMVAL issues.

SAMESG Guideline Committee

- The main focus for SAMESG for 2019 is to socialize our guideline and reach as many CPs and contributors to CPRs as possible.
- The SSC has held discussions with the SAMVAL Chairperson to ensure that SAMESG remains a guideline for consideration in valuations and not a requisite.

SAMOG Committee

- The newly issued PRMS (2018) will require the SAMOG code to be updated, which will be done this year.
- The SAMOG Readers Panel reviewed one Competent Person's Report. This resulted in significant challenges and differences in opinion between the issuer and the Panel. A post-mortem review between the readers and the Chairman of the Readers Panel will be held soon to discuss how to handle these challenges in the future.
- The Committee continues to conduct short courses on the reporting systems and SAMOG Code.

Education and Promotion

The SSC continues its high level of Code education and promotion, focusing equally on students, young professionals, and experienced practitioners. Where possible these events are being organized through the Patrons, and are held either in conjunction with existing conferences or as stand-alone events.

Educational events continue to be organized for interested parties, such as the JSE, the Institute of Directors of SA, the Council for Geoscience, the DMR, and others.

The Squirrel Awards, through the Investment Analysts Society of South Africa, for the best Public Reporting are the premier promotion activity on the SSC calendar. This year's winners were Impala Platinum and Harmony Gold Mine.

Main Activities: 2018–2019

- April 2018 – Global Mineral Resource and Valuation Reporting Standards: Their evolution, convergence and effectiveness (Minex Asia, Kazakhstan)
- 11 June 2018 – Diamond Reporting Workshop (Tania Marshall)
- June 2018 – Junior Indaba (panel discussion – (Matt Mullins)
- 28–29 June 2018 – GSSA/SAMCODES/JSE Reporting Workshop (Tania Marshall)
- 9 July 2018 – Copper Cobalt Conference (Steven Rupprecht)
- 17 July 2018 – SAMCODES Workshop at Geocongress
- 16–17 August 2018 – SAMREC/SAMVAL Advanced Training Workshop.
- 5–6 September 2018 – SAMVAL for non-Technical Professionals – SAMVAL Committee/JSE
- 4–7 November 2018 – SAMOG Workshop at AAPG Conference (Peter Dekker)
- 31 January 2019 – MISA Presentation (Ken Lomborg)
- 31 January 2019 – Zimbabwe Gold Conference (Tania Marshall)
- 28 March 2019 – SAMOG Workshop (Peter Dekker)
- 16–17 May 2019 – GSSA/SAMCODES/JSE Reporting Workshop (Tania Marshall).

Organized and Proposed

- 21 September 2018 – SAMREC/SAMVAL for young professionals (Steven Rupprecht)
- 25–26 February 2020 – SAMCODES Conference (Ken Lomborg and Tania Marshall)
- 25–26 June 2019 – Mineral Project Valuation School (TBA).

International Developments

CRIRSCO

This year the Patrons will send only Ken Lomborg to the Annual General Meeting in Washington DC in an attempt to reduce expenditure in response to the over-expenditure (R159 000) on the Chinese delegation's visit to South Africa. Roger Dixon will participate via skype or other conference call service to provide his input to the meeting.

It is expected that the 2020 CRIRSCO AGM will be held in South Africa. After 2020, it is proposed that the Patrons send only one representative to the AGM and promote the use of video conferencing for the second CRIRSCO representative

IMVAL

IMVAL is developing into a global forum for international coordination and direction of Valuation reporting. SAMOG has been given Observer status, with Peter Dekker sitting on the Committee.

The third edition of the IMVAL template has been circulated. Although comments regarding the template have been made there has been no material progress in this area.

The UNFC

The UNFC continues to drive the evolution of national reporting for governmental inventory, with Roger Dixon representing CRIRSCO as an observer member. No substantial updates have been received.

FCM

FMC contract dispute regarding the 2018 Chinese delegation to South Africa

Annual report

The FCM 2018 invoice of R159 250.99 was paid in full by the Patrons. A dispute was raised when translation services were not properly provided by FCM's subcontractor Lingua-World. It has been recommended that the Patrons consider whether we have a claim against Lingua-World – this matter is outstanding.

