

Minutes of the 167th Meeting of the Council of the SAIP

3-6, Natural Science I Building, University of Pretoria, Pretoria

25 February 2005

1 Opening

The President of the SAIP, Prof. Zingu, chaired the meeting and welcomed all present to the first Council meeting of 2005.

2 Attendance

Present: Dr. N. Chetty, Prof. J.A.A. Engelbrecht (Treasurer), Prof. D.J. Grayson, Prof. W.D. Heiss, Prof. H. Moraal (Vice-President), Miss. J. Padayachee (Secretary), Dr. P.A. Whitelock, Prof. E.C. Zingu (President and Chair) *Apologies:* Dr. S.H. Connell

3 Items for Discussion under General

The following items were added for discussion under “General”:

1. Transactions of the South African Institute for Electrical Engineers
2. Letter Concerning Physics Funding to Government

4 Minutes of Previous Meetings

The minutes of R166, Council Meeting of 29 October 2004, were approved with the following corrections: Item 16.4., last sentence of last paragraph should read: “Otherwise, for the two year term, a *new* student representative would be *elected* if the current student representative on Council completes his/her degree.”

5 Matters Arising From The Minutes

5.1 Proposal for Merging the SAIP Council and the IUPAP Liaison Committee

Prof. Moraal queried a letter from the SA ICSU Secretariat which gave details of the SA ICSU Committee until

2007. Prof/ Zingu explained that the decision of Council, made at the last meeting, to merge the SAIP Council and the IUPAP Liaison Committee had not been implemented as the ICSU board would only be meeting in May 2005. Prof. Zingu will however contact the SA ICSU Secretariat and suggest that the SAIP decision get implemented in the interim.

Action: Zingu

6 Shaping The Future Of Physics In SA

6.1 Follow-up from Last Meeting

Following the meeting with Dr. R. Adam (DG, DST) and Dr. K. Mokhele (President, NRF) at the last SAIP Council meeting, no progress has been made regarding how funding for projects arising from the Recommendations of the International Panel Report.

Following these contradictory messages from DST and the difficulty the President has had in arranging a meeting with DST, Council decided to write a letter to Dr. Adam detailing Council’s concerns and requesting guidelines as to how the SAIP should proceed with the implementation of the Recommendations from the International Panel report.

Action: Zingu

6.2 Council’s Response on International Panel Report

Council has not yet formulated an official response on the International Panel Report. It was suggested to use the feedback already obtained from Heads of Departments and SG Chairs as the basis of the response. The costing of each recommendation should be included after the costs have been reviewed. The responses and costs of recommendations will be collated and circulated among Council for input as to how the response can be phrased. **DEADLINE: 30 April 2005**

Action: Moraal, Padayachee, Council

7 Financial Matters

7.1 Treasurer's Report

The financial situation of the Institute is quite good, despite the fact that about one-third of current members have not paid their membership fee for 2004. The provisional budget compared to the actual budget for the financial period ending 31 March 2005 is shown in Table 1. The financial situation at the time of this report is as follows :

1. Arrears 2003. A total of 41 members (down from 44 at last meeting), are still owing their membership fees for 2003, totalling an amount of R 3614.67. The number of members may be less, due to 11 payments that deposited directly into the bank account, without names or account numbers. (I believe many of these members are no longer interested in membership of the SAIP: in addition to annual accounts, at least two reminders have been send to these members. 16 of the 41 are student members).
2. Arrears 2004. There are currently 170 members (35(The above number of members in arrears are only a guide, as some payments have been made directly into the bank account, without members informing the Treasurer about who made such deposits).
3. The amount donated by UNESCO for the Conference on Physics Education has been paid over to the Conference organisers.
4. Arrangements have also been made to open a separate account for the Conference on Sustainable Development, to be hosted in Durban later this year.

A list of members in arrears will be circulated to Council.

Action: Engelbrecht

The treasurer will investigate the advantages of a 32-day account over a money market investment account.

Action: Engelbrecht

In light of the good financial standing, the President suggested that Council start thinking about ideas as to how the money can be best used for physics-based projects. One suggestion is a registration system for conferences so that organisers do not have to reinvest time and money on developing one for each conference.

