

Annual report

FOR THE YEAR ENDED 30 JUNE 2017

Council for 2016/2017

President
C. Musingwini

President-elect
S. Ndlovu

Vice-Presidents

<i>Senior</i>	<i>Junior</i>
A.S. Macfarlane	M.I. Mthenjane

<i>Immediate Past-President</i>	<i>Honorary Treasurer</i>
R.T. Jones	J.L. Porter

Co-opted Member
Z. Botha

Members of Council

V.G. Duke	G. Njowa
I.J. Geldenhuys	S.M. Rupprecht
M.F. Handley	A.G. Smith
W.C. Joughin	M.H. Solomon
W. Kutekwatekwa	M.R. Tlala
M. Motuku	D. Tudor
G.R. Lane	D.J. van Niekerk
D. Munro	A.T. van Zyl

Branch Chairpersons

Botswana Branch	L.E. Dimbungu
DRC Branch	S. Maleba
Johannesburg Branch	J.A. Luckmann
Namibian Branch	N.M. Namate
Northern Cape	J.P. Leader
Pretoria Branch	P. Bredell
Western Cape Branch	C. Sweet
Zambian Branch	D. Muma
Zimbabwean Branch	S. Matutu
Zululand Branch	C.W. Mienie

Past-Presidents serving on Council

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

Key objectives of the Institute

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

Arrangement of this Report

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

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

1. Interests of Individual Members

Portfolio Holder: J.L. Porter

As at the end of the 2016 year, total membership across all categories stood at 5081 representing a satisfactory increase of 9% year-on-year. Of this number, 3578 are based in South Africa and a further 1003 from our Country Branches. The balance is made up of members scattered across the globe. This year two-thirds of the growth came from South Africa, which is a pleasing indicator. As in previous years, we continue to see growth in our Country Branches. Zimbabwe and Zambia have the bulk of members in the Branches, but this year we have seen good growth in Namibia and Botswana. This is particularly gratifying due to the scattered distribution of mining professionals in these countries and is a good indicator of the commitment of the members.

Total SAIMM membership, year-on-year change

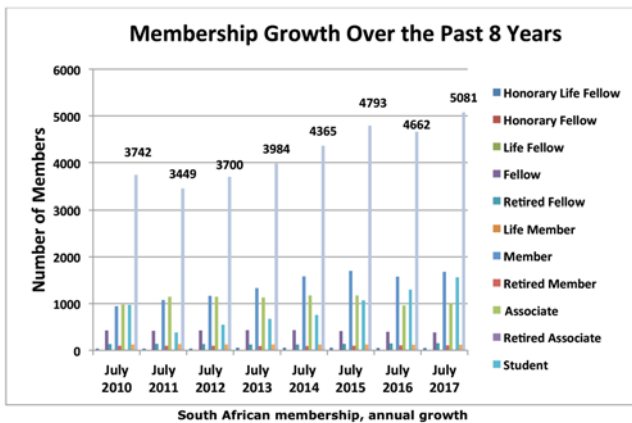
Membership Grade	End of 2015/2016	End of 2016/2017	Net gain/loss
Honorary Life Fellow	51	49	-2
Honorary Fellow	2	2	0
Life Fellow	7	7	0
Fellow	398	385	-13
Retired Fellow	144	153	9
Life Member	1	1	0
Member	1572	1678	106
Retired Member	102	103	1
Associate	961	1010	49
Retired Associate	12	12	0
Student	1295	1564	269
Company Affiliate	117	117	0
TOTAL	4662	5081	419

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Student membership across the region remains robust at just under 31% of total membership, with a 6% increase year-on-year. The focus on our youth and Young Professionals remains a cornerstone strategy for the long-term health of the Institute. Despite recent industry trends, our Corporate Members have increased by 6.75%. 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. Our special dispensation for distressed members has increased year-on-year by 0.9% which reflects the continuing pressure facing our membership in the mining industry.

Branch	2015/16	2016/17
Botswana	62	79
DRC	28	28
Namibia	75	91
Zambia	195	196
Zimbabwe	604	609
Total	964	1003

The Northern Cape and DRC branches have been affected by the downturn in the mining industry and will continue to need support over the next year or two.



It has long been a stated objective of the SAIMM to grow our overall membership to above 5 000. This has been an elusive target but was achieved on a sustainable basis during 2017. However, our collection of fees remains relatively flat, mainly due to the two-year period of grace that is afforded members to pay their subscriptions. It is pleasing to report that outstanding debtors stands at the lowest ever due the excellent work of the Membership Team and Accounts.

Tight control of expenses continues, with an overall reduction in the amount of travel undertaken on behalf of the SAIMM, and the position of Regional Manager remains vacant. To compensate for these decisions, 2017 was the first year that a full one-day induction workshop was held for all incoming Branch and Council Members. The event was successful and appreciated by the incoming office-bearers. Work will continue to improve the content and the delivery of the induction. It is anticipated that by structuring this training appropriately, we

will be able to maintain our commitment to the Branches, facilitate smooth transitions between changes in Committee Members, and enhance the professionalism of the organization.

Progress on the work of the Membership Committee includes the following activities.

- ▶ Re-defining membership benefits:
This is ongoing in conjunction with our sister institutes. There is a growing sense of activism with regard to developments within the mining industry. How the relevance of the SAIMM can be improved on behalf of members is an issue that needs to be explored in the year ahead.
- ▶ Ongoing updates of membership by-laws:
The criteria for acceptance as a member have been reviewed to make membership more accessible for industry professionals in the diaspora and also provide better guidance to the Membership Committee. The new definition is as follows:

*A2.3 A candidate for admission to or transfer into the category of **Member** shall:*

A2.3.1 Be in possession of a tertiary qualification relevant to the minerals or associated industries,

A2.3.2 Have 2 (two) years relevant working experience post qualification, or;

A2.3.3 Be in possession of a valid relevant Government Certificate of Competence; and 5 (five) years working experience in the relevant minerals or associated industries and;

*A2.3.4 Be practising in his/her profession at the time of his/her application; satisfy council that he/she is a fit person to become a **Member** and council shall be satisfied that his/her qualification, training and technical experience justifies such professional status, and;*

A2.3.5 Has obtained a signature of both proposer and supporter (who are either a Member or a Fellow of the Institute).

- ▶ Actively focusing on upgrading members to higher membership grades:
This is an ongoing task. Current focus is on Associate Members who have been at this grade of membership for more than 4 or 5 years.
- ▶ Maintaining our role within ECSA:
Various activities are under way in terms of managing the SAIMM's continued engagement with ECSA.
- ▶ Re-design of the SAIMM web site to further improve application and payment efficiency:
This phase is complete and no further work is planned due to budget constraints.
- ▶ Monitoring of the membership 5 Star Incentive Programme:
The Incentive Programme has not received the uptake that was expected and this will be reviewed in the coming year.
- ▶ Recognizing our newly elected Fellows at the annual banquet: Completed and ongoing.
- ▶ Creating an electronic membership archive:
Completed and on-going.
- ▶ Assisting the Young Professionals Council in the implementation of the Mentorship Programme:
Ongoing.

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

There is no doubt that maintaining the twin objectives of membership growth and fees collection is going to be a challenge for the coming 2017/18 year. Membership and conference fees have been maintained well below inflation 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.

The membership analysis by country provides an excellent picture of how our members have spread around the world. Your Membership Committee will continue to explore ways in which we can continue to represent the Southern African mining community in these geographies.

Members who sadly passed on during 2016/2017			
Deceased	Election date	Membership number	Grade
Sidney Sondashi	9 September 2005	702960	Member
Gert Machiel Jooste	21 September 2012	705919	Member
Marcus Dijkstra	6 September 1973	19089	Retired Fellow
William Alan Naismith	13 March 1994	700938	Fellow
Johannes Paulus Hoffman	17 November 1965	18527	Retired Fellow
Alan Francis Newall	19 July 2013	701892	Retired Fellow
Denis Grantham Maxwell	10 February 1950	53527	Honorary Life Fellow
Charles James William Oertel	30 October 1987	18261	Member
Charles Timothy Shaw	14 October 1960	18793	Life Fellow
Brian George Harvey	3 February 1971	19182	Retired Fellow
John Saise Freer	11 August 1961	19101	Honorary Life Fellow
Lancelot Charles Stilwell	4 April 1974	19465	Retired Member
Douglas Frank Foster	25 February 1948	18462	Retired Fellow
Carl Peter Jonathan Biccard Jeppe	16 March 1979	19213	Retired Member
Albert Francois Simon Schoukens	18 January 1985	38466	Member

Geographical distribution of membership, 2016/2017			
Country	Members	Country	Members
Australia	121	Mongolia	1
Austria	2	Mozambique	8
Belgium	4	Namibia	91
Botswana	79	Netherlands	4
Brazil	10	New Zealand	2
Cameroon	1	Nigeria	2
Canada	40	Papua New Guinea	1
Cayman Islands	1	Peru	7
Chile	8	Philippines	1
Colombia	1	Russia	1
DRC	28	Rwanda	1
Dominican Republic	0	Singapore	1
Finland	4	South Africa	3578
France	4	Suriname	2
Germany	6	Swaziland	4
Ghana	101	Sweden	1
Hong Kong	1	Switzerland	2
India	8	Tanzania	17
Indonesia	1	Thailand	2
Iran	1	Turkey	5
Ireland	3	United Arab Emirates	1
Israel	2	UK	61
Lesotho	6	US	42
Madagascar	4	Venezuela	1
Mali	2	Zambia	196
Mauritius	2	Zimbabwe	609
		Total	5081

Summary of new applications and membership movements for 2016/2017 and comparison of membership grades and total membership 2015/2016										
Membership grade	Members July 2015	New members	Transfers in	Transfers out	Reinstatements	Resignations	Deceased	Struck off	Net gain/(loss)	Members June 2017
Honorary Life Fellow	51	0	3	0	0	0	-2	0	-2	49
Honorary Fellow	2	0	0	0	0	0	0	0	0	2
Life Fellow	7	0	0	0	0	0	0	0	0	7
Fellow	398	0	6	-13	0	-4	-1	0	-13	385
Retired Fellow	144	0	13	0	0	0	-4	0	9	153
Life Member	1	0	0	0	0	0	0	0	0	1
Member	1 572	102	10	-13	28	-18	-4	0	106	1 678
Retired Member	102	0	3	0	0	0	-2	0	1	103
Associate	961	79	38	-6	11	-57	0	0	49	1 010
Retired Associate	12	0	0	0	0	0	0	0	0	12
Student	1 295	309	1	-44	0	4	0	0	269	1 564
Company Affiliate	117	4	0	0	0	-4	0	0	0	117
Total	4 662	940	84	-76	35	-36	-8	-505	419	5233

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

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.L. Porter, Chairperson
S. Ndlovu, Vice-Chairperson

N.A. Barcza	M.H. Rogers
R.D. Beck	D.A.J. Ross-Watt
J.A. Cruise	G.L. Smith
J.R. Dixon	T.R. Stacey
G.V.R. Landman	O.K.H. Steffen
J.C. Ngoma	J.N. van der Merwe
R.G.B. Pickering	D.J. van Niekerk
S.J. Ramokgopa	M. Woodhall

Membership

The SAIMM membership comprises engineers, metallurgists, chemists, physicists, geologists, certificated managers, and technikon diplomates, and 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 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

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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

T.M. Mmola, Chairperson

A.S. Nhleko, Vice-Chairperson

V.G. Maseko, Treasurer

W. Banda, Secretary

G. Dabula

D.E.P. Klenam

E.S. Links

S. Maharajh

T. Mahomedy

N. Makhalemele

Observers

S. Ndlovu

Z. Maruma

S.Z. Ndlovu

L.N. Nene

T. Randima

I. Sibisi

L. Zombene

S.M. Rupprecht

Strategy

In the 2016-2017 term of the Young Professionals Council (YPC), the strategy was to directly align the activities for the YPC with the mandate of the SAIMM. This involved setting up strategic portfolios to manage the mandate of the YPC. The identified portfolios are Membership, Technical Programme Committee, Publications, Funding, Strategic Partnerships, Advocacy, and Marketing. The functions of these portfolios are:

Funding

This portfolio looks at ways for the YPC to raise funds through partnerships with companies. The members in charge of the portfolio should develop a model that may be used to raise funds to ensure that the YPC is financially stable.

Strategic Partnerships

This portfolio looks at which institutes or companies the YPC can partner with to investigate synergies and carry out common projects, *i.e.* Financial Planning Institute. The members in charge of this portfolio should explore strategic partnerships.

Membership:

This portfolio focuses on attracting membership of young people and retaining these members. This should include developing programmes and support that will be beneficial to members. Those responsible for this portfolio are expected to be part of the SAIMM Membership Committee so that there is a transfer of knowledge and know-how.

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Publications

The focus of this portfolio is on encouraging young people to start publishing, *i.e.* finding ways for the YPC to develop future publishers of technical papers. Those responsible for this portfolio should also serve on the SAIMM Publications Committee.

Advocacy

This is where the YPC acts as the voice of young people within the mining companies and industry, *i.e.* through advocating on issues such as practical training, vacation work, and bursaries.

Technical Programme Committee (TPC)

This portfolio looks at bringing together all the programmes, conferences, and workshops to consolidate them within the SAIMM. Through this grooming and exposure, members will be developed and encouraged to move effortlessly into the greater SAIMM. Those responsible for this portfolio should also serve on the SAIMM TPC.

Marketing

This portfolio focuses on marketing the YPC

YPC Events

During the term, the YPC organized several events, which are seen as important in developing young professionals in general and developing the YPC's capacity to organize larger events on behalf of the SAIMM in the future.

On 18 August 2016, Mining and Metallurgy students from the University of Johannesburg (UJ) and University of the Witwatersrand (Wits) participated in the annual student debate, which was co-hosted by the SAIMM Johannesburg Branch and the YPC.

This was followed on 19 August by the Careers and Leadership Conference held at the University of the Witwatersrand. In attendance were students from the University of the Witwatersrand (Wits), the University of Johannesburg (UJ), the University of Pretoria (UP), and the University of South Africa (UNISA).

Unfortunately, the SAIMM had to cancel the Annual Student Colloquium, which was scheduled for 25 October 2016, because of the disruption to the academic programmes of universities caused by the #FeesMustFall protests. Nevertheless, the Special Student Edition of the *Journal* was published, containing papers from students as selected by their respective university departments.

On 11 February 2017 the YPC held a lecture entitled 'Introduction to the SAMREC and SAMVAL codes' presented by Dr Steven Rupprecht, senior lecturer at the University of Johannesburg.

The YPC held a two-day conference, the third Young Professionals Conference, on 9 and 10 March 2017 at the Innovation Hub in Pretoria.

Publications

As part of the YPC strategy to foster the culture of publishing, in line with a core function of the SAIMM, *i.e.* dissemination of information, several publications were released containing work from young professionals.

The YPC published a first-edition e-magazine entitled 'Youth in Mining and Metallurgy' or YIMM mag for short. The e-magazine is authored entirely by university students and

covers topics that matter to the student population. The theme of the first edition was 'How to empower yourself as a young professional'.

The April edition of the *SAIMM Journal* contained papers on research work by university students, and the July edition featured articles from young professionals who presented at the Young Professionals Conference in March. Having two volumes of the *Journal* dedicated to young professionals speaks highly of the commitment that the SAIMM has in recognizing and nurturing technical excellence in young professionals. Furthermore, it is indicative of the quality of graduates entering the minerals industry and the standard of work from young professionals applying their trade in the industry.

Education Support

The YPC continues to support initiatives that are focused on education. The YPC participated in the Sci-Bono Career Guidance events, where members gave career guidance presentations to high-school students, and ran a raffle at the SAIMM Banquet to raise funds for the Scholarship Trust Fund.

The Education Working Group (EWG) of the YPC was involved in hosting soft-skills workshops at the University of Johannesburg and the University of the Witwatersrand. Topics included research and innovation, time management, interview skills, CV writing, and presentation skills. Other planned workshops for the 2017 academic year include personal branding, financial skills, and entrepreneurship. The purpose of these workshops is to prepare well-rounded graduates for the minerals industry.

Professional Support

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.

The SAIMM mentoring programme, which is in its second year of running, has grown to include 82 protégés and 64 mentors. The programme allows young professionals to build connections with experienced practitioners and to develop into future leaders of the industry.