A number of learnings have emerged from hosting this event. Matt Mullins highlighted the following:

1. The original amount budgeted, R1.2 million, was 27% lower than the actual expenditure. While this was largely due to the changes to the translation services mentioned above, no contingency was allowed for.
2. The fixed and inflexible budget was dictated by the MRREC. Although they did contribute an extra R180 180 (in US dollars cash), this did not fully cover the shortfall. In retrospect we should have pushed back more strongly on this.
3. The understanding of what was required for simultaneous translation was inadequate. We should have done more research in this area.

The above comments are noteworthy and should be considered for any future foreign training involving the SAMCODES.

Review of JSE Readers Panel

On 26 June Rob Ingram (Chair of the JSE Readers Panel), Steve Rupprecht (SSC Chairperson), and Ken Lomborg (SAMREC Working Group Chairman) met with Annalie de Bruyn of the Johannesburg Stock Exchange to discuss the JSE Readers Panel List to ensure that the Panel members have the necessary skills to support the review of Competent Person Reports requiring review by the JSE. It was found that the panel had sufficient CPs; however, it was recognized that additional Competent Valuers (CVs) were required. As Minxcon had requested to become more involved with the JSE Readers Panel it was decided that Rob Ingram would approach Minxcon to put forward names to join the panel as CVs.

Chamber of Mines Turkey

The Chamber of Mines Turkey would like to conduct a workshop in Turkey on the SAMREC Codes and Qualified (Competent) Persons. This was discussed in Antalya during IMCET. The SSC will follow up on this request, liaising with the CRIRSCO representative as Turkey is a member.

6. Management and Administration

Portfolio Holder: A.S. Macfarlane

The Secretariat consists of:

Sam Moolla (Manager)
Gugu Charlie (Conference Coordinator)
Camielahn Jardine (Head of Conferencing)
Tshepiso Letlhaku (Conference Secretary)
Dennis Makondesa (Accountant)
Portia Malatji (Accounts Assistant)
Zuliakha Malgas (DTP Operator)
Nazli Mamdoo (Conference Publications Coordinator)
Kelly Matthee (Journal Coordinator)
Yolanda Ndimande (Conference Coordinator)
Prudence Ntumeleng (Membership Assistant)
Aphathia Sello (Administration Clerk)
Keabetswe Shumba (Membership and Branch Liaison Administrator)

Tsholo Sole (Receptionist and Assistant to the Manager)

Thato Letebele (Communications Coordinator)

The SAIMM, Office Bearers, and Council record their appreciation to the above for their service.

6.1 Finance

Portfolio Holder: V.G. Duke

Overview

The past year has been very challenging for your Institute, which relies on profits from conferences to break even. The magnitude of the challenge is clear if one looks at our financials over the past six years and excludes the impact of the work of our TPCs.

Area	Revenue Rm	Cost Rm
Membership & admin	~3.9	~6.0
Journal & advertising	~1.5	~3.0
Annual Banquet	~0.3	~0.4
Branch activities	~0.3	~0.5

We raise around R6 million each year without income from the work of our TPCs, but spend in the order of R10 million on maintaining our international influence and on the interests of our members.

These non-TPC expenditures include, but are not limited to:

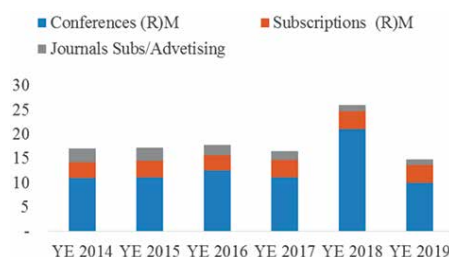
- Subscription to the Technical Library
- Subscription to OneMine Org
- Sponsorship of the Student Colloquium
- SAMREC/SAMVAL.

This average deficit of R10 million is covered by profits from our TPC-related activities when times are good but, as evidenced over the past year, significantly erodes our reserves when times are bad:

- Income down by 43% year on year
- Expenditure down by 23% year on year
- Reserves down by 10% year on year.
- A net deficit of R3.7 million was recorded for the year.