7.2 Balance of Accounts

Current Account : R 20 942.53 (28/01/2005)
32 Day Call Account : R 152 645.53 (03/01/2005)
Stanlib Money Market Account : R 101 821.93 (Interest amounting to R 1 821.93 was earned on this account at 03/01/2005). The previously earned amount of R 1065.64 has not yet been transferred to this account).

7.3 Tax Implications: Fees of Professional Bodies

No feedback has been received from the NSTF. The treasurer will follow-up on the matter.

Action: Engelbrecht

7.4 Remuneration for *History of the SAIP*

Dr. Wagener has approached the Treasurer with the proposal of R150/A4 typed page up to a maximum of 20 pages. The cost for 20 pages would be R3 000. Costs approved.

8 Conference Matters

8.1 Conference Committee

Nothing to report

8.2 Other Conferences

Nothing to report

8.3 Bloemfontein (UFS) 2004

The report from the organisers of the 2004 SAIP conference was received with thanks. The most notable problem experienced by the conference organisers was that SG chairs seemed unaware of their responsibilities at the conference. In light of this, Dr. Whitelock will remind the current conference organisers that SG chairs should be contacted well in advance of the conference to remind them of their responsibilities. Council will also contact the SG chairs to prompt them to their responsibilities.

Action: ?

A highlight of the report was the comments from the invited speakers on how much they enjoyed interacting with the students. The current conference organisers would be asked to try to arrange an opportunity where the students and invited speakers could interact. A suggestion could be the Meeting of Physics Students.

8.4 Pretoria (UP) 2005

The conference organisers (JB Malherbe, HL Alberts, M Braun, J Nel) joined the meeting and Prof. Malherbe pointed out that the conference would be from 4 to 7 July 2005 (Monday to Thursday), instead of the traditional Tuesday to Friday because of venue problems at

Table 1: Provisional Budget For The Financial Year Ending 31 March 2005

INCOME	BUDGET	ACTUAL	EXPENDITURE	BUDGET	ACTUAL
Donations	100	136	Affiliation fees	300	350
Institutional members (2 X 1800)	3,600	3,600	Bank charges	750	783
Interest on 32 day call account	3,000	4,740	Conference advance	2,000	
Interest on SME account	500	879	Honoraria	6,000	7,750
Subscriptions (250 x R220)	55,000	53,253	Overseas speaker		12,000
Conference surplus	5,000	81,185	Science Olympiad		1,000
Sponsorships	1,000		SciFest		600
Deficit for the year	5,700		Secretary's expenses	4,500	2,782
Transfer from 32 Day A/C	100,000		Treasurer's expenses	750	551
Sundries	17,013		Travel expenses	35,000	8,268
Opening balance (1/4/2004)	20,290		FEST Prize	2,000	
			Specialist group prizes	6,000	1,000
			Website		
			Logo Prize	3,000	3,000
			Sundries		21,103
			Transfer to Moneymarket		100,000
			Transfer to 32 Day		110,000
			Excess for year		25,508
	73,900	281,095		73,900	281,095

UP. Prof. Malherbe summarised plans for the conference. There are problems with Prof. t'Hooft attending the conference as a plenary speaker. The President will send out official invitation letters to the plenary speakers and will confirm that the Minister of Science and Technology can open the conference.

Action: Zingu

Dr. Braun quickly summarised the programme. There are 9 parallel sessions, including a new Medical/Biophysics session, to try to accommodate the fact that the Wednesday is dedicated to Einstein.

8.5 2006 - Cape Town

Nothing to report

8.6 2007 - Wits

Letter of offer received, with thanks.

8.7 2008

The matter of a venue for 2008 was discussed and it was decided that this would be approached on a regional basis.

9 Committees of Council

9.1 Awards Committee

9.1.1 Silver Jubilee Medal 2005

One nomination has been received thus far, for the 2005 Silver Jubilee Medal. The closing date for nominations is 28 February 2005.

9.2 Future of De Beers Gold Medal

Dr. Connell has been in discussions with R. Caveney who has been consulting for the SAIP on the issue of the De-Beers Gold Medal and Banquet Funding. He has had a series of discussions with DeBeers. There are two medals which are available for the 2006 and 2008 awards. It is likely the banquet will be funded for these occasions as well. There will be further discussions at a later stage about the continued Gold Medal and Banquet funding.