1.3 Promotion of the SAIMM

Portfolio holder: C. Musingwini

The 2016/2017 financial year was characterized by the challenges experienced by the global mining industry in the years following the Global Financial Crisis of mid-2008. The mining industry continued to experience job losses and closure of operations stemming from the depressed commodity prices. Most professional organizations within the minerals sector, the SAIMM included, bore the brunt of the economic downturn as some members were retrenched and could not pay their membership fees. The SAIMM implemented measures to absorb as much of the financial impact as possible while recognizing that the needs of our members always come first. Overall, the SAIMM has been able to survive in the current tough times. Although it still remains in a deficit position financially, the deficit is much less than was predicted at the start of the

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2016/2017 financial year. The better-than-expected performance is attributable to the support of our membership for SAIMM activities, hard work by the staff of the Institute, and the Institute's unwavering leadership.

Financials

Our financial performance is covered in detail in the Honorary Treasurer's report. In 2015 we forecast that our Institute would operate under serious financial strain due to the economic downturn, and deficits were predicted for three consecutive years. The deficit reported for the 2015/2016 financial year was R6 034 222, and this was significantly reduced in the 2016/2017 financial year to R63 781. This significant reduction was due mainly to a reduction in expenditure resulting from cost control measures, while revenues remained fairly stable. Our income is still heavily leveraged towards conference income, with conferences accounting for about 66% of the total income, followed by membership subscriptions at 21%. The remainder of the income was derived from advertising in the *Journal*, contributions from Branches, sales of books, and *Journal* subscriptions.

An amount of R2 million was drawn down from our AFC-managed investment portfolio, which reflected a loss of 3.5% for the year. The investment started the financial year at R29 967 321 and ended the year at R29 714 155. This investment portfolio is the result of a prudent historical decision taken by the SAIMM to plan for the proverbial seven fat years followed by seven lean years.

Membership

Our membership is drawn from more than 50 countries. We started the financial year with 4689 members. Membership peaked at 5081 in June 2017, the highest it has ever been, and also breached the target of 5000 that we set for ourselves several years ago. Our ability to breach this target is in part due to the SAIMM's Incentive Programme. Of our total membership, about 4622 members reside within the southern African region. It was recognized that a number of unemployed members required support, and being the caring organization that we are, the SAIMM deferred the payment of their membership fees upon request.

Publications

The Institute continued to deliver on one of its key objectives, that of disseminating scientific and technical knowledge to the benefit of the mining and metallurgical industries. Technical and scientific knowledge was shared through the *Journal*, which was published monthly and distributed electronically to all members. Those members and some libraries requiring printed copies continued to receive printed copies of the *Journal*. The quality of the *Journal*, as measured by the Journal Impact Factor, improved by about 26.5%. A survey undertaken during the year indicated preference for electronic copies of the *Journal* by the broad membership, and we hope that over time we can save on the cost of printing and postage if all our members opt to receive the *Journal* electronically. The *Journal* and conference proceedings continued to be available as free and open access information sources. Our decision to encourage and revive the publication of books received a positive response and the book 'Theoretical Rock Mechanics for Professional Practice' by Matthew Handley has already been

published. Another five books are in different stages of production, and this should hopefully serve to encourage those of our members who are contemplating writing a book or books to seriously consider taking up this offer.

Technical Conferencing

The Mining and Metallurgy Technical Programme Committees (TPCs) successfully organised 14 conferences on a variety of topics that are relevant to the minerals industry. A number of these technical events were jointly organized by the two TPCs. Two of the technical events – the Introduction to SAMREC/SAMVAL Codes and the Young Professionals Conference – were organised by our vibrant Young Professionals Council (YPC). The annual Student Colloquium was, however, cancelled due to the nationwide #FeesMustFall protest action that forced most of the country's state universities to close for several weeks. The SAIMM still arranged for universities to submit the best student project papers, which were published in the April Student Edition of the *Journal*. The two TPCs continued to hold joint quarterly meetings in order to improve communication between them and share best practice. High-quality peer-reviewed papers were published in conference proceedings for most of the larger conferences. Most of the conference proceedings were also published as electronic copies and provided to delegates as part of their registration package, with printed copies being produced on demand only.

Due to the impact of the economic downturn on the minerals industry, there has been a decrease in the number of conference delegates from mining companies, as companies cut back on discretionary spending. Despite these challenges, several companies have continued to sponsor most of our technical events, thereby enabling us to reduce the registration cost per delegate to reasonable levels. The SAIMM is very grateful for the support received from our sponsors of technical events.

International Collaboration through the Global Mineral Professionals Alliance (GMPA)

In February 2017, the SAIMM hosted the annual meeting of the Global Mineral Professionals Alliance (GMPA). At that meeting we strengthened our collaboration by signing a Memorandum of Understanding (MoU). The GMPA comprises the Australasian Institute of Mining and Metallurgy (AusIMM), the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), the Institute of Materials, Mining and Metallurgy (IOM3), the Southern African Institute of Mining and Metallurgy (SAIMM), the Society for Mining, Metallurgy and Exploration Inc. (SME), and the Instituto de Ingenieros de Minas del Perú (IIMP). Our participation in the GMPA ensures that our members are able to enjoy reciprocal benefits from the other participating societies and enables us to benchmark our performance through mutual exchange of operating data of peers.

OneMine.org and Technical Library

Through our participation in the GMPA our members have free access to the more than 100 000 technical papers that are stored in the searchable OneMine.org database. In addition, the SAIMM also receives a share of the revenue generated from papers downloaded from the OneMine.org database. Through a once-off annual organizational subscription, our members have



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free access to the Technical Library, which amalgamated the technical publications of the former Anglo American and Chamber of Mines libraries. Members can receive up to 10 articles per month from the Technical Library by e-mail at no charge.

Collaboration with Local Professional Associations

Locally, the SAIMM maintained interaction with a number of kindred professional associations affiliated to the minerals industry. We did this in several ways, including attending their annual general meetings and other annual functions, having reciprocal observer status at each other's council meetings, and in some cases by jointly organizing technical events. These associations include the:

- Geological Society of South Africa (GSSA)
- Association of Mine Managers of South Africa (AMMSA)
- Mine Metallurgical Managers Association (MMMA)
- Institute of Mine Surveyors of South Africa (IMSSA)
- Mine Ventilation Society of South Africa (MVSSA)
- South African Colliery Managers Association (SACMA)
- Southern African Coal Processing Society (SACPS)
- Fossil Fuel Foundation (FFF)
- South African Institution of Chemical Engineers (SAChE-ICHEM)
- South African Institute of Electrical Engineers (SAIEE)
- South African Academy of Engineering (SAAE).

Engineering Council of South Africa (ECSA)

The Engineering Council of South Africa (ECSA) is the statutory body mandated with registering engineering professionals, while Voluntary Associations (VAs) such as the SAIMM exist to serve the interests of their members. Some of our members would have heard through the media that the VAs took ECSA to court. This case, which has the support of seven VAs, is being led the South African Institution of Civil Engineering (SAICE) and the SAIMM is supporting the case following your Council's decision to do so. Papers were lodged in the High Court on Thursday 2 March 2017 to challenge the legitimacy of the new ECSA Council as there were alleged irregularities in the appointment of the Council in September 2016. This case is still ongoing.

Annual Banquet

We held our annual banquet on 11 March 2017 and it attracted a very sizeable attendance. There were 27 sponsors and a total of 350 members and guests attended. The banquet continues to be a social highlight for the Institute and the guests were treated to music by the University of the Witwatersrand School of Mining Engineering's SMES choir. The banquet was also an opportunity to introduce and recognize new Fellows and, as part of the Incentive Programme, recognize contributions made by our members who went the extra mile in supporting key activities of the Institute.

Leadership

The SAIMM's Office Bearers met monthly and the SAIMM Council (its highest decision-making body) met six times during the year. Some of the Council meetings were attended by Branch Chairpersons. Some of our branches also held regular branch meetings and managed to organize branch events, while others struggled as a result of the economic

downturn. The SAIMM continued to support its regional branches in line with its strategy of maintaining and growing its regional footprint.

Staff

Two staff members, Dawn van der Walt (Head: DTP Department) and Alf Bettoni (Accountant) retired at the end of December 2016. Although a decision had been made not to replace staff, we had to employ a new Accountant, Dennis Makondesa. In April 2017 Raymond van der Berg (Head of Conferencing) and Jacqui E'Silva (Head of Membership and Branch Liaison Administrator) resigned. Camielah Jardine was promoted to Head of Conferencing and Gugu Charlie was employed as our new Conference Co-ordinator. It was agreed not to replace Jacqui, and Kea Shumba was promoted to Membership and Branch Liaison Administrator, while Prudence Ntumeleng was promoted to Membership Assistant.

There are currently 14 full-time staff members.

Conclusion

The SAIMM has been in existence for 123 years. It remains a vibrant, strong, active, and growing professional organization, primarily because of the way it conducts its business and strategically positions itself to ride out tough times such as the one we have been through and are currently still experiencing. I am very hopeful that the Institute will continue to prosper under the guidance of its visionary leadership.

1.4 Awards and Adjudication Committees

Awards and Adjudication Committee—Mining

M.H. Rogers, Chairperson

M.F. Handley	G.L. Smith
R.G.B. Pickering	T.R. Stacey

Awards and Adjudication Committee—Metallurgy

D. Tudor, Chairman

R.D. Beck	R.L. Paul
P. den Hoed	

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	

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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	
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	

* 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. 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

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

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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*
	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. Tatterson
	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	

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1963	L. Anderson H.K.R. Cahnbley G.C. Clatworthy R.E.F. Cowley J.A.J. De Cuyper	J.N. Gallie J.J. Geldenhuys T.J. Kotze A.H. Munro A.G. Netto
1964	J. Douglas K. Imre	A.W. John A. Simon
1965	P. Andersson J.A. Cruise F.S.A. De Frey F.M.G. Egerton F. Fenwick M.R. Fuller-Good P.G. Gaylard J.P. Hoffman J.P. Loo	W. Mitchell D.I. Ossin M.H. Rogers E.H.J. Stoyell R.S. Traviss* J.W. Walls I.C. Watson J.C.M. Wethmar
1966	D.A. Arnold C. Fauconnier D.R. Fleming E. Fletcher P.G.P. Mrkusic	N.F. Peverett J.C. Simms P.J.C. Smith O.K.H. Steffen D.J. van Niekerk

* Deceased since becoming members of the Club

The Danie Krige Memorial Award

Following discussions at Office Bearers and Council during 2013 it was agreed to honour the memory 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 2016 to February 2017 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:

D. Cumming-Potvin, J. Wesseloo, S.W. Jacobsz, and E. Kearsley for their paper published in the August 2016 issue of the *Journal* entitled: 'Fracture banding in caving mines'.

As non-members, D. Cumming-Potvin, S.W. Jacobsz, and E. Kearsley will receive certificates of merit.

L.M. van Niekerk, A. Olivier, J. Armstrong, and N.A. Sikwa for their paper published in the August 2016 issue of the *Journal* entitled: 'Pioneering large diamond recovery at Karowe diamond mine'

As non-members, A. Olivier, J. Armstrong, and N.A. Sikwa, will receive 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:

D. Vogt for his paper published in the November 2016 issue of the *Journal* entitled: 'A review of rock cutting for underground mining: past, present, and future'.

J.N. van der Merwe for his paper published in the November 2016 issue of the *Journal* entitled: 'Review of coal pillar lifespan prediction for the Witbank and Highveld coal seams'.

R.C.A. Minnitt, for his paper published in the February 2017 issue of the *Journal* entitled: 'A version of Gy's equation for gold-bearing ores'.

L.R. Nelson and R.J. Hundermark, for their paper published in the May 2016 issue of the *Journal* entitled: 'The tap-hole key to furnace performance'.

C. Ngulube, C. Chongo, and F.X. Paquot for their paper published in the June 2016 issue of the *Journal* entitled: 'Review, evolution, and optimization of the treatment of Kansanshi mixed copper ore'.

As non-members, C. Chongo and F.X. Paquot will receive certificates of merit.

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	S.F. Maluleke
Metallurgical Engineering	D.J. Prozesky

University of Pretoria

Mining Engineering	R.E. Dinkelmann
Metallurgical Engineering	M.C.J. van der Merwe

University of Johannesburg

Mining Engineering	T.A. Sethu
Extractive Metallurgy	R.M. Moepeng

University of Cape Town

Mineral Processing	A. de Goede
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University of Stellenbosch

Mineral Processing	M. Theart
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Cape Peninsula University of Technology

Mineral Processing	T. Mahlasane
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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 10 August 2017

In addition, the Western Cape Branch also awards two Outotec Postgraduate Scholarships for students conducting research in the area of sustainable mineral processing.

There was no award this year.

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.

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The Top 5 proposers are:

K. Nnyenyiwa
J. Selby
J. Luckmann
J. Steenkamp

Joint Fifth place goes to:

M. Tlala
R. Sililo
C. Collins.

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

L. Cornish
S.M. Rupprecht
G.L. Smith

Joint Fourth Place:

F. Abassy
J. de Korte
J.R. Dixon
E. Esterhuizen.

The author who has submitted and published the most number of papers in the *Journal* is:

R.C.A. Minnitt.

Top Advertiser in the Journal

The award for the *Most Supportive Advertiser* in the *Journal* is to be made annually by the SAIMM and it 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 2016/17, and for the second year running, is Elbroc Mining Products.

1.5 SAIMM Scholarship Trust Fund

J.R. Dixon, Chairman

F.M.G. Egerton

A.S. Macfarlane

T. Mmola

M.H. Rogers

W.H. van Niekerk

The Trust Fund was able to distribute a total of R242 000 between the eight minerals-industry-related faculties across the country. Significant contributions to the Trust Fund by Larry Cramer, a former trustee, and Samuel Eshun, a SAIMM Fellow, are gratefully acknowledged. 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 2953 students.

The role of the Scholarship Trust Fund has become even more important in the prevailing economic and political climate as many students struggle just to pay for basic necessities.

We continue to try and make the Fund more visible through the SAIMM website and at major SAIMM functions. Thanks to Tshepo Mmola for his contribution in this regard.

A review of the Trust Deeds commenced during the year to ensure that the SAIMM and the Trustees comply with the relevant legislation applicable to charitable trusts such as ours.

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

We look forward to your continued support.

1.6 Complaints Committee

R.C.D. Phillis (Chairperson)

M. Dworzanowski

A.J. McDonald

A. Garbers-Craig

On 9 June 2015, the first official meeting, chaired by R.P. Mohring, was held. Dr E.J. de Jager and Mr A.J. McDonald attended, with apologies received from Dr R.C.D. Phillis. The mandate of the Committee was stated and two complaints were discussed. It was agreed that recommendations be made after Mr Mohring had met the parties concerned since the complaint did not fall within the scope of the Committee. The SSC had already ruled on the matter.

A complaint had also been lodged against a company that had misquoted its coal reserves.

On 22 January 2016, Mr Rick Mohring notified the Committee of a complaint against a Competent Person who was noncompliant in terms of the SAMVAL Code. Mr Mohring also requested the consideration of a Vice-Chairperson to chair the meetings in his absence.

Unfortunately, on 14 March 2016 Mr Mohring passed away.

On 13 October 2016, Mr Andy McDonald (interim Chairperson) chaired the meeting. Sam Moolla (Manager, SAIMM), Professor Marek Dworzanowski, and Dr Rudy Phillis attended while Professor Andrie Garbers-Craig dialled in. Dr Rudy Phillis was elected as the new Chairman. The recommendation on the complaint was to send the Competent Person two separate letters requesting: (1) feedback on the progress of the revised CPR; (2) the original brief from his client for the Committee's record-keeping.

The complaint regarding the coal resources, reserves, mineable, and saleable ores was that the reporting was not compliant with the SAMVAL and SAMREC codes. However, the company had repeatedly breached the reporting codes. The decision was that the JSE must be the watchdog of the industry.

Complaints and disciplinary procedures review was discussed and the Committee had to apply themselves to improving the procedures and submit their proposal to Ms Moolla for consolidation and approval by the end of November 2017.

On 19 January 2017 at 12:00, Dr Phillis welcomed members to the first meeting of 2017. Ms Moolla provided feedback on the progress made towards the resolution of the complaint against the Competent Person. After due deliberation it was agreed that the Competent Person be exonerated.

No new complaints had been received, and therefore no dates for the following meetings were set.

1.7 Banquet Committee

C. Musingwini

A.S. Macfarlane

R.T. Jones

S. Ndlovu

M.I. Mthenjane

J.L. Porter

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The banquet was held on Saturday 11 March 2017 in the Ballroom at the Sandton Convention Centre, Sandton. This year it was decided not to invite a guest speaker, but instead to have entertainment. This was provided by the choir of the Society of Mining Engineering Students (SMES). Their performances were interspersed between each course and the presentations, which allowed guests to savour the good food and enjoy the entertainment.

The presentation of certificates to Fellows who were elected in the preceding year was instituted in 2016. This was once again well received, and the Fellows were pleased to be awarded their certificates at the event. In addition, it was agreed that the top five members in the different categories of the Five Star Incentive Programme and their partners would also be invited to the banquet at no cost.