Income

Our annual income dropped from a previous high of R26 million, where we benefited from international conferences (*i.e.* Copper-Cobalt, Infacon, and AfriROCK), to a new six-year low of R15 million for the year ended 2019.



We generally experienced poor attendance at our conferences over the past twelve months, and revenues from our monthly *Journal* were also lower.

We are able to report a slight increase (approx. 1%) in income from subscriptions, with the number of paying members now at 4837. A total of 240 members were removed from our membership register due to non-payment. You will notice that

Annual report

we have limited increases in our membership fees to below the inflation rate in this difficult economic climate.

Your administrative staff have worked hard and succeeded in reducing the debtor's book. Total trade and other receivables stand at R2.9 million, which is a helpful improvement on last year's R4.1 million.

Expenditure

The decrease in the cost of sales, of R6 million (approx. 33%), was unfortunately also less than the decrease in the associated income.



Operating expenses were down by R154 000 from the previous period, with the more material expenses being attributable to:

- R191 000 to the Scholarship Trust Fund
- R4.3 million on salaries
- A R0.5 million write-off of bad debts, mostly due to non-payment of membership fees.

Investment Portfolio

Your investment portfolio performed adequately, despite market volatility over the past year. The year-end 2019 closing balance was R28.5 million, an overall net decrease of R3.2 million after:

- A fair value adjustment of R60 000
- Income from dividends of R0.9 million
- Income from interest of R0.2 million
- A drawdown of R3.7 million.



These reserves have been key to ensuring both short-term stability and the long-term sustainability of your Institute. We have had to draw down a total of R14 million over the past six financial years. This is against an initial investment of R6 million, which has enjoyed consistent positive growth even during recent difficult financial periods.

The latest drawdown included R0.5 million which was the second and final half of an Infacon research fund commitment.

Closing Comments

In summary, the total loss for the year amounted to R3.7 million, a significant reversal on last year's profit of R5.0 million. Other key metrics from the 2018 and 2019 Financial Statements are provided below.

Heading	2019	2018	%
Assets	R34.4m	R38.9m	-11.6
Equity	R31.7m	R36.0m	-11.9
Liabilities	R2.6m	R2.9m	-10.3
Revenue	R14.7m	R26.0m	-43.5
Cost of sales	R12.2m	R18.0m	-32.2
Operating exp.	R8.4m	R8.6m	-2.3
Gross Margin	-R4.8m	R 0.1m	
Net Margin	-R3.7m	R 5.0m	

On behalf of the Institute, I wish to thank Sam Moolla your Office Manager, her accountant, Dennis Makondesa, and all of the SAIMM staff for their hard work while having to deal with budget constraints, and for assisting me with the responsibility of Honorary Treasurer.

I also appreciate the contribution of our Auditor, Genesis Chartered Accountants and thank them for their services over the past twelve months.

Finally, we must not forget the very important part that Dee Campourglou (AFC Account Manager) has played in not only preserving, but significantly growing, your investment portfolio over the years, and we thank her for this.

New Members

Fellows

A. Ramcharan

Members

E. Addo Jr, J.M. Akande, D.C. Alexander, C.W. Baleti, D.L., Bantobetse, N. Beenzu, S. Bhattacharya, E. Bird, A. Burger, H.G. Burnett, R.A. Daffue, J. de Meyer, G.H. du Plessis, R.A. Els, J. Festus, J. Gasitene, T.B. Hendricks, Y. Huang, S.M. Jeyarajan, H.K. Kondolo Bananga, S. Kumawat, S.R. Madzivha, P.M.Y. Mahamba, T. Mangole, G.V. Marsden, I.M. Matheson, R.S. Meyer, J.W. Miller, S. Mitropolskaya, K.G. Moloko, E.L. Moolman, P. Mostert, K.K. Motsumi, S. Moyo, T. Munenerwa, D.A. Muridili, F.D. Musuka, O. Mutapanduwa, W. Mutematsaka, A.K. Nalwaya, A. Nieto, L.I. Nsenga, G. Rakhunwana, I.P. Saker, A.E. Senga, S. Sinha, J.M. Steyn, B.B. Swartz, W. Swartz, M.S. Szpak, H. Thomoli, M. van der Bank, S.E. van der Westhuizen, W. van Zweel, D.L. Venter, V. Verengera, G.K.W. Wilson, N. Zimba