Council decided that they should start looking for a new sponsor for the medal as it would be a pity to lose the most prestigious award the SAIP has, due to lack of sponsorship.

Action: Council

9.3 Education Committee

DST has granted funding for a workshop to familiarise physics departments with the physics part of the new

FET physical sciences curriculum. The workshop is being planned for May 2005 and will therefore allow physics departments to host a half-year course for physics teachers.

A two-day symposium on the teaching of science in Africa is being hosted by the Senegal Academy of Sciences and Technology on 10 and 11 March in Dakar. The symposium is being held under the auspices of the Inter Academy Panel, the Network of African Science Academies and the African Academy of Sciences. Prof. Grayson has been asked to represent the Academy of Science of South Africa. The purpose of the symposium is to draft a regional programme for the teaching of science in Africa

Prof. Grayson has been interviewed to sit on a moderation panel for the matric physics exams.

Council wished Prof. Grayson well in her new career as an independent Education consultant.

9.4 Marketing Committee

The Outreach Programs - The Emasondosondo program grew last year and was active for a total of 9 weeks of the year, by three groups. MoU's to enable the multi-funding and multi-institutional nature of the program are being drawn up. There was an application to Industry for funding. There is unfortunately still no effective assessment. The LIAL program was discussed by the Emasondosondo partners (in a visit to the USA and locally). There is interest in exploring a synergy between the programs and contact with LIAL has been initiated.

Kevin Govender has been very involved on the organising committee of IYP activities.

10 Portfolios of Council

10.1 Communication

Web-site: As of 14 February 2005, there were 8168 hits on the SAIP web-site.

Newsletter: The first newsletter of 2005 was sent out on 14 February 2005.

10.2 Role and Function of the SAIP

Nothing to report.

10.3 Industrial Liaison (tba)

Nothing to report.

10.4 Fund-Raising

Nothing to report.

11 Specialist Groups

11.1 Applied and Industrial Physics

The chair of the specialist Group, Dr. K. Meyer, reports the following:

Website: The Applied and Industrial Physics Specialist Group website has been produced. The content at this stage is provisional, but does lay out the basics of the services the group would like to provide.

(URL: <http://www.saip.org.za/SGs/Applied.html>)

SAJS Special Issue Contributions: Dr. Meyer reported that he had emailed everyone on my list of physicists in industry requests to contribute something for a SAJS article, with only 2 positive responses from Dr Gavin Hough at EnviroVision Solutions and Prof. Mike Alport (UKZN). He was still trying to get more contributions.

11.2 Astrophysics and Space Science

Nothing to report.

11.3 Condensed Matter Physics and Material Science

Nothing to report.

11.4 Education

Nothing to report.

11.5 Lasers, Optics and Spectroscopy

Nothing to report.

11.6 Nuclear, Particle and Radiation Physics

Nothing to report.

11.7 Theoretical Physics

Nothing to report.

12 SAIP Affiliations and Representations

12.1 Representations

12.2 SACNASP

Nothing to report.

12.3 NSTF

Nothing to report.

12.4 SAASTA

Nothing to report.

12.5 Affiliations

Nothing to report.

13 International Liaison

Nothing to report.

14 Membership Matters

14.1 New Member Applications before Conference

The Secretary reported that every year, just before the early-bird deadline for conference registration, there is a flood of new applications from people who only want the member discount and seem to resign within the next two years. In light of the fact that in the last two years there have been an average of 50 new applications each year, a deadline of 1 April for receipt of applications who want to be considered as members for the conference, has been imposed.

This will then give the Secretary sufficient time to process the applications, get the new names onto the Treasurer's database and also to track that the new members have actually paid to receive the member discounts at the conference.

14.2 Membership Statistics

The list of new members since the last Council meeting appears in Table 2.

The membership statistics as at 17 February 2005 appears in Tables 3 and 4.