The balance between the entertainment, networking, socializing with old friends, and the various presentations worked well, and many guests commented favourably on this.

Although the size of the Banquet has decreased over the past few years, the quality certainly hasn't and we look forward to hosting this annual event for many more years to come.

There were three VIP tables, and 33 Sponsors and Members tables, with 350 guests in total.

2. Technical Meetings

Portfolio Holders: R.T. Jones and C. Musingwini

2.1 Technical Programme Committee—Mining

D.D. Munro, Chairperson

Z. Botha, Metallurgy Representative

R. Armstrong

S.M. Rupprecht

P. Bredell
A. Bester
C.R. Fredericks
W.C. Joughin
G. Lane
D. Limpitlaw
J.A. Luckmann
A.S. Macfarlane
S. Maleba
C.W. Mienie
R.C.A. Minnitt
D. Muma
C. Musingwini
N.M. Namate

J.L. Porter
S. Pule
S.M. Rupprecht
S. Rungan
A.G. Smith
C.B. Smith
G.L. Smith
M.H. Solomon
C. Sweet
M. Tlala
T. van der Berg
D. Vogt
R.C.W. Webber-Youngman
M. Woodhall

With optimism growing in the industry for some recovery in the mining sector, we have spent considerable time in the past three months looking back on the successes of the Mining Technical Programme Committee (TPC) and how we can improve on what has been an eventful year in the South African mining industry. This has included the regular joint Mining / Metallurgy TPC strategy sessions and meetings.

A number of trends that were identified last year have continued, such that the bulk of attendees at our conferences are non-members, ever more of our members are based on site, and companies are curtailing spend on employees' technical development.

We have also seen a number of new trends, and this is where the TPC aims to enhance its offerings in the coming year. These trends include the development of lower cost, high-speed internet connectivity, which is fulfilling the need for more content to be made available digitally. We are embracing this and have already made arrangements for Skype facilities (as

Schedule of Mining/Metallurgy Technical Conferences, 2016/2017				
Type of Event	Date	Title	Convenor	Attendance
Conference	18–19 July 2016	Zimbabwe Branch Event - Innovations in Mining 'Redesigning the Mining and Mineral Processing Cost Structure'	Zimbabwe Chairperson	65
School	25–26 July 2016	Production of Clean Steel	J. Steenkamp	77
Conference	31 July to 3 August 2016	Hydrometallurgy Conference 2016 'Sustainable Hydrometallurgical Extraction of Metals'	S. Ndlovu	150
Conference	16–18 August 2016	Heavy Minerals 'Expanding the Horizon'	J. Selby	99
Conference	31 August to 2 September 2016	MINESafe Conference 'Striving for Zero Harm'	T. van den Berg	1317
Conference	12–13 September 2016	Mining for the Future 'The Future for Mining Starts Now'	G. Lane	175
School	27 September 2016	GMSG - Underground Mining Forum	D. Vogt	40
Colloquium	19–21 October 2016	AMI Ferrous and Base Metals Development Network Conference 2016	J. Papo	96
School	11 February 2017	Introduction to The SAMREC/SAMVAL Codes: YPC Lecture	K. Lomborg	56
Conference	9–10 March 2017	Young Professionals Conference	S. Nhleko	83
Colloquium	20 April 2017	Proximity Detection and Collision Avoidance Systems in Mining	A. Macfarlane	115
Workshop	10–12 May 2017	Sulphur and Sulphuric Acid 2017	T. Claassens	80
Colloquium	6–7 June 2017	Mine Planning Colloquium	M. Woodhall	12
Colloquium	19–20 June 2017	Chrome Colloquium 'What's next for Chrome? A Debate on the Tough Questions'	M. Erwee	22
School	27–29 June 2017	Mineral Project Valuation School	C. Birch	13

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opposed to conference calls) to be available for members to join our meetings. Further plans are afoot to start recording conferences and develop a business model where these sessions can be on-sold to our members.

The year has also seen the further adoption of social media platforms to publicize our events, with regular tweets and posts from events and Facebook reminders of upcoming events becoming the norm. These opt-in facilities, accessible through the SAIMM's Facebook: <https://www.facebook.com/THESAIMM> and Twitter pages: (@SAIMM) ensure that our members are constantly up to date with latest events and also enable them to share upcoming events with peers and colleagues.

We are also critically aware of the importance of our sponsors, as without their contributions many events would not take place. As such, we are always looking at ways of improving our offering to them in terms of sponsorship opportunities and additional advertising on our social media platforms.

The following is a summary of the events hosted in the last year.

- ▶ MineSAFE 2016 was again held at Emperors Palace in Johannesburg, and attracted a gathering of 1317 people over the three days. This event is co-hosted and is one of the largest on the SAIMM calendar
- ▶ The bi-annual Electra Mining show saw the SAIMM presenting a two-day colloquium entitled the 'Future of Mining'. This proved that the pay-as-you-go concept is possible for colloquia in South Africa
- ▶ The alliance with the Global Mining Standards Group was further developed through the hosting of an Underground Conference at the Wits Club. This was attended by 40 delegates.
- ▶ As part of the roll-out of the new SAMREC / SAMVAL codes, a lecture was given to the Young Professionals Group. This was held on a Saturday morning and attracted 47 attendees. This provided further evidence that conferences need not be held only during weekdays
- ▶ In addition, the Young Professionals held a joint Mining/Metallurgy conference at Emperors Palace in March 2016. This gave an opportunity for our younger members to gain valuable exposure and present their current projects
- ▶ The requirement that trackless equipment be equipped with proximity detection led to the SAIMM hosting a one-day colloquium on Proximity Detection. This was extremely well attended by 169 delegates, and covered a very broad spectrum of the mining industry, including both service providers and industry
- ▶ The Mine Planning School has become a regular event on the mining calendar, with this year's June event attracting 66 delegates to Mintek. This school continues to grow and showcases the best our industry has to offer
- ▶ Our final event of 2017 was the Mineral Project Valuation School, which was held at the Wits Club. The 62 delegates who attended this event benefited from the years' experience of the presenters.

The Mining TPC thanks all the conference committees for the hard work and dedication that they put into the organization of the past financial year's events, and the Secretariat for the endless hours and diligent work they put in behind the scenes in preparing for each of the conferences.

We look forward to the next financial year as an opportunity to continue to develop and expand the technical knowledge of the industry, and invite any members of the SAIMM to contact the SAIMM office and volunteer to participate in the organization of conferences.

2.2 Technical Programme Committee—Metallurgy

Z. Botha, Chairperson

M. Dworzanowski, Vice-Chairperson

R.T. Jones, Vice-Chairperson

N. Blackham

T. Claassens

P. den Hoed

E. Dhlamini

L. Dimbunu

I. Geldenhuys

D. Groot

I. King

J.P. Leader

A. Mainza

S. Maleba

S. Matutu

C. Mienie

J. Mishra

T. Mmola

M. Motuku

A. Mulaba

D. Muma

P. Muthaphuli

N. Namate

N. Naude

S. Ndiyamba

S. Nhleko

S. Ndlovu

N. Segapela

H. Simonsen

A. Sithole

K. Sole

J. Steenkamp

A.L. Swart

M. Valenta

P. van Staden

C. van Wyk

B. Xakalashé

This year the Metallurgy Technical Programme Committee (TPC) had to operate against a very interesting backdrop. This was an unprecedented year of hardship in the minerals industry. It was a tough political year around the world, and especially in South Africa where, for the first time, mention was made of state capture and we experienced a very quick succession of ministers of finance. Nonetheless, throughout the year the TPC supported a wide selection of technical conferences, supporting continuing education of and knowledge sharing between metallurgical professionals. These topics included clean steel production, hydrometallurgy, heavy minerals, ferrous metals, an introduction to and workshop on the new SAMREC/SAMVAL codes, sulphuric acid, a chrome school, and water in the mining industry. The Metallurgy TPC also supported the MineSAFE 2016 Conference, the Future of Mining Conference, the GMSG - Underground Mining Conference, Proximity Detection Conference, Mine Planning School, and Mineral Project Valuation School.

The Metallurgy TPC has remained focused on innovation and changes in the mining and metallurgy industry. The drive continued for interactive information transfer via social media during conferences; as well as for a different approach to the type of conferences offered by the SAIMM. There was a greater focus on schools and breakfast sessions this year, which proved to be very successful during the SAMREC/SAMVAL Young Professionals Council breakfast session at Worley Parsons. This was an introductory session to the new SAMREC/SAMVAL codes, specifically for young professionals, and was very well attended. Another great success was the breakfast session hosted by the Production of Clean Steel School. During this event 20 new members were registered with the SAIMM. These new sessions did not only focus on sharing information about new processes and techniques for

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improvements in the industry, but also took a hard look at current markets and the future of the industry. SAIMM conferences are generally accredited for continuing professional development (CPD) purposes, as required by the Engineering Council of South Africa (ECSA). Formal proceedings of high-quality peer-reviewed papers continue to be published for most of the larger conferences; however, electronic copies are now provided to delegates as part of their registration package, and printed copies are produced on demand only.

With a focus on interactive information transfer, the SAIMM website now offers electronic expression of interest in any event before the actual registration form is available; as well as the new online registration forms, and the conference questionnaires are also now done electronically. SAIMM TPC events and information from events are also now more actively shared on social media, and Twitter feeds are available on the website. Full conference proceedings are still being published on the new SAIMM website in order to make the information searchable and available to as wide an audience as possible. The SAIMM will continue to make its website publications available free of charge (via open access) to the general public, in recognition of the time and effort freely contributed by authors and the organizations where they work.

Attendance figures for this year's metallurgical technical conferences were on average 100, which is 33% less than in 2015/2016. The largest number of delegates (150) attended the Hydrometallurgy 2016 Conference. The Chrome School and Heavy Minerals Conference were also very well attended. Sponsorship from July 2016 to June 2017 was R3 856 000, which is approximately 6% less than 2015/2016, but still at a significant level, despite the poor state of the economy and the rather eventful political year experienced by South Africa. The SAIMM appreciates the continued support of sponsors, especially during trying economical times.

The Metallurgy TPC hosted the Production of Clean Steel School at Mintek during July 2016. The main presenters were Professor Chris Pistorius, POSCO Professor of Iron and Steelmaking in the Department of Materials Science and Engineering at Carnegie Mellon University (CMU) in Pittsburgh, PA, USA; and Harry Delpont, based at SA Steelmakers in Cape Town, who gave a presentation at the networking breakfast on the history of iron- and steelmaking in South Africa. Discussion throughout this event included strategies for local steel producers to control dissolved elements and strategies to control the effect of nonmetallic inclusions on steel properties. A poster competition, with a prize sponsored by SAISI, was included in the programme. Dirk Kruger's poster won the prize of an overseas trip to work with Professor Pistorius at CMU for one week, on a paper to be submitted on his return, to the SAIMM *Journal* for consideration for publication.

The next event was the international Hydrometallurgy Conference, hosted in conjunction with the SAIMM Western Cape Branch, in Cape Town at the end of July 2016. There has been a drive to develop innovative methods that look at the smart and sustainable extraction of metals from traditional and alternative metal resources. In particular the aspect of sustainable extraction of metals has been prominent in the past few years as reflected by some of the papers presented and hence the conference theme 'Sustainable Hydrometallurgical Extraction of Metals'. The conference was preceded by a

workshop on 'Test work and its importance in metallurgical design'. This was very well attended by industry delegates, academics, and students. A significant number of papers from local and overseas delegates and from both industry and research institutions were presented over the subsequent three-day conference. There were five keynote addresses. Professor Kwado Osseo-Asare from Penn State University, USA gave a very interesting talk on the fundamentals of hydrometallurgy. Dr Frank Crundwell from CM Solutions, South Africa discussed the linkages in corrosion, hydrometallurgy, and flotation. Professor Mike Nicol from Murdoch University, Australia gave a talk on the ineffectiveness of oxygen as an oxidant in hydrometallurgical processes. Professor Markus Reuter from Helmholtz Institute Freiberg for Resource Technology, Germany gave a very stimulating talk on the role of hydrometallurgy in a circular economy. Professor Bhargava from RMIT University in Australia discussed innovative research during hard times in the minerals industry. Posters were also presented by both local and international students. Presenters and participants were drawn from six continents and fifteen countries.

The papers highlighted the fact that although hydrometallurgical extraction of metals is still largely based on primary resources, there is also a large amount of metal-containing waste material being generated in the metal production and manufacturing industry that has potential to act as a secondary source of metals. It was clear from the conference that global academic and industrial research into metal recovery from such secondary resources has become a focal point. The hydrometallurgy of copper was a hot topic as usual; a large number of papers at the conference were dedicated to copper processing and these sessions had a high attendance rate. In addition, there was overwhelming interest shown in the processing of uranium.

The SAIMM Young Professionals Council (YPC) again hosted the Young Professionals Conference. The challenge addressed during this conference was how young professionals, at this time, can create a vision for mining in Africa that will inspire confidence for the future. In setting the strategic direction to achieve the abovementioned vision, there were a few questions posed during the conference:

- What are the policies that should be developed and implemented to transform the *status quo* to the envisioned mining environment?
- What are the technical solutions that need to be pursued?
- What are the human capital needs that must be satisfied?
- What are the economic conditions required?

This conference provided a platform for young professionals to interact with peers and industry thought leaders to drive the dialogue towards unlocking the future of the African minerals industry. The conference was very well received and was in fact oversubscribed in terms of authors. There were also numerous posters displayed outside the conference room. The event hosted 89 delegates who participated in the discussion of topics like 'Multi-stakeholder collaboration to unlock the potential of deep-level mining in South Africa' (K.M. Letsoalo) and 'The impact of Section 54 stoppages on staff morale' (M. Mpanza and P. Nelwamondo).

The Heavy Minerals Conference was held at Sun City on 16–17 August. The HMC conferences are held every two years, alternating between South Africa and another country



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specifically involved this industry. Previous conferences have been hosted in South Africa, Australia, the USA, and India. The event was very well sponsored by the industry and allowed for many networking opportunities, during which local and international delegates enjoyed truly South African cultural and social activities. The number of persons involved in this sector of the minerals industry is quite small, and as a consequence most stakeholders tend to know each other from past encounters. This makes the conference particularly pleasing as all delegates get to meet old colleagues and exchange 'war stories'. There was, however, slightly less visible support from the operators in the industry, which showed that financially business is still tight, but has a positive outlook. Over the life of this series of conferences the organizers have striven to keep the theme of the conference strictly technical, with the more financial aspects of the business being covered elsewhere. Mr J. Selby has chaired six of the ten conferences and he derives great pleasure from seeing a conference, arising from the SAIMM's Zululand Branch back in 1995, sustaining itself over 20 years. Discussions at this series of events have seen, over the years, an increasing number of papers on the downstream processing and beneficiation of the raw minerals. This is particularly gratifying, as historically the industry was closed, with a perception that open discussion would cause a loss of proprietary information. The willingness to talk about such topics does illustrate the developing maturity of the operators.

The Sulphuric Acid Conference was held in May 2017 at the Southern Sun Cape Sun. The event was well attended and very well sponsored by the industry. Local and international delegates enjoyed the opportunity to network with industry peers, as well as a number of social events. Technical presentations were held over two conference days. A sponsored workshop was held prior to the conference and was very well attended.

Under the agreement negotiated with the Advanced Metals Initiative (AMI) in 2010, which is endorsed by the Department of Science and Technology, the AMI 2016 Ferrous and Base Metals Development Network Conference was held during October 2016 at the Southern Sun Elangeni Maharani, KwaZulu-Natal. The Department of Science and Technology, through the AMI, promotes research, development, and innovation across the entire value chain of the advanced metals field. Keynote speakers included international speakers. The conference shared insight into the state of research and development under the AMI-FMDN programmes.

Unfortunately, due to the volatile environment at all South African universities during the end of 2016, the annual Student Colloquium had to be cancelled. This was very disheartening since one of the SAIMM focus areas is support of tertiary educational institutions in Southern Africa. However, organization of the Student Colloquium 2017 is already underway and has already received sponsorship. The SAIMM looks forward to hosting this event at Mintek in October 2017.