Associates

T.S. Andrew, L. Chanderman, L.P. Cogang, A. Costa Silva, A. Dubula, J.A. Gwarada, D. Hove, B. Khumalo, K. Kunda, N.R. Kunene, T.B. Mabe, S.O. Makinana, O. Malaolo, M.K.S. Mangoma, T. Mapeta, S.T. Mapheto, T.S. Masikhwa, L.M. Mnisi, T.H. Mohlahlo, L.A. Mokoatsi, H.C. Muyemeki, R. Ndimande, E.L. Ndzumeni, P. Ngoben, S.T. Ngwenya, P.T. Ntuli, M.C. Ramushu, A.C. Scullard, M. Tsitywa, S. Tyalibongo

Associates from Conferences

G.O. Akintola, T. Chima-Mwale, R.M. Flanagan, K.R. Gwandu, H.P. Kapolo, T.A. Mabela, N. Madani, R.S. Magwaneng, N.A. Mahlaule, S.G. Makganye, T. Mazorodze, T. Nyamagudza, B.Y. Tichoue.

Students

D.A. Baloyi, A. Barnard, O.S. Beyi, U.E. Bezuidenhout, N. Bokola, G.T. Chibamu, A. Dondo, S.J. Dube, T. Hailaula, M. Hlongwane, J.C. Jacobs, K. James, R.K. Juala, T. Khoboko, P.O. Kolapo,

Annual report

A. Kuhl, N.P. Malahlela, T. Mampuru, C.K. Manthata, P. Maphatsoe, A.L. Maqelepo, S.D.N. Mariwande, A.N. Mathevu, K.M. Mathipe, C.R. Matsimela, N. Mautsa, C.T. McQuade, T.J. Mfune, M.C. Mhlanga, M. Mokgalaka, K. Moloi, M.M. Moosa Bhura, L.P. Morena, M. Mthombeni, K.L. Mtokwana, N. Muavhi, M.T. Mundida, T.D. Murova, V. Musapingura, N. Ncube, I.N.M. Nday, P.W. Netshitumbu, S. Ngomane, T. Ngwenya, P. Nondonga, N.P. Nxumalo, S.N. Nyoni, M.F. Phuthehang, L. Ponto, K.P. Rahube, T.C.N. Rungani, S.M. Sheikh, V.N. Shumbambiri, S.Y. Sigauke, V. Spencer, J.M.S. Strauss, P. Tejane, G.K. Teme, M.P. Tomas, D. Tshoma, A. Wali.

Company Affiliates

Acid Plant Management Services (Pty) Ltd, ASPASA, Ingwenya Mineral Processing, Micromine Africa (Pty) Ltd, Opermin, OPTRON, Ramika Projects, Verni Speciality Construction Products (Pty) Ltd.

Resignations

Fellows

H.E. Bartlett, N.F. Nicolau, R. Schindler, N.W. Searle.

Members

R.J.W. Bold, D.F. Botha, K.T. Broekman, N.A. Chapman, P.J. de Garis, J. de Hill, D.E. Erasmus, O. Fenn, P.D. Finney, N.P.C. Fox, W. Gabryk, C.G. Higgins, R. Huygen, H.J. Ilgner, V.R. Jewaskiewitz, B.J. Krause, G.H. Lind, J.H. Maartens, F.D. Manini, D.Y. Matthews, R. Mhlari, E. Mwampokota, I. Naidoo, M.H. Rakale, J.L. Schoeman, W.E. Stumpf, M. Tacke, J.C. Terblanche, N.S. Tshiloane, J.P.A. van der Heever, D.J. van Wyk, R. Visser, T.J. Willemse.