Table 2: List of New Members since last meeting

NAME	CATEGORY
Dr. P.J. Cilliers	(O)
Mr. B.D.L. Opperman	(O)
Prof. A.M. Strydom	(O)
Mr. G. Mhlanga	(S)

Table 3: Membership Statistics as at 17 February 2005

Ordinary Members	258
Associate Members	17
Student Members	149
Retired Members	19
Emeritus Members	12
Honorary Members	12
Institutional Members	4
Honorary Institutional Members	1
Total Members	474

Table 4: Break-down of Membership Statistics by Specialist Group

	1st	2nd
Applied and Industrial	27	73
Astrophysics	82	19
Education	25	47
Lasers, Optics and Spectrometry	35	28
Nuclear, Particle and Radiation	58	31
Solar-Terrestrial and Space Physics	16	24
Plasma	9	12
Condensed Matter Physics & Materials Science	149	33
Theoretical	26	33
General	8	20

14.3 Benefits of Corporate Membership

Carried over to next meeting.

14.4 Emeritus Membership Applications 2004

For the record, the votes to award Emeritus status to Prof. G.N. van Wyk and Prof. P. Walters was unanimous, in favour. The printouts of the email votes were available for examination during the meeting.

14.5 New Certificate - for Approval

Carried to next meeting.

15 Physics 2005

15.1 Report on IYP2005

Prof. Moraal reported that all preparations for the various IYP activities were proceeding as planned, with Mr. C. Rijdsdijk, Ms. G. Stone and Mr. K. Govender doing the bulk of the work.

IYP funds have been transferred and have become available on 26 January 2005. Marina Joubert of SAASTA manages media interaction, promotion, and marketing. Additional requests for funding submitted after the Council meeting of 27 October 2004 were not supported.

15.2 Stamp to celebrate the International Year of Physics

The design circulated by Philatelic Services on 11 January 2005 has been approved with the following alterations:

1. Make the orbits of the atom and the lettering of $E=mc^2$ clearer (it disappears when reduced to stamp size)
2. See how the words "World Year of Physics 2005" can be included into the stamp design. It can be done in the same way as the lettering on the envelope
3. Add the logo of the International Year of Physics into the design for the envelope (if needed, Einstein can be faded more, since he is already on the stamp).
4. Change the canceller and use a line drawing of the International Year of Physics logo. Please also change the town to Pretoria, and the date is going to be 7 July 2005.
5. Because the issue date is now earlier than originally planned for, the final artwork should be ready by 1 March 2005.

The suggested text for the card to accompany the issue (to be submitted on 1 March) is as follows: The International Union of Pure and Applied Physics (IUPAP) has declared 2005 the International Year of Physics (IYP) to celebrate the centenary of Albert Einstein's miraculous year 1905, when he published three of his most famous papers: special relativity, the photoelectric effect and Brownian motion of atoms. These papers have revolutionized our understanding of nature, and numerous optical, atomic and nuclear technologies in everyday use are based upon their principles.

The Department of Science and Technology, in partnership with the South African Institute of Physics is conducting a range of activities during this year to make it an exciting year for practicing physicists, but particularly an opportunity to inspire a new generation of scientists. This new generation must bridge the science and technology gap between ourselves and the developed world. The

South African activities focus on the theme "It's YOUR Physics". They include: a summer school on computational Physics in the Drakensberg, a Physics focus for the annual SASOL SciFest and National Science Week, the first SA Physics Olympiad, a day with "Physics on Parade" for secondary school science teachers during the 50th SAIP Conference, a special exhibition, the Physics of Toys at the science centres around the country, a board game with Physics questions for use in the classroom, a Physics jingle, a revitalization of science clubs in schools, personal Physics handouts to learners, support with the upgrading of laboratory equipment in schools, a lecture series on "Physics in Film" and, finally, international Physics meetings in Cape Town and Durban in October/November. More details can be found at www.saip.org.za.

The South African Institute of Physics is proud to the culminate the IYP celebrations with an Einstein Day at its annual conference on 7 July 2005 at the University of Pretoria, exactly 50 years after its inception on 7 July 1995 at the same venue.

We will try to get the SAIP logo included on the card, expecting that the IYP logo will appear on the First day Cover.

