



R165

MINUTES OF A MEETING OF THE COUNCIL OF THE SAIP WITH CHAIRPERSONS OF THE SPECIALIST GROUPS

DATE: 1 July 2004

TIME: 16h00-17h40

VENUE: Kine 1, Medical Science Faculty, University of the Free State, Bloemfontein

1. OPENING AND WELCOME

Prof. Zingu chaired the meeting and welcomed everyone to the meeting. He invited those present to introduce themselves.

2. ATTENDANCE

Name	Representing	Email
EC Zingu	President, SAIP (Chairperson)	zingu@julian.mantec.ac.za
J. Padayachee	Secretary, SAIP	secretary@saip.org.za
JAA Engelbrecht	CMPMS/ Applied and Industrial /Council	Japie.engelbrecht@upe.ac.za
H. Moraal	Council	fskhm@puk.ac.za
D. Grayson	Council	graysdj@unisa.ac.za
PA Whitelock	Council	paw@sao.ac.za
C. Rijdsdijk	Education	particles@mweb.co.za
S. Goedhart	Astrophysics and Space Science	sharmila@hartrao.ac.za
EG Rohwer	Lasers, Optics and Spectroscopy	egr@sun.ac.za
F. Frescura	Astrophysics and Space Science	frescuraf@physics.wits.ac.za
Z.Z. Vilakazi	Nuclear, Particle & Radiation	vilakazi@physsci.uct.ac.za
N. Chetty	Council	chettyn@nu.ac.za
SH Connell	Council	Connell@inkosi.src.wits.ac.za
K.A. Meyer	Applied and Industrial	KevinM@innovation.org.za

3. MINUTES OF THE PREVIOUS MEETING

There were no corrections to the minutes of the meeting held on 26 June 2003.

4. SHAPING THE FUTURE OF PHYSICS IN SOUTH AFRICA

Prof. Zingu discussed the recommendations contained in the Report by the International Panel and requested that the specialist groups take action guided by the recommendations. The Theoretical Physics Specialist Group was to be commended for initiating discussion on the formation of a Theoretical Physics Institute, in line with one of the recommendations of the International Panel Report.

Dr. Vilakazi offered the SAIP access to an internal UCT document drawn up in response to the International Panel report. His offer was accepted.

There was a proposal to solicit short (3-page) descriptions for flagship projects with e.g. the three best being funded to conduct feasibility studies. It was mentioned that Dr. R. Adam had a document listing the criteria that a successful project proposal had to satisfy before the project could be considered a national facility.

It was agreed that the Specialist Groups would put together a list of priorities for their research area, based on the report of the international panel. ***The deadline for the report from the Specialist Groups is 31 August 2004.***

5. GUIDELINES FOR SPECIALIST GROUPS

Dr. Chetty gave a short description of his motivation for drawing up guidelines for the specialist groups. He stated that the intention had not been to restrict the groups' activities and that groups should reject those guidelines that were not appropriate. Each group should now take the next few months to draw up their terms of reference and mentioned that the SAIP had budgeted for one face-to-face meeting to finalise the terms of reference. He pointed out that the Specialist groups would have a greater role to play in setting up the academic programme at future SAIP conferences.

6. REPORTS

6.1. Applied and Industrial Physics

The acting Chairperson Prof. J.A.A. Engelbrecht reported that at the previous AGM, Prof D Raubenheimer indicated that the group is "in dire straits and required assistance from the AGM and Council". Prof Raubenheimer subsequently resigned in February 2004. Realizing that another conference may pass without student awards, Prof Japie Engelbrecht, chair of the CMPMS, offered assistance to ensure awards will be made. Two more sponsorships were obtained at the conference in Bloemfontein, and thus 4 awards could be made.

A new committee for the Applied and Industrial Physics specialist group was also elected in Bloemfontein. They are : Dr Kevin Meyer, Ms MW Diale and Prof T Derry. The acting chair, Prof Engelbrecht, is confident that the new committee will ensure the development of a vibrant specialist group for this important section of the physics community.

The new chairman, Dr. Meyer reported that at the Applied and Industrial Physics Specialist Group meeting, a new committee was elected to manage the running of the group.

The meeting was attended by 19 members. The new committee elected by these members are:

Chair: K.A. Meyer, Additional: Mmantsae Diale (UP), Freddie Vorster (PE Tech), Prof. Trevor Derry (Wits)

In the meeting the following were discussed:

- 1) The initial problems concerning the management of the AIP group.
- 2) That the group was being looked after (very successfully) by Prof Japie Engelbrecht of UPE, but understandably, this was just an interim measure.
- 3) A new committee was elected to manage the group.
- 4) Prof Japie Engelbrecht was thanked for his efforts, especially for managing the responsibilities of the group at the conference, such as acquiring sponsors for the student prizes.