Associates

J.F. Costa, T.L. de Vries, A.I. Dennis, H.M. Ereche, J.P. Labuschagne, K.P. Lebopa, M.M.A. Lelope, K. Lombard, H.D. Mabunda, S. Macdonald, S. Maharajh, P. Mare, L.J. McEwan, T.T. Musikavanhu, N.I. Nhlengethwa, C.S. van Aswegen, H.J. van Velze, M.F. Whitter.

Students

J.A. du Plessis.

Retired Members

D.F. Grieve.

Company Affiliates

DMS Powders, Department of Water Affairs and Forestry, Technology Innovation Agency.

Members transferred to Higher Grade

Transfer from Member to Fellow

B.P.S. Pelli, E. Kirby, A.T. van Zyl.

Transfer from Associate to Member

P.J. Coetzer, A. Fletcher, L.P. Hoffmann, X. Liu, K.G. Lomborg, G.M. Makatong, B.K. Maputla, E. Maringe, T. Mutezo, E. Nel, H.S. Nyakunhwa, M. Onifade, A.D. Reddy, Z. Smith, A.I. Stoker, A.L. van Wyk, P. van Wyk.

Transfer from Student to Associate

T. Chikomo, M.I. Kulula, R.J. Kunatu, T.B. Mapaire, A.W. Meek,

K.A. Moganedi, T.E. Mokoqama, N. Moyo, K. Munyai, M.L. Musariri, S.G. Ndhrazi, N.C. Nkhi, C.T. Nyahwai, T.G. Nyambuya, T. Panganayi, P.J. Selepe, T. Shandirwa, J. Silinda, C.T. Simelane, A. van Wyngaardt.

Members who retired

Fellows

S.J.M. Caddy, G.K. Chunnett, D.D.J. Clemente, A.R. Formanowicz, N. Green, W.P. Imrie, G.J. Jonck, H.E. Lombard, J.A. Luckmann, M.R. Mortlock, M.S. Mulder, V.P. Pillay, D.J. Stanton, W.M. Stear, M.V. Steyn, H. Strauss, J.R. Walklate.

Members

A.C.C. du Preez, E.K. Harvey, C.J. Hattingh, J.D. Kirkman, L.C.K. Tolmay, T. Zaniewski.

Members who were re-admitted

Re-admitted as a Member

K.K.T. Avia, D.M. Bukunkwe, F. Chinyakata, J.A. Fourie, N.P. Glossoti, M.E. Lekota, M.B.W. Mabaso, M.S. Malebana, K. Mandanji, M. Maoketsa, D.N. Nyungu R.P. Zindoga.

Re-admitted as an Associate

M.T. Malisa, M.O. Maotoe, M.S. Seabela, L.A.E. Tukula, A. van Wyngaard, Y. Zhou.

Members who were re-instated

Re-instated as a Member

C.A. Biley, G. Dzinomwa, V. Maronga, A. Shumba, T. Sisya, G. Togara.

Re-instated as an Associate

M.S. Babusi, N. Buthelezi, R. Kamba, R.F. Maluleke, A.W. Meek, N. Molapisi, B.T. Motlagodi, J.T. Samuels, A.P. van der Westhuizen.

Deceased

Retired Fellows

R.E.F. Cowley, F. DeVries, P.J.D. Lloyd, J.A. Luckmann.

Retired Members

R.J.T. Butler, D.R. Chelius, F. Fenwick, K.M. Steenkamp.

Fellows

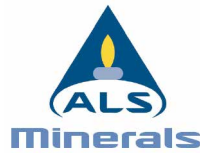
C.A. Roode.

Members

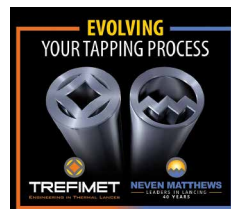
C.P. Celliers.

Associates

A.W. Jameson, A.A. van Jaarsveld. ◆







Faculty of Engineering,
Built Environment and
Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en
Inligtingtegnologie / Lefapha la Boetšenere,
Tikologo ya Kago le Theknolotši ya Tshedimošo

Mining Engineering



UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

School of Chemical and Metallurgical
Engineering



SCHOOL OF MINING ENGINEERING

UNIVERSITY OF THE WITWATERSRAND