15.3 History of the SAIP/Biographies of Eminent SA Physicists

At the previous meeting Prof. P.C. Wagener of Fort Beaufort was given an endorsement by the SAIP to write a book with biographies of prominent South African Physicists. He was asked to also write a concise history of the SAIP, particularly during its early years, as an inclusion in the programme for the 2005 conference. Prof. Moraal reported that by the greatest twist of luck, the long-lost "Chris Engelbrecht" material was discovered in the first week of December 2004, and this was forwarded to Prof. Wagener. He has actively started to write.

Prof. Wagener submitted samples of what he has written thus far. It was decided that an Editorial Committee consisting of Prof. Moraal, Prof. Grayson and Prof. Heiss would edit the draft of the History of the SAIP.

Prof. Engelbrecht would circulate the email containing details of copyright to Council for comment.

Action: Engelbrecht

All comments on the agreement and the drafts should be submitted electronically to Prof. Moraal. **DEADLINE: 11 March 2005**

Action: Council

It was decided that the SAIP will not be a partner on the rest of the book written by Prof. Wagener. At most, the SAIP would endorse the book.

15.4 SA Journal of Science Issue devoted to Physics

Another call for contributions was sent in the middle of January by the secretary to all SAIP members.

On 11 February the status was: 3 Manuscripts received (A.Z.A. Combrink, J.A.A. Engelbrecht (2x)), approximately 8 indications of intent received during January - i.e. pending papers, several items of correspondence of 2004 will be followed up by the editor, a guest editorial of approximately one page or 1000 words (flexible) will be welcomed by the journal. Deadline for this is middle May.

15.5 IUPAP General Assembly 2005 and UNESCO World Conference on Physics and Sustainable Development

DST via SAASTA will transfer funding for both these events into the SAIP bank account. From an accounting point of view, it might be easier if a second bank account were opened. The treasurer was given permission to open the second bank account.

Action: Engelbrecht

16 General

16.1 Accreditation Of Nuclear Physicists As Radiation Protection Scientists

According to the minutes of meeting R162: "Prof. Spoelstra Prof. Zingu thanked all those involved in the discussions thus far for their input. Dr. Connell requested that Dr. E. Sideras-Haddad be allowed to follow up with the matter with the chair of the Nuclear, Particle and Radiation Physics. Approved. Action: Connell"

Prof. Moraal would formulate a response based on previous discussions.

Action: Padayachee, Moraal

16.2 Meetings at SAIP Conference - Call for Assistance

Miss. Padayachee described that she was nearing the end of her PhD and the next 5 months were going to be terribly busy and requested assistance with the duties of the Secretary. Miss. Padayachee was excused from the meeting and Council discussed the matter of getting outside help to handle the Secretaryship until Miss. Padayachee finished her degree. The previous Secretary, Prof. B. Spoelstra, had been approached but he was unable to help. In earlier discussions with the President and Vice-President,

Miss. Padayachee said that she would be willing to forfeit her honorarium for the six-month period from January to June 2005. It was decided that Miss. Padayachee would still receive her honorarium and that Dr. Whitelock would contact a potential replacement to check if she would be interested in assisting the SAIP.

Action: Whitelock

16.3 Constitution Changes - Update

The Secretary reported that there was a potential problem at the end of last year with the changes to the constitution and by-laws only coming into effect after being accepted by the 2005 AGM. However, after careful scrutiny of the constitution by Prof. Zingu, it was found that it was only the by-laws that were effected by this requirement and the constitutional changes came into effect immediately after the votes were counted. This means that the election *can* be held as usual.

The only problem that then remained regarding the election was that there was no allowance for how the transition to President-Elect was going to be made. The suggestion is to therefore add the following By-Law (as 3.11) which would handle the transition. The statement is as follows:

In the transition from the old structure of Council to the new structure of council, the President will be chosen as previously, by members of Council, from members of Council, excluding the President-Elect.

This will be submitted to the membership for approval.

16.4 Election for 2005/2007 (JP)

The election for the 2005/2007 Council will be held around May/June. The call for nominations will be made electronically where a valid email address exists and via post otherwise. Since there are usually around 12 nominations in total received, nomination forms will be made available on the web-site. This will save on having to post nomination forms to every single member. There is nothing in the Constitution that prevents this.

The voting will be by traditional postal ballot.