The Chrome Colloquium was another highlight for the Metallurgical TPC this year. For the organizer, Markus Erwee and his team, the highlight was the high-profile speakers, from around the globe who presented at this event. The number of delegates from industry was more than normally expected for a colloquium of this nature. A very wide audience was attracted to this colloquium, including representatives of the DMR,

general managers of ferrochrome plants in South Africa, as well as a large number of technical staff from different producers. There were presentations across the board, tackling technical issues, social issues (Peter Major, Cadiz Corporate Solutions), and market issues (*e.g.* Heinz Pariser, the number one chromium market analyst from Germany, and Lara Smith, a great mining analyst from the UK). The presenters included Eli Ringdalen (from Sintef in Norway, who did a lot of groundbreaking chromium research work), South Africa's own Nic Barcza (previously at Mintek, now an independent consultant), Professor Hurman Eric (Wits), Paul Beukes (the leading chromium researcher in South Africa, at North-West University), and the father of electric furnace arc physics, Ben Bowman. These speakers painted the whole picture of what is going on in chromium at the moment, from more than just a pure technical perspective. Three things were clear:

- ▶ Delegates were truly concerned about the future of our chrome industry – and these delegates were from across the chrome value chain, not only from smelters
- ▶ The organizer, Markus Erwee, was truly honoured to have had so many high-profile speakers attend this colloquium and he wants to thank all of them for taking the time to attend
- ▶ All delegates were interested in repeating this colloquium, and the Metallurgy TPC looks forward to organizing this event again.

In the past year cooperation has continued with various international mining and metallurgical societies, including those based in the USA (Society for Mining, Metallurgy & Exploration (SME), The Minerals, Metals & Materials Society (TMS), and the Association for Iron and Steel Technology (AIST)), Australia (Australasian Institute of Mining and Metallurgy (AusIMM), Canada (Canadian Institute of Mining, Metallurgy and Petroleum (CIM), and Europe (Gesellschaft der Metallurgen und Bergleute (GDMB)). The focus will continue on close liaison with these international societies and on co-hosting a number of overseas international events, as well as co-sponsorship of events (which also entails publicizing the events to SAIMM members). The SAIMM has also seen more collaboration between all its Branches, with great success, and is looking forward to more co-hosted events in future.

The Metallurgy Technical Programme Committee wishes to express its gratitude for support from its highly capable members, sponsors, technical matter experts, and the mining and metallurgy industry, who are all committed to innovation, knowledge transfer, and dissemination of groundbreaking information. The Metallurgy TPC would also like to thank the SAIMM conferencing team for a successful year, despite various challenges. They continue to arrange events of high technical quality and which continue to enjoy support from industry. The combined effort of all these stakeholders has resulted in excellent technical events, focused on the current challenges in the industry as well as on strategies to ensure a better future for the metallurgical community of Southern Africa. The pioneering and inventive thinking of the TPC and all the conference convenors is highly appreciated

2.3 South African National Committee on Tunnelling (SANCOT)

H.J. (Ron) Tluczek, Chairperson

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C. Viljoen, Vice Chairperson

L. Nene, Chairperson: Young Members Group

G.A. Davis

F.B. Stevens

P.H. Ferreira

D. Vogt

M. Lebitsa

J.W. Walls

J.L. Porter

M. Wainstein

D. Roos

J. van der Westhuizen

T.R. Stacey

The International Tunnelling and Underground Space Association (ITA) held its 43rd General Assembly along with the 2017 World Tunnel Congress (WTC) in Bergen, Norway from 9 to 15 June 2017. Seventy-three member nations participated in the conference, and Nigeria became the 74th member nation. Ron Tluczek, Chairman of SANCOT, represented South Africa at the General Assembly on behalf of the SANCOT Committee.

South African representatives participate in four 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). Unfortunately, due to work pressure, both Chris Viljoen and Monique Weinstein were unable to attend this year's Congress.

Two reports were published in the previous year from two ITA Working Groups, namely:

- WG6: Structural Fire Protection for Road Tunnels
- WG17: TBM Excavation of Long and Deep Tunnels under Difficult Rock Conditions.

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

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

Dubai, UAE, from 20–26 April 2018, during the ITA–AITES WTC 2018 'Smart Cities: Managing the use of underground space to enhance quality of life'

Naples, Italy, from 2–9 May 2019, during the ITA–AITES WTC 2019 'Tunnels and underground cities: engineering and innovation meet archaeology, architecture and art'.

Kuala Lumpur, Malaysia, in 2020.

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.

In the civil engineering sector, due to the global increase in urbanization, pressure is being placed on governments and the public sector to provide expanded services such as safe and reliable public transport, electricity, gas, water, and sewage facilities. This results in further development of road, rail, and metro infrastructure. However, the availability of space for this essential infrastructure in the urban environment is becoming a major challenge. In order to keep up with this increasing demand, civil designers and contractors are having to resort to tunnelling more than ever before, and in order to deliver these services timeously, mechanized underground excavation and support installation is proving to be cost-effective.

In the mining sector, the fast, efficient, and safe abstraction of raw mineral reserves is of strategic importance. However, rising labour costs, coupled with labour unrest, impact heavily on the ability of companies to achieve these goals. The South African mining sector needs to mechanize at a faster pace in order to remain globally competitive. This is especially true when developing stopes and vertical shafts. A typical deep-level mine has a life of 30–40 years, therefore shafts are not sunk regularly and the specialized expertise may not be readily available.

With the prospect of several major tunnelling projects on the horizon, the active SANCOT membership is increasing. Two major projects which are imminent are:

- 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 will augment the water supply to the Gauteng area
- The uMkhomazi Water Transfer Scheme, which will incorporate the Smithfield dam and 34 km of water transfer tunnel. This scheme will augment the water supply to the area under the jurisdiction of the Umgeni Water Board.

Four Working Groups are active within SANCOT, namely:

WG 12: Sprayed Concrete Use

WG 14: Vertical Tunnelling

WG 21: Life Cycle Asset Management.

There is also a working group that is looking at hosting the ITA World Tunnel Congress in Cape Town, South Africa in 2022. This is as a result of numerous enquiries that Ron Tluczek received at recent ITA World Tunnelling Congresses. There appears to be a lot of international support for holding a WTC in Africa, and specifically in South Africa.

Currently, SANCOT is preparing to host a conference on Life Cycle Asset Management. This conference will highlight the need for life cycle asset management and sustainability of underground works and will be aimed at the numerous municipalities, water utilities, and mines that have underground assets. A common call on the international tunneling stage at present is '*surface problems – underground solutions*'.

3. Publications

Portfolio Holder: S. Ndlovu

D. Tudor, Chairperson

R.D. Beck

J.A. Luckmann

P. den Hoed

C. Musingwini

M. Dworzanowski

H. Potgieter

B. Genc

T.R. Stacey

M.F. Handley

M.R. Tlala

R.T. Jones

D. Vogt

W.C. Joughin

3.1 Journal

At the end of December 2016 we bade farewell to Dawn van der Walt, who retired after 20 years of service to the Institute and particularly the Publications Committee. We welcome Naomi Wernecke to the team as communications coordinator.

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

Year	Mining	Metallurgy	Other	Total
2015	75	49	4	128
2016	59	76	2	137
2017	87	41	7	135

Of the 135 papers published in 2016/17, 59 were from outside South Africa. The rejection rate of papers received was 43%. There were five themed editions of the *Journal* during the year.

Advertising revenue for the year totalled R 1 194 905, which was some 23 % below last year's figure.

The e-mailing of an electronic copy of the *Journal* to members was well established by year-end, although it was necessary to mail the *Journal* in two parts due to the maximum e-mail attachment file size of 4 MB. The survey questionnaire to members was issued later than planned, and 17% of the membership responded to the questionnaire. The acceptance of an electronic copy of the *Journal* has allowed for a reduction of the monthly print run from 2700 to 2350, and it is proposed to gradually reduce the print run to 1500 copies during the course of the next financial year.

The Special Publication 'Theoretical Rock Mechanics for Professional Practice' by Matthew Handley was completed, published, and made available for sale in May 2017. This was a notable achievement by Matthew after some 5 years of work. Five potential books covering a range of topics are in the early stages of production.

The award for the Most Supportive Advertiser 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 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 2016/17, and for the second year running, is Elbroc Mining Products.

As mentioned in last year's report, we have continued the search for a more effective way of managing the production of the *Journal* within the prevailing financial constraints.

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*.

The publications team of Kelly Mathee, Zulaikha Malgas, and 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

- Co-operates with other member societies of AS&TS and with associations and interest groups that have close ties with operating mines and metallurgical plants by holding joint technical meetings and collaborating in the field of publication.

4.1 SAIMM Branches

4.1.1 Botswana

L.E. Dimbunu, Chairperson

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

4.1.2 DRC Branch

S. Maleba, Chairperson

D. Sambwa, Vice-Chairperson

G. Kalama, Vice-Chairperson

D. Tshibanda, Secretary

P. Kalala

C. Byakoukou

R. Kazembe

The DRC Branch was invited to participate in the DRC Mining Week Conference held from 23 to 24 of June 2017 at the Grand Karavia Hotel in Lubumbashi. Mr Susa Maleba, the Chairman of the Branch was a member of the panel on the Commodities focus session.

The new Branch Committee was elected on 25 July 2017.

4.1.3 Johannesburg Branch

J.A. Luckmann, Chairperson

H. Jantzen, Vice Chairperson

D. Jensen, Secretary

B.P. Abilliera

S. Nhleko

I. Ashmole

D. Porter

J. Clarke

D. Powell

G. Dellas

G. Ralph

A. Dougall

J. Ruddy

C. Heili

G. Stripp

R. Heins

M. Tlala

M. Mostert

Introduction

The Johannesburg Branch's main activity is to organize technical presentations on a monthly basis from July to November, breaking for December, and recommencing January to June each year. These technical presentations are generally held on the third Thursday of each month at the premises of Worley Parsons at Melrose Arch. During the period under review the Branch Committee was successful in securing ten technical presentations, one students' debate in August 2016, and one lecture on 2 May 2017 at Wits, co-hosted with the Western Cape Branch.

Student attendance has decreased due to the #Feesmustfall protest and education activities. The students' involvement is considered by the Branch Committee as important, as through the Johannesburg Branch events many of these students are signed up as student members of the Institute, with a good conversion ratio to Associate Membership after graduation.

Student attendance has continued to put pressure on the costs associated with the technical presentations and associated networking events, while the poor economic situation has put adversely affected the sponsorship received.

Referees of papers submitted during 2017

Abbasy, Farzaan	Garbers-Craig, Andrie	McGeorge, Norman	Sellers, Ewan
Abdallatif, Masoud	Gardner, Les	Mcmaster, Leigh	Simonsen, Henry
Ali, Montaz	Gaylard, Jeremy	Meyer, Cor	Slaker, Brent
Archer, Sidney	Gaylard, Peter	Milne, Doug	Smith, Craig
Austin, Mark	Genc, Bekir	Ming, David	Smith, Gordon
Badenhorst, Heinrich	Gibson, Jon	Minney, Dave	Smith, Janet
Bals, Alex	Goldbach, Olaf	Minnitt, Richard	Sole, Kathy
Barcza, Nic	Grobler, Hendrik	Mitri, Hani	Solomon, Michael
Basarir, Hakan	Guest, Alan	Morris, David	Spangenberg, Conne
Basson, Frans	Gunther, Peter	Moster, Maurice	Spottiswoode, Steve
Beck, Richard	Hamann, Ralph	Moys, Michael	Stacey, Thomas
Behera, Sunil	Handley, Matthew	Muaka, Joseph	Steenkamp, Joalet
Bekker, Ernst	Harris, Esme	Musingwini, Cuthbert	Stewart, Paul
Beukes, Paul	Haupt, Grietjie	Mutemeri, Nellie	Strauss, Jacobus
Buckley, Jon	Hay, Kevin	Naik, Sandip	Symons, Mike
Bullock, stephen	Heugh, David	Navarra, Alessandro	Tartibu, Lagouge
Canbulat, Ismet	Horsch, Hanna	Ndlovu, Sehliselo	Taylor, Douglas
Chamberlain, Vaughan	Hundermark, Rodney	Neale, John	Taylor, John-Guy
Chatterjee, Snehamoy	Hykawy, Jon	Nel, Andre	Tholana, Tinashe
Chileshe, Peter	James, John	Nel, Jacques	Tlala, Mpho
Chown, Lesley	Jang, Hyongdoo	Neomagus, Hein	Thuczek, Ron
Claassens, Thys	Jones, Rodney	Newcombe, Bianca	Tose, Simon
Clark, Isobel	Joughin, William	Nhlengetwa, Kgothatso	Tudor David
Clay, Andy	Kamper, Maarten	Njowa, Godknows	Uludag, Erhan
Coni, Nigel	Kapageridis, Ioannis	Oconnor, Cyril	Uludag, Sezer
Cook, Alan	Kennedy, Mark	Ololade, Olusolao	Van der Merwe, Nielen
Cornish, Lesley	Keys, Oliver	Ortiz, Julian	Van der Vyver, Mientjie
Cowan, John	King, Matt	Peattie, Richard	Van Drunick, Wayne
Cowen, Dennis	Knights, Peter	Phillips, Huw	Van Graan, Jaco
Croll, Rob	Komljenovic, Dragan	Pierce, Matt	Van Niekerk, Dirk
Cromarty, Robert	Kostecki, Todd	Pistorius, Chris	Van Niekerk, Jan
Cunningham, Claude	Krige, Geoff	Pistorius, Pieter	Van Nieuwenhoven, Ruud
Curr, Tom	Kruger, Buks	Potgieter, Herman	Van Rooy, Louis
De Graaf, Phil	Kruger, Leon	Power, David	Van Staden, Petrus
De Jager, Kobus	Kumalinga, Nicholas	Priest, Graham	Van Zyl, Andre
De Korte, Johan	Lagendijk, Herman	Prins, Chris	Van Zyl, P.G.
Den Hoed, Paul	Lane, Gary	Prout, Barry	Velasquez, Raul
Dixon, Roger	Le roux, Marco	Ramlall, Nigel	Venter, Julian
Dohm, Christina	Leeuw, Paseka	Ravary, Benjamin	Vervoort, Andre
Dougherty, Heather	Limpitlaw, Daniel	Rice, Colin	Vogt, Declan
Du Plessis, Michael	Lloyd, Philip	Roberts, Dave	Watson, Bryan
Dungan, Robert	Lomberg, Ken	Roberts, Howard	Watson, Ingrid
Dworanowski, Marek	Loveday, Brian	Rorke, Tony	Wedding, Chad
Erasmus, Wynand	Luckmann, John	Rose, David	White, David
Erwee, Markus	Madani, Nasser	Ross, Victor	Whittle, Jeff
Esterhuizen, Essie	Magnus, Sarah	Rudaki, Ali	Whyte, Rod
Fagan-Endres, Marijke	Malan, Francois	Rupprecht, Steven	Woodhall, Mike
Falcon, Rosemary	Marais, Lochner	Sabanov, Sergei	Yilmaz, Halil
Farmer, Iain	Marshall, Tania	Sackett, Steve	Zvarivadza, Tawanda
Frangakis, Terrance	Matinde, Elias	Schmitz, Peter	
Fraser, Peter	Mbanza, Sichone	Selby, John	

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The Johannesburg Branch Committee has therefore endeavoured to continue to control the costs, with the most significant measure being the change in approach to sponsorship by creating a new sponsorship committee lead by the Branch Secretary Danie Jensen.

Events

The Johannesburg Branch Committee has managed to commit sixteen sponsors to support branch events in the 2016–2017 session, and ensured that the technical presentations held from January 2017 until June 2017 were at financial breakeven, the sponsorships for which have been received and accounted for.

We kicked off the SAIMM Johannesburg Branch sessions 2016–2017 on 14 of July 2016 with a technical presentation entitled 'What kind of people will work in a future mine?' presented by Dr Declan Vogt, Director of Mechanised Mining at Wits, and partly sponsored by the University of the Witwatersrand.

This was followed on 18 August 2016 by the Johannesburg Branch annual Student Debate. This year's topic was 'Five Southern African countries as preferred mining investment destinations', which provided for a lively and interesting debate – the students were well prepared.

On 15 September 2016 the Branch held a technical presentation on geomechanical modelling, presented by Alexey Shalashinsky from DMT Group in Germany and fully sponsored by DMT South Africa.

The technical presentation on 20 October 2016 was entitled 'A story of rare earth', presented by Derick R. de Wit from Venmyn Deloitte South Africa and fully sponsored by Venmyn Deloitte SA.

The last technical presentation in 2016, held on 18 November 2016, was entitled 'Against the odds, the remarkable story of champagne'. John Luckmann was the presenter, and his talk was followed by the Annual Champagne Evening, with a French champagne and Swiss cheese tasting privately sponsored by John Luckmann, Hein Jantzen, and Danie Jensen.

We began the SAIMM Johannesburg Branch New Year on 19 January 2017 with a technical presentation entitled 'Ghaghoo decline tunnelling through sand' by Lawrence Schultz, Operational Director of Redpath Mining. The event was partly sponsored by Redpath Mining South Africa.

This was followed on 16 February by 'The future of diamond processing', presented by Jeremy Clarke, MD of Paradigm Project Management (PPM), who partly sponsored the event.

On 16 March 2017 the Johannesburg Branch held a technical presentation entitled 'Project overview and update', presented by Dr Laurence Stefan from Plateau Uranium of Canada and fully by Plateau.

The April technical presentation was on 'Case studies in mineral processing/gravity concentration', presented by Gerhard Bezuidenhout from Gekko South Africa and fully sponsored by Gekko Systems Australia.

On 2 May 2017 the Delprat Distinguish Lecture, entitled 'Distinguished past and uncertain future' was presented at Wits by Professor Tim Napier-Munn from the University of Brisbane. The event was co-hosted by Western Cape Branch and Johannesburg Branch with the collaboration of the AusIMM.

A presentation entitled 'Dynamic simulation of material movement and placement utilizing integrated Deswik landform and haulage software' was held at Worley Parsons on 18 May 2017. The speaker was Victor Maronga from Deswik (Pty) Ltd, and the event was fully sponsored by Deswik.

The final presentation for 2016–2017, entitled 'Vanadium crediting the energy storage leap', was held on 22 June, following the Branch AGM. The speaker was Derick R. de Wit, Associate Director of Venmyn Deloitte. The presentation was jointly sponsored by Venmyn Deloitte and the SAIMM Johannesburg Branch.

Finance

The Branch ended the period 1 July 2016 to 30 June 2017 with a surplus of R 42 224.14.

AGM

The SAIMM Johannesburg Branch AGM was held at 16:30 pm on 22 June 2017, shortly after the Branch Committee meeting. John Luckmann confirmed his willingness to serve as Chairperson for the 2017-2018 session, and Hein Jantzen also confirmed his willingness to serve as Branch Vice-Chairperson. Danie Jensen was again elected as Branch Secretary.

We welcome Andrew Kinghorn and Barris van Houten as new members of the Branch Committee, while we say farewell to Ian Ashmole, Bruno Abilliera, and Gary Ralph. We wish Ian, Bruno, and Gary well, and thank them for their invaluable contribution during 2016-2017. Finally, our thanks to the SAIMM Secretariat, to Jacqui E'Silva, Kea Shumba, Prudence Ntumeleng, and Naomi Vernecke for their key role in making sure that all the Branch events were well co-ordinated and ran smoothly.

4.1.4 Namibian Branch

N.M. Namate, Chairperson

B. Sililo

F. Uahengo (YPC Coordinator)

Activity at branch level is low, and commitment from members could be better. This is compounded by the operating situation in the mining industry, with many operations either scaling down or closing, with major implications for the job market.

Membership Recruitment

The recruitment drive has slowed due to the economic situation in the industry. Two major mines have ceased operations – one has outsourced to a contractor while the other has suspended mining and is only working stockpiles. However, the Namibian Chamber of Mines reports that the situation is expected to improve. The recruitment drive is still ongoing, with both professionals and students being encouraged to apply for membership. Without statistical information, it is hard to state the impact on recruitment during the year. It is of great concern that most of the graduates from the two universities are still not employed. Some have resorted to teaching, while others are with construction companies.

Forthcoming Events

Planning for the uranium conference in September is at an advanced stage. Most of the Branch's activities are geared towards this event.

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Two members of the Committee attended the third Young Professionals Conference, which took place at the Innovation Hub in Pretoria in March 2017. One of these members is now a Council Member for the YPC. The participants presented two papers; the first being an extended abstract on the topic *Nitrate removal from plant solution* and the second entitled *Effect of various parameters on uranium leach kinetics*.

General

The SAIMM was represented at the Mine Expo as usual through the Namibia University of Science and Technology (NUST). This event, which took place on the NUST campus from 26–27 April 2017, featured various public and student lectures by industry professionals.

4.1.5 Northern Cape

J. Leader, Chairperson

B. Basson, Vice-Chairperson

F. Nieuwenhuys, Secretary

I. Lute, Treasurer

N. Buthelezi

B. Sebole

J. Mans

Strategy

The strategy is largely unchanged, with the primary focus on recruiting new members and getting a pipeline of presentations for use at local technical events.

Membership Recruitment

Bulk membership for the larger companies was an objective which proceeded as far as the payment stage. This initiative was unacceptable to the Kumba Iron Ore finance department, which viewed Committee members' activities on the mine as representing a conflict of interest.

Nonku Buthelezi and Fabian Nieuwenhuys have been driving membership within Assmang.

Nonku Buthelezi has focused on the young professionals, specifically women. Kumba and Assmang have agreed to support her efforts. The aim is to expand the idea to all operations in the Kimberley to Black Rock areas.

A presentation was given to the Executive Committee of the Northern Cape Mine Managers' Association at Finsch Mine, Lime Acres highlighting the benefits of membership of SAIMM and the synergies between the two organizations. Their support was given. Several application forms were requested and provided.

Additional members have been recruited at both Kumba and Assmang. South32 and the new manganese operators are still a challenge.

Activities

The Lifestyle Coach presented her paper at a NCMMA quarterly meeting on behalf of the Northern Cape Branch. NCMMA has been approached for assistance in compiling a list of Professionals in Training who are potential members and participants in the Young Professional activities. Assmang would like to expand this initiative to their other operations.

Forthcoming Branch events

Visits were planned to both Finsch and Kolomela. Finsch cancelled after 4 months of effort. Kolomela agreed at top level but has run into difficulty at implementation.

Tshipi Borwa has agreed to take over the visit from Kolomela on 21 July 2017.

The following presentations are planned and have been confirmed.

Proposed date	Title	Presenter	Sponsor
4 August 2017	Current	IMPLEX	Tshipi é Ntle
4 August 2017	Autonomous drilling	Atlas Copco	Tshipi é Ntle
4 August 2017	Mine planning	Ukwazi	Tshipi é Ntle

Important events in and around the region

A Mining Expo has been committed for 22–24 June at various venues in the province. The organizers are willing to give the SAIMM a stand in exchange for Branch support at their next event, probably in September. Promotional material and support will be required from the SAIMM Secretariat.

Financial

The costs of the planned events will be fully covered but will not generate income at this stage. The main focus is on creating awareness of the SAIMM and encouraging membership.

Annual General Meeting

The AGM is being organized for 4 August 2017.

Neither the current Chairman or Vice-Chairman will be available for re-election.

General

Despite the increase in commodity prices, individuals are still under work commitment pressure and getting time off to attend events is going to remain a challenge.

Company mentorship programmes do not include membership of professional societies and participation in technical events. This is especially apparent at operational level.

4.1.6 Pretoria Branch

P. Bredell, Chairperson

W.W. de Graaf

N. Naude

D. Powell

W. Snyman

The activities of the Branch could not continue with the format of previous years, mainly due to student protests which, with the associated security risks, made it impossible to arrange talks on campus for our students. With this in mind it was decided to change strategy as follows.

- Improve our cooperation with the Johannesburg Branch, since most Pretoria Branch members could easily attend Johannesburg events and *vice versa*, apart from the students. Johannesburg Branch also indicated that finding funding for their events had proven difficult, and it was thought that Pretoria Branch could perhaps assist in this regard
- Start video recording of talks arranged by Johannesburg Branch, so that these recordings could be made available to other branch members via video conferencing or replay. In this way, we would still be able to make the talks available to students at the University of Pretoria, or even other universities.

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The Pretoria Branch Chair was invited to a Johannesburg Branch event in November 2016. This was a very successful event and very well attended, and inspired the idea of combining one of the more successful regular events arranged by MASUP (Mining Alumni Society University of Pretoria) with a SAIMM event.

A craft beer tasting was arranged for 30 March 2017 and SAIMM members were invited. This was also very successful and should be repeated on a regular basis. MASUP has a get-together at the Irene Country Club every last Thursday of the month. The current president of MASUP is Ben Bruwer from VBKOM (ben@vbkom.co.za).

The talk recordings have not been implemented yet, and means to assist Johannesburg Branch with this should be looked into.

Unfortunately Pierre Bredell had to resign as Chair in June, as he has emigrated to Canada, and a new chairperson has not been elected yet. M. Powell has volunteered to act as Chair in the interim.

Finally, thanks to the Committee, the SAIMM Secretariat, and lastly a special word of thanks to Zelmia Botha who suggested the craft beer tasting event and assisted in making it possible.

4.1.7 Western Cape Branch

C. Sweet, Chairperson

M. Solomon, Vice-Chairperson

L. Auret, Treasurer

R.D. Beck

L. Bbosa

J.A. Cruise

D. Deglon

C. Dorfling

A. Mainza

A. Nesbitt

C. O'Connor

T. Ojumu

J. Petersen

J. Sweet

Without any doubt our biggest news is that the Branch has secured the rights to host the 2020 International Minerals Processing Congress (IMPC) in Cape Town! This is the flagship of minerals processing conferences and was last held on the continent in 2003 (also in Cape Town). We are working towards significant participation of the range of bodies within the SAIMM, and in particular the Country Branches from the rest of Southern Africa. Professor Dave Deglon is the Chair of the Conference Committee and Professors Stephen Simukanga (from Zambia) and Marek Dworzanowski (SAIMM Central and a Member of Council) have accepted the posts of co-Chairs. The Conference will be hosted in conjunction with the SAIMM Conferencing Department.

Past Events

Hydrometallurgy 2016

The Branch co-hosted the Hydrometallurgy 2016 conference held at the Mount Nelson in Cape Town in August 2016. The conference was well attended and supported, and the high level of technical quality was well received.

Student Evening 2016

The Branch aims to hold at least one large student event every year. It is a great way to build bridges between the three largest local tertiary institutions, as well as a great opportunity to recruit student members. The Branch's 2016 Student Evening was held at the Sports Science Institute in Newlands on 29

September, with more than 60 students attending from the three Western Cape institutions.

Professors Dee Bradshaw and Mike Solomon opened the discussion by providing some background and context to the sustainability development goals (SDGs). This was followed by a workshop, where it was agreed that the goals are aspirational and ambitious, but immensely useful in focusing strategy that allows the economic revenue from mining to create sustainable communities and thereby assist in reducing inequality.

AusIMM Delprat Distinguished Lecture – Professor Tim Napier-Munn

A further noteworthy event was that the Western Cape Branch, together with the Johannesburg Branch, hosted the AusIMM Delprat Distinguished Lecture at the University of the Witwatersrand (Wits) on 2 May 2017. The lecture, titled 'Innovation in Mineral Processing: Distinguished Past and Uncertain Future' was given by the acclaimed, and indeed distinguished, Professor Tim Napier-Munn. The event was attended by an audience of 75, which included a good proportion of Wits students. The Committee is exploring further such events, and the idea of branches working together holds merit for the broader SAIMM on a number of levels.

A Branch Undergoing Change

We are changing the format of the annual Cape Town conference, traditionally held in August. The conference will retain its important functions of providing a podium for postgraduate research, encouraging industrial comment to focus research, and—most importantly—to showcase talent to potential employers in industry. The new conference will be called the Western Cape Minerals Research Showcase, and is intended to alternate with larger, themed conferences. The future pattern would therefore be that a themed conference (theme to be announced) would be held in 2018, followed in 2019 by the second Western Cape Minerals Research Showcase. The IMPC will be the following 'big' conference in 2020.

At the time of writing, the organization of the Western Cape Minerals Research Showcase 2017 is well underway. The conference is being arranged by a committee comprising largely students from Stellenbosch University, Cape Province University of Technology, and the University of Cape Town. The conference has the tagline 'Resourcing the Future' and will be held at Philippi Village, which is an eclectic, and vibrant venue—in the heart of a gritty setting that focuses social context.

We plan to hold our Annual General Meeting, where our new Committee will be elected, on 9 August 2017.

In closing, I would like to thank the Branch Committee and those that have contributed to our Branch for your work, dedication, and most of all—the fun that you bring to the table.

4.1.8 Zambian Branch

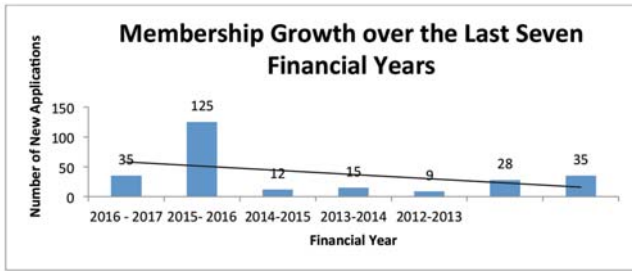
D. Muma, Chairperson

C.M. Walubita, Vice-Chairperson

W. Munalula, Treasurer

C. Ngulube H. Zimba

Membership growth has been quite encouraging in the recent past, particularly as regards the number of membership applications from experienced and working individuals, including students.



Year	Members	Fellows	Associates	Students	Company Affiliates	Total
2016-2017	11	0	2	22	0	35
2015-2016	4	0	4	117	0	125
2014-2015	7	0	4	1	0	12
2013-2014	10	0	5	0	0	15
2012-2013	5	0	4	0	0	9
2011-2012	3	0	25	0	0	28
2010-2011	2	0	33	0	0	35

Activities

The SAIMM Zambian Branch held a series of successful events in the past year.

A collaborative technical services and research venture for the mining industry was formed with the Zambian Higher Education Authority (HEA) on 3 May 2017. The Zambian Branch is fully committed to the Zambian HEA initiative as its members stand to benefit from the reciprocal arrangements that exist among the member institutions. For example, any SAIMM member in good professional standing who wants to engage in further studies or research at any Zambian institution of higher education can be given appropriate preference and technical support. This allows the member, among other things, to register for studies, conferences, seminars, and workshops conducted by the host society at the host society's member rate, and to have access to the host society's facilities.

The Branch participated in the CBM-TEC 2017 (Copperbelt Mining Trade Expo and Conference) and CAMINEX 2017 (Copperbelt Agricultural, Mining and Industrial Expo), which took place from 6 to 8 June 2017 at the Kitwe Showgrounds. This was the second time that Branch participated in this great regional event; taking advantage of the major opportunities that SAIMM members will gain based on the mutual agreement between the Branch and Specialised Exhibitions Montgomery, (SEM) in conjunction with Electra Mining of South Africa.

The collaboration was successfully negotiated and agreed with respect to the following deliverables:

SEM will:

- ▶ Carry the SAIMM logo on all collateral moving forward as an endorsing Association.
- ▶ Add the SAIMM logo to the CBM-TEC website
- ▶ Provide any collateral needed to market the show
- ▶ Provide a 9 m² outdoor stand (floor space only) to the SAIMM at CBM-TEC free of charge.

The SAIMM will:

- ▶ Endorse CBM-TEC
- ▶ Assist in marketing CBM-TEC to its members in Zambia via functions, mailers, website etc.
- ▶ Add the CBM-TEC logo to the SAIMM website.

The number of delegates who visited the SAIMM Zambian stand was quite impressive. However, the numbers of membership applicants were relatively small compared to 2016. This was could be attributed mainly to a 50% reduction in the actual duration (hours) of the exhibition in 2017.

Forthcoming activities

The following activities /events are planned for the remainder of 2017.

- 28 July 2017 Kitwe, Branch AGM and convention
- 6 October 2017 Chambishi Copper Smelter, Technical visit
- To be advised Chingola, Technical/ professional event.

4.1.9 Zimbabwean Branch

S. Matutu, Chairperson
 G. Mufumatelwa, Secretary
 C. Sadomba, Treasurer
 G. Dzinomwa
 M. Hungwe
 W. Kutekwatekwa
 G. Shepherd

N. Stephen
 C. Tawha
 O. Zvarevashe

Membership

The Zimbabwe Branch membership has largely remained static since the beginning of the year. The absence of the Regional Development Manager, who used to assist in the recruitment of new members, particularly students in tertiary institutions, has hampered the growth of membership in Zimbabwe. The closure of mining companies due to by the international commodity price downturn and the economic challenges in the country is also affecting membership. The Branch, through its Head for Youth development initiative, will visit tertiary institutions in the coming year.

Networking events

The Branch hosted a conference (Innovation in Mining) in Bulawayo at the beginning of the year in July 2016, at which local and regional speakers presented papers on various topics. The AGM was held at the end of the conference, during which the new office bearers for the Committee were elected.

Branch events

Two events, at the RioZimbabwe Cam and Motor gold operation and Metallon's new dump retreatment operation at Mazoe Mine, had been planned for the third and fourth quarters respectively. Unfortunately, these events could not proceed as the operations subsequently withdrew their invitations, citing delay in the commissioning of the two projects. It is planned to hold these events in the coming new financial year.

The challenges facing operations in Zimbabwe are hampering their capacity to host SAIMM branch events. However, more effort will be directed at organizing branch events in the new year.