16.5 Unsolicited Research Submissions(JP)

The Secretary has received a few submissions from amateur researchers who would like their work sent out to South African physicists who might be able to review it. Thus far the Secretary has been unsure as how these submissions should be handled. It was agreed that the following:

The South African Institute of Physics does not have the resources to distribute your work amongst appropriate researchers in South Africa. The suggestion would be for you to attend conferences related to your topic, and submit the work to peer review, as is standard in research.

16.6 Project 500

Dr. Chetty described that the motivation behind the project was to advertise that physics graduates find employment in varied fields. The information to be requested from supervisors includes: Year graduated, institution, highest physics degree, co-major (if BSc is highest), physics field of study, abbreviated thesis title, name of supervisor/co-supervisor, where currently employed, job title, comments. The information will be put up on the Careers section of the SAIP web-site. Dr. Chetty will send out the request for information.

Action: Chetty

16.7 Transactions of the South African Institute for Electrical Engineers

Carried over to next meeting

16.8 Letter Concerning Physics Funding to Government

In a discussion with Prof. G. Ellis, he suggested to Dr. Whitelock that he thought the SAIP Council should write a letter to the Minister of Science and Technology highlighting the problems with funding of S&T in South Africa, despite Government repeatedly stating that S&T is important.

It was decided that the supporting information for the letter would be properly researched. The matter would be raised at the Heads of Department meeting at the next Conference and other stakeholders would also be consulted.

16.9 PBMR Report

An information sharing workshop on the research and training needs of the South African nuclear industry, as well as possible mechanisms to address these requirements was held at Pelindaba on Wednesday 27 October from 10:00 to 15:00. The workshop flows from a Memorandum of Understanding that was signed between NECSA and British Nuclear Fuels plc (BNFL), through their Nuclear Sciences and Technology Services (NSTS) division, in February 2004. In the MoU the two parties undertook to explore mechanisms to make a substantial contribution to the development of nuclear skills and research in South Africa. In the UK this has been performed successfully

over the last number of years through a partnership between BNFL and leading universities (the so-called BNFL University Research Alliances). There was participation by relevant government departments (DST, DME and the DTI), PBMR (Pty) Ltd, the National Nuclear Regulator, and various universities. The universities all agreed that they should cooperate in networks of excellence; along the DST/NRF model. NECSA gave a presentation on the SA skills and research needs, and undertook to give guidelines of topics which could form part of these networks.

This workshop is expected to be followed up by another one aimed more specifically at the role of Universities. It was originally scheduled to be held in March 2005, but has been postponed.

There are other manpower development initiatives such as STEF (Science and Technology Education Fund (Pty) Ltd) in which NECSA are involved with the French nuclear industry, AREVA. The objectives of STEF are to gather financial resources from industry, especially the counter-trade market, channelling the funds to the energy and minerals sector, with the emphasis being on the nuclear and electrical industries, and to gather market intelligence for exchanges between funders and beneficiaries. Another initiative, a National Energy Research Institute, a possible partnership between DST and DME, was mentioned.

16.10 Synchrotron Report

The Department of Science and Technology has established the Synchrotron Task Team under the chairmanship of Dr Tshepo Seekoe (Manager: Science Platforms Unit). The brief of this Team includes a wide-ranging investigation and feasibility study which will inform the Ministry of the merits of a Synchrotron program for South Africa. Such a program may simply involve facilitated and encouraged access to existing facilities, or it may extend to implementing a carefully designed roadmap whose goal is the ultimate realisation of a South African or African Synchrotron Facility.

The Synchrotron Task Team has a number of Working Groups to assist it in its mission. One of these is the Science Working Group, chaired by Dr Simon Connell. This working group will focus on the science case, the identification of the current and potential Synchrotron based scientific programs and the current and potential Synchrotron scientific user community. The Group will be working towards a report which will form a pre-feasibility study as well as a Workshop scheduled for about 6 months time. The Workshop will be an important opportunity for the Science Community to participate in the process.

17 NEXT MEETING

Sunday, 3 July 2005. 10h30 to late.

18 CLOSURE

The meeting closed at 16h15.

President: E.C. Zingu

Secretary: J. Padayachee