International Conference on Innovation in Mining

In July 2017 the Branch hosted a two-day international conference on innovation in mining. The conference, which

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was held at the Zimbabwe School of Mines, attracted various speakers and attendees from the mining industry. The delegates welcomed the quality of the papers and presentations, and SAIMM members in Zimbabwe mooted that such events be held annually. There was a lot of interaction between delegates at the networking dinner, which was arranged on the first day.

AGM

The 2017 AGM has been delayed until August to allow for the preparation and successful hosting of the international conference scheduled for the first week of August 2017.

Forthcoming events

The following events are planned for 2017/2018:

- ▶ October 2017: visit to Cam and Motor gold operation in Kadoma
- ▶ November 2017: visit to Mazoe dump retreatment gold recovery plant
- ▶ March 2018: visit to Hwange Colliery
- ▶ May 2017: visit to Afrochine ferrochrome smelter.

Financial

The Branch's account, under the Chamber of Mines of Zimbabwe, has a closing balance of an equivalent US\$5000 at the end of June 2017. Efforts are underway to open a branch account with a local international bank, which is expected to be in place by end September 2017. The Branch continues to make use of a part-time administrator to assist in the organization and coordination of international conferences. The Branch has requested the SAIMM in South Africa to assist in the following:

- ▶ Payment of the salary for the part-time administrator
- ▶ Procurement of ICT facilities to enable video conferencing and communication with the main branch.

4.1.10 Zululand Branch

C. Mienie, Chairperson

E. Clare

W. Jordaan

R. Kutama

P. Strydom

Hugo Pienaar resigned from the Committee, owing to his being transferred to another operation within his company.

News / Conferences

The mining industry remains under severe pressure due to low product demand and low commodity prices. Most of the mines in the area are operating at 50% of normal capacity. Cost-cutting programmes have been widely implemented. Tata Steel SA (Pty) Ltd was liquidated. A new company, Richards Bay Alloys (Pty) Ltd bought the assets as a running concern and started up one furnace, followed by the second furnace during the first quarter 2017.

The Heavy Minerals International Conference (HMC 2016) was held from 16-18 August at Sun City, North-West Province. The Zululand Branch was part of the organizing team for this event, which was a great success.

The challenge for the Branch is to find companies willing to give technical presentations in Richards Bay. Sponsors are hard to find.

We do not have a local university as a base. The closest university is the University of KwaZulu-Natal, Durban. There is no metallurgical faculty in the province. Metallurgical

engineering positions locally are filled mostly by chemical engineering graduates from Durban.

Branch activities

Branch committee meetings

13 July 2016, 8 March 2017, 22 June 2017.

Technical meetings/events

22 June 2017, Recent refractory developments, by Dennis Brazier, Managing Director of Refractory & Metallurgical Solutions (Pty) Ltd, Fifteen people attended.

Activities planned for the year ahead:

Technical presentation for the third quarter – to be confirmed

- ▶ Plant visit—BHP Billiton Hillside (South32 aluminium smelter)
- ▶ Other—financial / investments
- ▶ Social—end of year wine or whiskey tasting.

5. Engineering Council of South Africa (ECSA)

Professional Advisory Committees

PAC Mining

M.H. Rogers, Chairperson

A. Boadua

M.J. Motomogolo

C. Musingwini

J.C. Ngoma

R.C.D. Phillis

V.O. Seboni

G.L. Smith

V.P. Tobias

D.J. van Niekerk

S. Uludag

R.C.W. Webber-Youngman

L. Zindi

S. Zitha

PAC Metallurgy

M. Dworzanowski, Chairperson

K.C. Mistry, Vice-Chairperson

I.J. Geldenhuys

R.T. Jones

S.M. Naik

J. Phiri

K. Poonan

M.D. Seke

PAC Mining

The Committee continued to review and recommend applicants for registration as Professional Engineers. As in the past, the SAIMM arranged peer reviews for candidate Professional Mining Engineers, which assistance is appreciated. These activities ceased after October 2016 when the new Council was appointed.

It is pleasing to note the increasing number of women applying for registration. It is expected that this trend will continue as the number of women graduating increases.

The legitimacy of the appointment of the new ECSA Council by the Minister of Public Works is now the subject of a legal challenge by 14 voluntary associations representing the various engineering disciplines.

In the interim, ECSA has replaced the existing extensive peer review and registration processes and committees with a new process, which has yet to start functioning.

To all intents and purposes the PAC Mining, along with the other PACs, no longer exists.

It is not clear what role the voluntary associations will play in the new registration process and what the future relationship with ECSA will be.

We await the outcome of the legal challenge for clarity.

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PAC Metallurgy

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

During 2016/2017 the PAC Metallurgical Engineering again considered applicants for registration as Professional Engineers by means of paper evaluations and interviews, in which volunteers from the SAIMM participated. No new members were appointed to the Committee.

The requirement for Continuing Professional Development (CPD) of Professional Engineers for all registered persons opens up opportunities for the SAIMM to support the profession by the offering of seminars and conferences. This contributes to the CPD category 1, developmental activities. The SAIMM also supports the CPD process in category 3, individual activities, in which membership of the SAIMM, presenting papers at SAIMM conferences, and participating in SAIMM committees all contribute to CPD credits. The Committee wishes to record its thanks to the organizing committees and the Secretariat of the SAIMM for the issuing of CPD certificates.

The accreditation of conferences is also carried out by members of the PAC. It is critical that SAIMM conferences receive ECSA accreditation so that CPD points can be awarded to attendees who are registered Professional Engineers. The accreditation process involves confirming that the content of the conference papers is engineering-based and that the presenters are qualified to present their papers.

6. State Liaison

Portfolio Holder: R.T. Jones

6.1 Outcomes-based Education and Training (OBET)

Portfolio Holder: D.J. van Niekerk

Regulation of the Engineering Profession

National Focus

Compulsory Registration with the Engineering Council of SA (ECSA)

- ▶ The registration of persons currently performing Identified Engineering Work (IEW) is currently voluntary
- ▶ The promulgation and implementation of the proposed Identification of Engineering Work (IDoEW) Regulations will make registration with the Engineering Council of SA (ECSA) compulsory for Engineering Practitioners who perform IEW and take responsibility for such work
- ▶ The Competition Commission (CC), with the support of ECSA, has consulted all the interested and affected parties who submitted comments and who have raised concerns regarding the proposed IDoEW Regulations (CBE Board Notice)
- ▶ The CC has rejected the Council for the Built Environment (CBE) and ECSA's Exemption Application to publish the proposed IDoEW Regulations. The CC also rejected the exemption applications of all five of the other Professional Councils resorting under the CBE

- ▶ The CBE, in collaboration with the said six Professional Councils, is busy preparing appropriate appeals against the said ruling of the CC.

New registration system (NRS)

- ▶ The NRS departs from the legacy registration system in that ECSA has decided to adopt an Outcomes-based Education and Training (OBET)-compliant Competency Standards and Assessment Model which is internationally benchmarked and recognized
- ▶ Applicants will continue to submit their applications to register with ECSA in paper-based format until the online NRS becomes operational. An appropriate phasing-out period of 12 months will be observed for paper-based applications.

Focus for the SA Mining and Minerals Sector

IEW in the SA Mining and Minerals Sector (SAM&MS)

- ▶ Engineering Practitioners in the SAM&MS who perform IEW and take responsibility for such work will need to become registered in the appropriate category with ECSA
- ▶ The engineering practitioners in the SAM&MS who will be most affected by the proposed IDoEW Regulations include Engineers, Engineering Technologists, Certificated Engineers, and Engineering Technicians in the relevant engineering disciplines and/or vocational practitioners as well as mining-technical-related occupations and professions, inclusive of Rock Mechanics/Engineering and Mine Environmental Control practitioners who perform IEW and who take responsibility for such engineering work
- ▶ The level descriptors in the proposed IDoEW Regulations make an unambiguous distinction between the levels of engineering practice *vis-a-vis* complex (Pr. Eng.), 'broadly-defined' (Pr. Eng. Tech. and Pr. Cert. Eng.) and 'well-defined'
- ▶ Numerous discussions held between the Mine Health and Safety Council (MHSC), the Mining Regulations Advisory Committee (MRAC)'s Task Team dealing with Mandatory Licensing in the SAM&MS, and ECSA, have led to a joint agreement to investigate the possibility of instituting some form of exemption for Competent Persons who perform and take responsibility for IEW
- ▶ ECSA has also consulted with PLATO, SACNASP/GSSA, and the SAIMM and its associated Recognized Voluntary Associations (VAs) in respect of overlaps between the Identified Work for the different professions/occupations in the SAM&MS. The agreed way forward in regard to the said overlaps that was proposed to the CC is the incorporation of an appropriate exemption clause to the proposed IDoEW Regulations as well as the establishment of joint IDoW committees that will deal with specific overlaps between registration categories, persons registered with other statutory bodies, and relevant practice areas.

Cheadle, Thompson and Haysom (CTH) Report

- ▶ The CTH Report dealing with certificates of competency (CoCs) in the SAM&MS was approved by a Stakeholder Consultative Workshop arranged by the Mining Qualifications Authority (MQA) held on 20 July 2012

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- ▶ The work relating to the implementation of the recommendations of the said Report was subsequently temporarily suspended until the completion of the Classification of Mines Project. To date the work relating to the said issue has not commenced
- ▶ The said CTH Report was referred for implementation to the Mining Regulations Advisory Committee (MRAC). To date the implementation of the recommendations of the said report has not commenced.

Statutory Licensing in the SAM&MS

- ▶ The Department of Mineral Resources (DMR) undertook to expedite the implementation of the report *Reverting back to the Blasting Certificate* which was approved by the Board of the MQA. To date, the work relating to this crucial issue has not recommenced
- ▶ The Inspectorate: Mineral Resources holds the view/position that Certificates of Competency (CoCs) issued by the DMR are not qualifications and may therefore be withdrawn or suspended. Legal counsel considers the use of CoCs for the purposes of a Licence to Practice (LtP) as unconstitutional
- ▶ The DMR undertook to publish a draft list of occupations in the SAM&MS that would be subject to statutory licensing, e.g. the 'Big Five' appointments. The work relating to this crucial issue has not been completed.

Poor Examination Results : Government Certificates of Competency (GCCs)

- ▶ The draft, final report *Poor Examination Results of Government Certificates of Competency (GCCs)* compiled by a University of Johannesburg (UJ) team, was approved at a Stakeholder Industry Workshop held on 22 August 2014
- ▶ The MQA Board approved the said report and forwarded it for consideration and implementation to the MHSC. To date the work relating to this crucial issue has not commenced.

The New Model for CEs

- ▶ An ECSA Standards Generation Group (SGG) developed a New Model for Certificated Engineers (CEs) which proposes that the GCCs (seven in total), for Managers and Engineers in South Africa be replaced by registration with ECSA in the appropriate category of Pr. Cert. Eng.
- ▶ ECSA has agreed to establish a high-level Joint Steering Committee composed of representatives from the DMR, Department of Labour (DOL), Department of Transport, Department of Public Works (DPW), and ECSA to address the inappropriate duplication of requirements for CEs found in the different sets of legislation. Progress with this initiative is, regrettably, unsatisfactory.

Implementation of an OBET-compliant dispensation in the SAM&MS

The finalization/implementation of numerous Quality Council for Trades and Occupations (QCTO)-compliant qualifications for the SAM&MS has been derailed/delayed/suspended as a result of the re-introduction of the Blasting Certificate issued by the DMR.

A Future Model for Competency Determination and Regulation in the SAM&MS

The *Futures Model for Competency Determination and Regulation in the SAM&MS* for practitioners in certain/selected occupations and professions in the SAM&MS proposes:

- ▶ That the current CoC issued by both the Chamber of Mines of SA (CoMSA) and the DMR be replaced with OBET-compliant qualifications registered by the relevant Quality Council (QC) at the appropriate level of the 10-level National Qualifications Framework (NQF)

supported, where necessary and appropriate, by an effective, efficient, and user-friendly system of statutory regulation of the role, work and behaviour of selected occupations/professions in the form of a Licence to Practice (LtP), managed by the DMR

OR

That certain/selected CoCs (the 'Big Five') issued by the CoMSA or DMR (e.g. GCCs for Managers, Engineers, and Mine Surveyors) be replaced with registration in the appropriate category with the relevant statutory body, inclusive of ECSA, SACNASP, and SAGC; supported, where necessary and appropriate by an effective, efficient, and user-friendly system of statutory regulation of the role, work and behaviour of selected occupations/professions in the form of a Licence to Practice (LtP), managed by the DMR.

7. International liaison

Portfolio Holder: C. Musingwini

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 United Kingdom, and the United States of America, and interacts with sister institutions in other countries to promote international exchange of scientific and technical information.

7.1 APCOM

C. Dohm, Chairperson

APCOM Symposia

The symposium series on Application of Computers and Operations Research in the Mineral Industry (APCOM) was founded in 1961 by professors and students from Earth Sciences and Mining from four American universities, namely the University of Arizona, University of Arizona Stanford, Pennsylvania State University, and the Colorado School of Mines. The Society of Mining Engineers (SME) also participated in the meeting. In 1969 the Operational Research Society of South Africa (ORSSA) played a significant role in formalizing and recording the proceedings of the meetings. Over time, APCOM has become an international forum for presenting, discussing, and examining state-of-the-art and emerging technologies in the minerals industry. The annual or

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bi-annual international APCOM Symposium series is a major driver of innovation in the minerals industry, facilitating the advancement of computer and operational research methodologies applied in the sector. Thanks to the personal commitments of APCOM's loyal participants and supporters, the APCOM symposia continue to be a thriving success. APCOM is a meeting place for industry thought-leaders who have accepted the challenges of the mining environment and are adapting known or developing modern technology to solve age-old industry problems under different conditions and new challenges.

The International APCOM Council consists of the following members:

Professor Kadri Dagdelen, representing Colorado School of Mines, USA
Dr Ernest Baafi, representing the Australasian Institute of Mining and Metallurgy, Australia
Dr Sukumar Bandopadhyay, representing the Society for Mining, Metallurgy and Exploration, Inc., USA
Dr Sean Dessureault, representing the University of Arizona, USA
Dr Christina Dohm, representing the Southern African Institute of Mining and Metallurgy, South Africa
Dr Robert Hall, representing the Canadian Institute of Mining, Metallurgy and Petroleum, Canada
Dr Antonio Nieto, representing Pennsylvania State University, USA
Professor Julian Ortiz, representing the University of Chile, Chile
Dr Andrej Sublj, representing Institute of Mining, Geotechnology and Environment, Slovenia
Dr Wang Yuehan, representing China University of Technology, Beijing, China.

38th APCOM Symposium

The 38th APCOM is organized by the Colorado School of Mines in Golden, Colorado, and will take place between 9–11 August, 2017. The aims of this Symposium are to further the APCOM goal of contributing to effective decision-making processes throughout the entire minerals industry, by fostering relationships between academic researchers and industry practitioners in the development of the latest computer-based mathematical and operations research techniques in exploration, geological orebody interpretation and modelling, geostatistical resource estimation, mineral reserve estimation, ultimate pit limit analysis, cut-off grade and production scheduling optimization, truck dispatching, equipment maintenance, ventilation, mine valuation, and finance, with the latest information and operating practices coming from the field.

The technical programme of this Symposium represents a balanced mix of traditional areas with the latest information and operating practices coming from the field and includes exploration, geological interpretation and modelling, statistical and exploratory data analysis, geostatistical mineral resource evaluation, classification, reporting, conditional simulation and uncertainty characterisation of the mineral resource, risk and sensitivity assessment of geology and mineral grades, mineral reserve estimation, grade control and production reconciliation,

mine design, production planning, scheduling and optimization, investment analysis, artificial intelligence, simulation, mine automation, rock mechanics, mineral processing, and data management systems, 'big data' analysis, and operational improvement and controls.

7.2 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, Mintek, and the Ferro-Alloys Producers' Association (FAPA) when the first Infacon was held in Johannesburg. Infacon events are overseen by the International Committee on Ferro-Alloys (ICFA), which was formed by the SAIMM, FAPA, and Mintek, with the primary objectives being to promote the holding of the International Ferro-Alloys Congress every three years in appropriate locations around the world, and to ensure that the high technical standard of papers and presentations is maintained. ICFA has representatives from the major ferro-alloy producing and consuming countries. Mintek provides the secretariat for ICFA.

Infacon has previously been held in the following countries and 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.

The next congress, Infacon XV, will be held at the Century City Conference Centre in Cape Town from 25–28 February 2018, and will be co-chaired by Professor Rodney Jones and Professor Hurman Eric. The planning and organization of the conference is well advanced. Further details are available from the conference website at <http://infacon15.com>.

The SAIMM is the custodian of the Infacon Fund, which was established from the surplus generated by the last Infacon that was held in South Africa, Infacon X. In the past year, this fund has received and approved an application for the support of a post-doctoral research project on reductant reactivity for the benefit of the ferro-alloy industry.

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/>

7.3 SAMCODES Standards Committee (SSC)

T.R. Marshall, Chairperson
F. Cawood, Deputy Chairperson

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A. Bals, SAGC
M. Booysen, Law Societies of South Africa
G. Botha, SACNASP
J. Cato, ECSA
K. Davies, SAICA
A. de Bruyn, JSE
C. Dohm, GASA
P. Dekker, SAMOG
R. Dixon, SAIMM/CRIRSCO
S. Foya, Council for Geoscience
G. Grobler, General Council of the Bar
R. Ingram, Reader Panel
N. Kramer, SAOGA
K. Lomberg, SAMREC/CRIRSCO
S. Mabaso, DMR
S. Magnus, SAMESG
M. Matshivha, Council for Geoscience
o. Moumakwa, DMR
P. Rampersadh, SACNASP
K. Redman, SAMVAL
S. Siwela, GSSA
C. Teffo, Chamber of Mines
J. Visser, IMSSA
B. Williamson, IASSA

The SAMCODES Standards Committee (SSC) operates under the auspices of the Geological Society of South Africa (GSSA) and the Southern African Institute of Mining and Metallurgy (SAIMM). Its primary purpose is to develop, maintain, administer, ensure compliance with, and promote the South African Mineral Codes, collectively known as the SAMCODES. SAMCODES comprise three Codes, two Guideline documents, and an affiliated National Standard:

- a. SAMREC: The South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves
- b. SAMVAL: The South African Code for the Reporting of Mineral Asset Valuation
- c. SAMOG: The South African Code for the Reporting of Oil and Gas Resources
- d. Commodity- or subject-specific guidelines:
 - i. *SAMESG Guideline*: The South African Guideline for the Reporting of Environmental, Social and Governance Parameters within the Mining and Oil and Gas Industries
 - ii. *SAMREC Diamond Guidelines*: SAMREC Guideline Document for the Reporting of Diamond Exploration Results, Diamond Resources and Diamond Reserves (and other Gemstones, where Relevant).

SANS 10320 is an affiliated SABS standard – SAMREC requires that reporting of coal be done in accordance with coal-specific clauses in the SAMREC Code as well as the applicable SANS (the current 2004 version is in the process of being updated).

In June 2017, letters were sent to each of these organizations requesting confirmation of membership and their respective representatives, to be ratified at the August meeting of the SSC.

During the period under review:

- ▶ The DMR appointed two representatives to the SSC, both of whom are active participants

- ▶ Mr Ed Swindell resigned as GSSA representative on the SSC – he is leaving to take up other responsibilities within the Society. He has been replaced by Mr Sifiso Siwela
- ▶ Mr Andy Clay has resigned from his position as Chairperson of the SAMOG Committee – he is retiring to concentrate on other interests and has been replaced in this position by Dr Peter Dekker
- ▶ Mr Andy Clay has also resigned as IASSA representative and will be replaced by Mr Bruce Williamson
- ▶ During April 2017, the Financial Services Board (FSB) expressed an interest in becoming a member of the SSC.

The SSC continues to meet quarterly. Key issues and events influencing the business of the SSC during the period under review are as follows.

SAMREC Committee (Chairperson – Mr Ken Lomberg)

The SAMREC Code was launched in May 2016 but became the effective Code only on 1 January 2017. The remainder of the calendar year was spent considering any aspects that still needed to be addressed and looking at training requirements. The new Code was well received. Various editorial issues (grammar, spelling etc.) and aspects (format of Table 1 - portrait or landscape) were addressed in the first half of the period under review. Following the launch of the 2016 Code, numerous informal enquires were fielded.

There are no significant outstanding issues for SAMREC. There are, however, various aspects that still require clarification, but this is generally on an individual basis.

The main focus is on training, with various courses scheduled for 2017:

- ▶ SAMREC Compliance Training – June 2017
- ▶ Advanced training originally scheduled for May 2017 has been postponed to August 2017
- ▶ Prospect of training in Cape Town (Q3 or Q4 2017)
- ▶ Specialized SAMCODES workshops are also scheduled for the DMR (June) and the JSE (September).

Ken Lomberg, representing CRIRSCO, presented two papers at the 35th International Geological Congress (IGC) in August 2016. This also provided an opportunity to discuss the 2016 Code with participants on an informal one-to-one basis.

Various contributions have been made to the SAMCODES website.

SAMVAL Committee (Chairperson – Ms Kelly Redman)

The main thrust for the SAMVAL Committee has been the furtherance of the matter of statutory Competent Valuator (CV) registration.

In addition, some of the parked issues relating to disclosures around prices, and exchange rates are gaining momentum. Discussions are also ongoing with the Mineral Economics sub-division of the SAIMM.

SAMOG Committee (Chairperson – Mr Andy Clay)

This year has been one of constructive engagement between the JSE, the Alberta Securities Exchange (ASC), and the committee members to maintain the SAMOG Code within an international framework. The oil and gas (O&G) industry as a whole continues to operate under difficult global market conditions, and in South Africa the ongoing uncertainty over the regulatory and statutory rules has resulted in delayed

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foreign investments. Conventional as well as unconventional hydrocarbon exploration projects have been delayed. In the unconventional space, two stratigraphic wells were drilled by the Karoo Research Initiative (the Council for Geoscience and academia) to provide important geological and geophysical characteristic information, much of which was presented at the IGC in Cape Town in September 2016.

The ASC, and industry in general (including SAMOG), is reviewing the Petroleum Resources Management System (PRMS) in respect of a number of important matters at hand, which include, but are not restricted to:

- ▶ The definition of a 'Project', which is an anchor term in PRMS but creates confusion between the 'Field' and 'Project' development plan. This is critical for reporting 'value', as the difference between a Field and Project valuation is generally substantial
- ▶ Definition of 'unconventional', which seems to be losing favour as the industry has gained much experience in these deposits over the past twenty years
- ▶ Relationship between the Canadian Oil and Gas Evaluation Handbook (COGEH) and PRMS and the ASC's commitment to merge them.

In addition, SAMOG is progressing with the following subjects.

- ▶ During 2017, the SAMOG Committee embarked on a limited review of the SAMOG Code, in harmony with the ASC's assessment of the PRMS issues noted above
- ▶ Make-up and composition of the SAMOG Committee and Readers Panel and search for interested volunteers – this call has not gone out to the general geological/engineering fraternity, but has been confined to individuals working in the national/international oil and gas industry.

Mr Andy Clay, who has been Chair of the SAMOG Committee since 2010, has retired from this position, effective June 2017. Dr Peter Dekker has taken over as Chair. Peter has more than 25 years' experience with various international hydrocarbon companies assessing oil and gas resources and reserves. Currently, he works as a geophysicist and QRE with PetroSA. He is registered with AAPG, SACNASP, and EAGE.

SAMESG Committee (Chairperson – Mrs Sarah Magnus)

- ▶ The second version of the SAMESG has been put forward for comment to the SAMESG Committee, with expected date for final comment in the second week of June, following which an updated version will be published. This updated version will also be presented at the SAMREC/ SAMVAL conference scheduled for June 2017
- ▶ Two presentations will be made towards the SAMESG contribution to the Mineral Asset Valuation Mining School – a presentation on the environmental laws that contribute to MAV (specifically, the Financial Provisioning Regulations), and a presentation on the different approaches and methodologies for valuing closure and rehabilitation liability
- ▶ Compilation of a briefing document, including guideline table, to assist both the public and Readers Panel with understanding the requirements of applying SAMESG for both the SAMREC and SAMVAL codes
- ▶ SSC website – inclusion of updated segments on notable developments to the SAMESG. Further commentary on

developments in the industry as applicable to the SAMESG will be finalized and submitted in June 2017.

Revision of SSC Terms of Reference

The SSC Terms of Reference document revision was initiated under Professor Fred Cawood in early 2015 and was finally completed in February 2016. It was implemented at the end of March 2016, after approval by the GSSA and SAIMM Councils. The main issues have all been addressed, including the finalization of the JSE Readers Panels' mandates. The Complaints Procedure is being reviewed and streamlined to facilitate onward transmission of complaints to the relevant professional/statutory or RPO body.

IDoEW Board Notice - CBE Notice on the Imminent Regulation of the Engineering Profession

The SSC has been informed that ECSA intends to appeal the ruling of the Competition Commission with respect to both the Identification of Engineering Work (IDoEW) and fee scales. It is anticipated that the SSC will receive a copy of this document in time to comment, before it is submitted. The proposed updated version of the CBE Act is available for public comment.

CRIRSCO

The annual CRIRSCO meeting was held in Jaipur, India from 7–10 November 2017 and was attended by Ken Lomborg and Roger Dixon. The agenda included two days of open sessions followed by two days of business meetings. The open sessions were hosted by the Rajasthan chapter of the Mining Engineers Association of India (MEAI).

Roger Dixon (SAIMM) and Ken Lomborg (GSSA) continue in 2017/2018 as the CRIRSCO representatives (during 2018, a new SAIMM representative will be selected). The 2017 CRIRSCO conference is to be held in Indonesia during 30 October – 3 November.

AWARDS

The 2017 SAMREC/IASSA Squirrel award was presented to Impala Platinum Holdings Limited at the 32nd Annual Awards Ceremony of the Investment Analysts Society of South Africa held at the JSE in Sandton on 21 June 2017. This accolade is given for the Annual Integrated Report (AIR) adjudicated best in terms of compliance with the JSE Listing Requirements and the SAMREC Code.

This year, a second Squirrel Award (the Junior Squirrel Award) was also presented for the best Annual Integrated Report by a company with a market capitalization less than R15 million. The winner of this inaugural trophy was Keaton Energy Holdings Limited.

The adjudication panel has indicated that the general standard of AIRs this year has been high – especially so in the 'Junior' category. This is taken as an indication that the efforts by the SSC and the various subcommittees in education and training are paying off.

Also during 2017, the SSC has made provision for a non-IASSA award (floating trophy and certificate) to be presented to a non-listed company/entity for reporting according to SAMCODES compliance. This award (made on the basis of documents volunteered by the companies themselves) is to be presented at the AGMs of the SAIMM and GSSA. The maiden award is planned for 2018, for reports compiled in 2016/2017.

Parked Items

In November 2016, a report-back session was held at the SSC meeting to discuss a list of issues that had been identified through the JSE Readers Panels and also through the various complaints and/or disciplinary committees. These issues are, effectively, parked items which needed clarification and, in some situations, further input to allow for clarity of thought. After a round of e-mailed comments, a feedback session was held at the May 2017 meeting. The purpose of the session was to provide constructive ideas on how some of these issues might be addressed. It was realized that all solutions would not be found at this first session, but that it would, at least, provide a forum for discussion and thought generation.

Other

The updated SAMCODES website became live on 27 September 2016. All information regarding training, presentations, and Code matters is located on the website, which is updated as and when necessary, but at least once a quarter.

In conclusion, I should like to thank the GSSA, SAIMM, and all of the members of the SAMCODES Standards Committee for their voluntary time and effort. There is so much that the SSC can contribute to the minerals industry and it is their support, hard work, and passion that makes it all possible.

8. Management and Administration

Portfolio Holder: M. Dworzanowski

The Secretariat consists of:

Ms Sam Moolla (Manager)

*Mr Alf Bettoni (Accountant)

Ms Gugu Charlie (Conference Co-ordinator)

**Ms Jacqui E'Silva (Head of Membership and Branch administrator)

Mrs Camielah Jardine (Head of Conferencing)

Ms Tshepi Letsogo (Receptionist and Assistant to the Manager)

Mr Dennis Makondesa (Accountant)

Ms Portia Malatji (Accounts Assistant)

Mrs Zuliakha Malgas (DTP Operator)

Ms Nazli Mamdo (Conference Publications Co-ordinator)

Ms Kelly Matthee (Journal and Subscriptions Co-ordinator)

Ms Prudence Ntumeleng (Membership Assistant))

Mrs Anna Panana (Conference Assistant)

Mrs Apathia Sello (Administration Clerk)

Ms Keabetswe Shumba (Membership and Branch Liaison Administrator)

**Mr Raymond van der Berg (Head of Conferencing)

*Mrs Dawn van der Walt (Head of Publications)

Ms Naomi Wernecke (Communications Co-ordinator)

* Retired during the year

** Resigned during the year

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

8.1 Finance

Portfolio Holder: J.L. Porter

Despite income from all sources being under sustained pressure during the year under review, your Institute has managed the constrained business environment well under the circumstances. Members may recall that the 2015/16 budget

year was a transition year, where your Council approved for ongoing project commitments to be honoured during the year, but at the same time some of these commitments would be managed downward, placed on hold, or discontinued as appropriate. It was possible to fund this strategy due to the historical accumulated investments specifically held for this purpose.

The following highlights reflect the successful interventions in managing the costs of running the Institute:

- Income declined 7.9% year-on-year
- Total costs decreased by 26.6% year-on-year
- Total reserves steady at 0.05% year-on-year
- Total surplus improved by 90.4% year-on-year.

A further breakdown is shown in the table below. The operating surplus remains in negative territory; this was again funded by accumulated investments without depleting the investment significantly. In the 2016 financial year we drew R5.75 million from our accumulated funds. In 2017 this was reduced to a drawdown of R2.00 million – a significant improvement in real terms. We continue to have excellent service from AFC, our investment management company.

Overall, income from membership has grown by 9.2% in rand terms, made up of an annual 6% increase in fees and an increase in the number of paying members, which now stands at 3 278. This is underpinned by more proactive collection of these fees. Our members' patience in this regard is much appreciated. In the past year there has been a more direct and personal approach to collections, which appears to have been successful. However, we continue to find differences between our members' accounts and contact information in our database, and we unreservedly apologise for these odd occurrences, which have been corrected.

The key metrics for the year relative to 2016 are provided in the table below.

Heading	2017	2016	%
Assets	R33.4m	R32.8m	1.8
Equity	R31.4m	R31.3m	0.3
Liabilities	R 1.9m	R 1.5m	26.7
Revenue	R16.4m	R17.8m	-7.9
Cost of Sales	R13.0m	R18.1m	-28.2
Operating Exp.	R 6.0m	R 7.8m	-23.1
Operating surplus	R -1.1m	R -7.1m	84.5
Total surplus	R -0.63k	R -6.6m	99

From a budget and planning perspective, a three-year projection has been made to be able to better determine the maximum and minimum cash flow performance of the SAIMM through to 2020. From this projection, we can clearly foresee that:

- The SAIMM will not quickly return to the sort of performance enjoyed during the 2012 to 2015 financial years
- Conference attendances are likely to remain under pressure, as will levels of sponsorship
- New expenditures on developmental and growth projects will be constrained
- Our policy of below-inflation increases will have to be reviewed

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A closer look at the 2017 results reveals the following.

- **Assets:** The management of the investment portfolio is critical to the stability of the SAIMM. During 2017 the markets were more volatile from an investment return basis than in previous years. At the same time, we require these returns to finance our operational shortfall. The abovementioned projection indicates that this gap in funding will be required through to 2019
- **Revenue:** Three years ago we reported that the SAIMM conferences are not only world-class events, but are also very competitively priced relative to other organizations. This analysis was recently updated and the results are shown below; clearly indicating that in real terms, over the past five years, the conference fees continued to remain below inflation.

Five-year conference analysis		
	Members	Non-Members
1 Day Conference	-32%	-23%
2 Day Conference	-11%	-15%
3 Day Conference	-1%	-14%

Membership has grown by approximately 9% during the year, despite the hard times referred to above. Unfortunately, the policy of below-inflation increases to membership fees will need to be reviewed in the light of the three-year projection if we are to remain financially viable.

- **Cost of sales:** Actual cost of sales has dropped by a massive R5.1 million, despite an increase of approximately R400 000 in staff costs. This is a result of more aggressive cost budgets for conferences, fewer conferences, and using a different combination of venues. This resulted in a drop of R2.2 million in venue hire costs
- **Operating expenses:** Again, a significant reduction of R1.8 million against 2016. This is mostly due to reduced spending on projects. However, spending on the following commitments continued:
 - R220 000 to the Scholarship Trust Fund
 - R28 000 Global Mineral Professional Alliance participation (GMPA)
 - R89 700 Global Mining Standards Group (GMSG)
 - R25 000 Infacon attendance expenses
- **Debtors:** I think that it would be fair to say that historically, total members debtors, at less than R100 000, is the lowest for many years. Total trade and other receivables stands at R1.27 million.

In conclusion, the total deficit for the year stands at R63 781.00, a great decrease from last year. The operating deficit is R1.1 million and this was set off by a drawdown of R2.0 million from AFC investment fund, as mentioned previously.

AFC Investment Portfolio

The investment portfolio continues to perform well for the Institute, which in July 2016 was at R29.9 million and closed in

June 2017 at R29.7 million; an overall decrease of R0.2 million, including a drawdown of R2.00 million. This includes:

- Fair value adjustment: R86 000
- Dividends: R0.6 million
- Interest income: R0.2 million

The Investment Committee concluded its work in the previous financial year with a full review of the SAIMM investments, asset management company, instruments, and strategy. Work is ongoing with regard to identifying further business opportunity in sourcing new office and conferencing facilities based on their potential to supplement long-term earnings for the SAIMM.

As with all good things, they eventually come to an end, and this year I wish to make a special commendation and thanks to Alf Bettoni, who has decided to retire. On behalf of Council I wish him all the best for this new phase in his life. At the same time, we wish a warm welcome to Dennis Makondesa, who has taken over as our Financial Accountant. Also, thanks once again to Robert Kitching our auditor, Sam Moolla our Office Manager, Dee Campouroglou (AFC Account Manager), and all of the wonderful SAIMM staff for assisting me as your Honorary Treasurer.

New Members

Members

L.K. Acquah, H.H. Ally, W. Banda, D.N. Bande, C.P. Bergmann, E.E. Borerwe, F. Both, D.F. Botha, R.M. Brown, T. K. Chegwidde, R. Chetty, J. Chikuvadze, G.C. Chilala, K.C. Chimanya, T. Chinyowa, S. Chisempi, M. Chivasa, J.J. Christensen, P.J. Cilliers, J. Cronje, R. Da Silva, K. Gabanakgosi, G. Geza, O.C. Godie, M. Gopolang, M. Gumede, K. Hara, S.G. Hlatshwayo, E.E. Hormazabal Zuniga, M.A.H. Ibrahim, O. Ige, J.J. Japhet, T.T. Jiyana, G. Job, B.M. Joja, B.R. Jordaan, M.S. Kalichini, E. Kasitiko, M.B.H. Keikelame, O. Kgokong, K. Koolatotse, L. Krüger, J. Li, B.F. Liber, L.T. Lumbwe, P.M. Lunkoto, K.M. Mahuma, P.P. Makatane, T. Makgala, P.P. Makoela, G.C. Mandlokuwa, T. Marazani, M.W. Marshall, M.T.M. Masuku, S.M. Mathebula, E. Matsapa, M. Mazemo, M. Mbewe, D.B. Mckay, N. Mhlanga, M. Mogalanyane, T.N. Mogano, M.A. Molefofe, K. Mosebi, D.K. Mpepu, K. Mtetwa, D. Muchingami, W. Mujuru, M. Mulenga, C. Mulenga, V. Mutambo, M. Mutove, V.M. Nagel, R.R. Naidoo, W.J. Nel, A.C. Nengovhela, M. Ntlhane, B. Nyamubapasi, R.C. Oduah, O.E. Ojo, S. Pillay, L.J. Ramdhani, O. Rareque, D. Saku, G.G. Schroeder, W. Shamu, M.M. Shikwane, S.J. Sibeko, S.G. Sikhosana, N. Simwanza, G.M. Sithole, E.T. Sundire, Z.E. Thebethe, R.R. Tianiaina, E. van der Lingen, S. van der Woude, B. van Houten, R.P. Venter, D.J. Whitefield.

Associates

U.A.Q. Ahmed, O.S. Ayodele, N.T. Chamba, A. Chawatama, W.T. Chinogureyi, V. Chipakwe, G.I. Chipare, T. Dube, P. Dube, N.F. Faranando, T. Hapazari, T. Hove, A. Katalyeba, T.D. Katuruza, L.K. Kunneke, K.P. Lebopa, D.R. Mabelane, A. Mafuko, C.M. Malatji, T.A. Manzini, R.E. Maphalla, J.W. Mathaba, J. Mawarire, T. Mhike, K.M. Mmuledi, L.C. Mohlake, T. Mokotjo, K.C. Molefe, G.P. Motingwe, B. Motsathebe, M.A. Mulangisi, K. Mutamba, J. Mutamba, H. Mwandwa, D.J. Mzilethi, R.G. Nyumea, H. Roos, C. Selai, K.N. Serepong, S. Wedu.

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Associates from Conferences

B. Baloyi, H.S. Baloyi, M. Combrinck, K. Eden, K.G. Harding, D.J.J. Jacobs, K.K. Jairam, W. Johnstone, J.H. Kley, L. Koresaar, A. Ligege, S.J. Lukhene, P. Lupton, L. Malaka, M. Masipa, R.S. Mazo, N.L.M. Mendlicki, M.D. Mkhize, T. Montshioane, C. Ncube, S. Nkosi, T. Ntjepela, H.A. Olinga, C.P. Ott, W. Peters, M.J. Phaladi, A. Potgieter, J. Potgieter, T. Ramontja, C.M. Ramotsadi, A. Russell, H. Smit, C. Stiglingh, A. Taljaard, S. Thakurdin, M.E. Tladi, N. Uys, M. van Zyl, A. Walliser, T. Wallmach, J.E. Xaba.

Students

W. Ackah, P.K. Acquah, R.C. Adam, O.S. Adesina, P. Adjei Junior, S.M. Adoctor, R.T. Affotey, J.D. Afriyie, R.S. Agbenu, S.C. Aglebe, M. Ahmed, D. Aikins, N. Akuoko Sarpong, V.Y. Ametephe, C. Amissah, M.A. Amoah, L.C. Amoah, E.N.N. Amon, K.B. Ampong, J.D. Andrijasevich, B. Annor Yankyerah, E. Anshah, I. Arthur, S.A. Arthur, O. Asamoah, S.T. Asamoah, D.A. Asare, P. Asmah, B. Awortwe, B. Awortwe-Appiah, S. Awuah Owusu, P.C. Baalasaaye, N. Baloyi, A.A. Bawuah, S. Bentil, M.S. Bila, A.B. Bofah, S. Bokaba, J.O. Bonsu, M.P. Boya, T.M. Buthane, F.B.A. Chambal, T.C. Chinasamy, M.J. Chiumburu, G. Chulekazi, D. Coffee, J.B. Cupido, M.E. Dajee, T. Davhana, D.C. Davids, D.A. Dechie, J.E. Dedjoe-Djokoto, G. Dekai, N. Dhlamini, G.W.R. Ditlopo, S.F. Dladla, P.T. Dlamini, F. Dolo, B. Donkor, S.S. Dube, T.D.A. Dzimunwe, M. Ebisah Acqua, G. Erdogan, G.A. Farotade, T. Feroze, X. Gao, C. Gao, H.D. Gohoho, V.P. Guimaraes, M.A. Gyasi, M.A.B. Halala, M.J. Hashiyana, E. Hayford, H.K. Hengari, G. Ibishi, O.H.N. Ihambo, J. Imbili, Y. Ishak, L.R. Jackson, F. Javaid, L. Jimcrow, S.S. Kajewo, T.P. Kalpens, P.E.R. Kamuvi, M.B. Kekana, L.A. Kgadima, T. Kgaladi, M.T. Kgetjepe, K. Khuduga, S.L. Khumalo, A.T. Kiiga, N.K. Kodie, K.A. Kunene, E.K. Kunkah, A.E. Kuttin-Nuamah, R.A. Kwakye, K.B.F. Kyei, M. Langa, N.M. Leboho, G. Lei, T.P. Letsebe, D.J. Lockyear, P. Lubisi, A.S. Mabaso, S.A. Maberly, K.H. Mabika, D. Maboko, S.S. Mabuza, T. Mabuza, J.W. Maceve, D.M. Madihlaba, N.G. Magale, T. Mahlaela, T.M. Mahoi, R.N. Maila, A.S.S. Makhubo, T.N. Makopo, A. Maleka, D.L. Malele, K.C. Maluleke, T.K. Mamonyane, D.T. Manake, T.B. Mapiire, S.T. Maphosa, L. Marobane, M.M. Marota, L.P. Martin, A.T. Maselela, D. Maselesele, J.N. Mashabane, O. Mashabela, T.A. Mashau, K. Mashiane, P.K. Mashilo, S.P. Masina, N.A. Masombuka, K.D. Masule, G. Mataba, N.M. Mathebula, K.F. Mathipa, T.A. Mathoma, J.G. Matjila, R. Matodzi, S.M. Mbatha, M.R. Mbewe, N.P. Mcoyana, T.R.D. Mccunu, B.S. Mdaka, L.K. Mdoda, L. Melento, E.A. Mends, P. Mensah, X. Mgilane, T.G. Mhlanga, T.R. Milani, T. Mills, M.B. Miyambo, N.P. Mkandawire, P.Z. Mkhwebane, M.P. Mkosi, T. Mlangena, M.T. Moabelo, O.E. Moatlhodi, G.M. Mofokeng, L.A. Mogashoa, A.J. Mohammed, P. Mojapelo, T.M. Mokhine, K.M. Mokoena, R.L. Mokonyane, G.S. Mokoto, S.R. Mokwele, K.A. Molapisi, L.G. Molepo, S.L. Moloi, R.S. Moloi, M.M.M. Molopo, D. Monametsi, M. Mononela, I.M. Monyela, H.E. Monyollo, L.V.E. Moremi, T.T. Morifi, T.M. Moshwana, D.J. Mosola, F.H. Motala, T.J. Motshologane, R.J. Motsaeri, E. Moyo, B. Mphahlele, H. Mseleku, N. Mtetwa, M.M. Mthembu, M.E. Mthembu, S.V. Mugimba, D. Mulaba-Kapinga, M. Mulaudzi, K.E. Mungwariri, T. Muniyai, B. Mutandwa,

A.G. Mvambo, S.M. Mvula, K. Namukokoba, T.H. Ndadi, T. Ndivheni, S. Ndlangisa, A.K. Ndlovu, M.K. Ndlovu, A. Ndongeni, T.M. Nemavunde, P.P. Netshivhodza, W. Ngobeni, N.N.T. Nhinda, B.M. Nhlapho, D.J. Nhlapho, E. Nicholson, D.J. Ninje, N.V. Nkambule, N.C. Nkhi, S. Nkosi, Z.L. Nkosi, N.R. Nkosi, F. Nkrumah, P.B. Noloane, M.A. Ntuane, L. Ocran, E.N.B. Ofori, D. Oke, M. Onifade, H.O.B. Orleans-Boham, D.O. Owusu, Y. Pango, R. Parker, K.M. Phamotse, M.A. Phofa, P.J. Pilane, A. Plaatjie, M.B. Poku, S. Quaye, M.D. Radebe, B. Rajool, T. Rakgokomn, B.C. Rakoma, P.K. Ramagapu, A. Ramaswiela, F.D. Ramontja, I. Ramphadile, K.M. Ramphele, W.C.T. Rapudi, Z.Z. Rasmeni, O.O. Richeal, N. Rissenga, A. Sabo, B.A. Safowaah, B.M. Sauer, L.W. Sebico, P.A.T. Sedumedi, A.O. Sekgopi, J. Sekhwela, N. Sekhwela, T. Seleka, M.S. Seloga, E.K. Selowa, K.A. Senong, G. Serbeh, K. Seroto, J. Serowe, E. Seshoka, K. Shai, N.B. Shaku, A. Shemi, K.P. Shityeni, G.A. Siaw, T. Sibande, M.S. Sibisi, A. Sikhosana, M.P. Sitali, D.M. Sithole, C.Z.P. Skosana, T.K. Sokane, M.A. Sow, R. Suubam, M. Takalani, T.T. Talane, M. Taueatsoala, T. Tebele, T.B. Tekbey, M. Thale, L.P. Thekwane, T.C. Thobakgale, N. Tladi, M.M. Tshabalala, N.D. Tshilande, L. Tsoake, T. Tsotetsi, F. Twumasi Gyekye, M.R. Uoane, V.C. van Rooyen, X. Vangani, V.N. Vilane, L. Vutula, J.P.P. Wetterhahn, S.A. Wiafe, W.B. Winnaar, M.E. Yagimliuray, S. Yawson, N.F. Zabana, T.A. Zulu, D.A. Zulu, L.C. Zungu, A.F. Zungu.

Resignations

Fellows

S.K. Chakraborty, D.A. Kruger, G.H. Lawrie, M. Stander.

Members

D. Avutia, I. Bryson, G. Dzinomwa, R.H. Illingworth, W.H. Kotze, E.C. Luyke, T. Naidoo, A.E.A. Northcote, T. Pongweni, C.L. Reichardt, T.R. Robinson, D.M. Rose, J.D. Slabbert, C.E. van der Bergh, P.A. Walker, S. Weimar, J. Wheeler, G.D.L. York.

Associates

E. Behrens, M.F. Cedron, E.A. Clapham, B.S. Clapham, M. Coleman, R.H. Connan, B.K. Ferreira, D. Lusinga, K.P. Makoko, T.D. Meintjes, P. Millan, H.F. Nieman, A.J. Reinecke, B. Siame-Mwasa, D. van der Merwe, W. van der Walt, A.T. van Niekerk.

Students

J. De Goede, O.P. Nhambe

Company Affiliates

Anglo Operations (Pty) Ltd, Aveng Moolmans (Pty) Ltd, Caledonia Mining Corporation, Hatch Africa (Pty) Ltd.

Members transferred to Higher Grade

Transfer from Member to Fellow

T. le Roux, S. Ndlovu, J.A. Wells.

Transfer from Associate to Member

G.S.K. Segaetsho, A.T. Manuwa, S.M. Thema, F.C. Reinecke, V.G. Maseko, S.P. Swanepoel, S. Swanepoel, M.S.V. Valio, C.L. Brickhill.

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Transfer from Associate to Student

J. Sapsford.

Transfer from Member to Student

A. Shemi.

Transfer from Student to Associate

S. Bilitane, S. Buthelezi, T.M. Chagwedera, R. Coetzee, A.A. Gqada, T.D. Hlangwane, Y.L. Ikaneng, I. Kalande, K. Kangwa, J.L. Little, J.B. Mabaso, M.M. Magwede, Z.M.M. Makhanda, C.M. Malatji, O.T. Manne, T. Maphinda, G. Mentor, Z.S. Mhlanga, K.L. Moepi, B. Motsaathebe, P.P. Mthimunya, A.T. Mugadzi, N.N.M. Mukonoweshuro, H.I.N. Namupolo, M.C. Netshiomvani, T. Ngubane, V.N. Ngubane, S. Nkabinde, N. Nyathi, J.M. Page, S.Z. Petho, T.C. Phago, D.R. Ramaridili, M.P. Ramushu, F. Sengani, T.S. Sepuru, M.C. Shabangu, M.B. Sitefane, K.K. Sobiya, B.M. Thethwayo.

Members who retired

Fellows

G.F. Bainbridge, H.D.R. Browner, A.G. Du Plessis, G.N. Edwards, R.H. English, C.G. Knobbs, M. McWha, J.C. Simms, T.V. Spindler, P.J. Terbrugge, I.G. Townsend, R.F. Tucker.

Members

P.R. Carter, G. Cromberge, K.D. Meiring.

Deceased

Honorary Life Fellows

J.S. Freer, D.G. Maxwell.

Life Fellow

C.T. Shaw

Fellow

W.A. Naismith.

Retired Fellows

M. Dijkstra, D.F. Foster, J.P. Hoffman, A.F. Newall.

Retired Members

C.P.J.B. Jeppe, L.C. Stilwell.

Members

G.M. Jooste, C.J.W. Oertel, A.F.S. Schoukens, S. Sondashi.

Members who were re-admitted

Re-admitted as a Member

G.J. Buitendach, J.J. Joubert, M.H.S. Kgaria, A. Madowe, R. Mitra, K. Nnyenyiwa, D.H. Pullen, C. Setuke, D. Sibanda, P.E. Smith, F.C. Reinecke, M. Tibane, K.K. Tladiyamoroba.

Re-admitted as an Associate

C.B. Bhiya, V. Chipakwe, R. Hambeka, R.E. Maphalla, A.W. Meek, P. Mutimutema, F.I. Shumba, J.A.N. Van der Linde, H.J. Vorster. ♦



advanced metals initiative

AMI Precious Metals 2017

THE PRECIOUS METALS DEVELOPMENT NETWORK (PMDN)

In Association with **Platinum 2017**

17–19 October 2017 – Conference • 20 October 2017 – Technical Visits
Protea Hotel Ranch Resort, Polokwane, South Africa

BACKGROUND

The AMI Precious Metals 2017 Conference will be held in association with the Platinum 2017 Conference. The Platinum conference series has covered a range of themes since inception in 2004, and traditionally addresses the opportunities and challenges facing the platinum Industry.

This AMI Precious Metals 2017 Conference will present a forum where scientists and technologists can come together to learn and discuss the latest advances in precious metals (platinum group metals and gold) science and technology.



For further information contact:
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