After the end of the 30 minute meeting, the committee and other interested parties continued to discuss issues of relevance to the AIP Group. The following points were raised:

- 1) A radically new approach to presenting the group to industry is required, to overcome the perception barriers within industry that academic physicists can not contribute to industrial problems.
- 2) The need to identify what industry would like from physics graduates.
- 3) The need to identify what tertiary physics groups and institutions can contribute to industry.

Other matters discussed included:

- 1) issues of terminology, including how the term "physics" is apparently perceived by industry in a negative light, and that applied physicists are more likely to be immediately accepted if they referred to themselves as engineers.
- 2) The value of project management courses to aid graduate physicists to become entrepreneurs and create industry.
- 3) Potential methods of attracting industry key-players to attend the conference, both to promote the physics community within industry and to create an awareness amongst students of the potential employment opportunities

6.2. Astrophysics and Space Science

No written report submitted for inclusion in minutes

6.3. Physics Education

The chairman, Mr. Rijdsdijk, reported on the Groups AGM, held earlier in the day.

6.3.1. Committee

The following were elected to represent the Education Specialist Group, ESG.

Diane Grayson	UNISA	
Kevin Govender	NECSA	Student representative
Alfred Tsipa	Unizul Science Centre	
Sam Ramaila	WITS Technikon	
Mathie Hoffman	UFS – (to be confirmed)	
Case Rijdsdijk	Chairperson (till Pretoria 2005)	

6.3.2. Role of the ESG

The role of the ESG was discussed and it was suggested that the group should broaden its base to beyond just Physics Education Research and Tertiary Education. It had become clear that the SAIP should involve itself at different levels and the following were identified:

- 2.1 Physics Education Research and Tertiary Education
- 2.2 Teacher Development
- 2.3 Public Understanding of Physics, PUP
- 2.4 Closer interaction with Science Centres around SA
- 2.5 Greater involvement with schools and Olympiads
- 2.6 Liaison with organizations such as IUPAP, ASSA, SAASTA, SAASTEC, in particular in 2004/5 with DST for the WYP.

6.3.3. Goals

In view of the above, the following were decided to be achievable goals in the immediate and short term:

- 3.1 Continued liaison with the DoE with respect to curriculum development in the GET band and in particular the FET band.
- 3.2 Get Universities, National Facilities and Physics related industries to become more involved with Physics education at both tertiary and school level, with a focus on teacher development.
- 3.3 Seek teacher membership of the SAIP
- 3.4 Establish the SA Physics Olympiad, SAPhO.

There was also discussion on the role of Science Clubs at schools and the growing culture of Science Centres in SA, but it was difficult to formulate these important activities in terms of a goal for the ESG: their importance was noted since they both contributed to the achievement of the goals.

Other items that were raised were the idea of "Ask a Physicist" and "Paper Clip Physics" both running successfully in the UK as part of the IoP. Both of these would be looked into during the year and progress reported to members of the ESG.

It was also realized that there were some aspects of the Council guidelines that were not implementable and this would be taken up in the course of the year.

6.3.4. Report on the Previous Year

The ESG wishes to express its thanks and appreciation to Profs. Diane Grayson and Max Braun for the revision of the FET Physics curriculum, and whilst there was still room to modify, change and improve this, it was a considerable improvement on the DoE curriculum.

Prof. Diane Grayson was also to be thanked for initiating and organizing the ICPE Conference in Durban this month and for her continued work in the SA Association of Research into Maths and Science Education,

SAARMSE. Once again the SAIP has hosted a teacher/learner w/s as part of the annual conference and Kevin Govender has been instrumental in sustaining these w/s.

As a result of the "Shaping of the Future of Physics in SA" review (see SAIP website), the World Year of Physics and the report on the chairman's visit to the 33rd IPhO in Bali in 2002 (see SAIP website), it appears that the SA Physics Olympiad may well be launched next year. The chairman has been working closely with SAASTA and several other bodies that could impact or contribute to the success of this.

The ESG is already, and will continue to be, involved with the WYP and activities will be made known as and when finality on these has been reached.

The chairman was also asked to bring to the attention of Council the fact that the Science Centres in SA were playing an increasing role in promoting not only science, but physics, since most of the activities and displays in these centres were physics based. In addition they could become active hubs for the WYP and make a significant contribution to this.

There was also a plea from the group to hold the ESG AGM at another time. This group is the only truly cross disciplinary one, and arguably the most important, in sustaining Physics in SA, and greater input from all physicists would help maintain the 'physics pipeline'. It was suggested that at the Pretoria meeting, the ESG meeting be held during one of the Poster Sessions.

It was recognized that the ESG would need to work more closely together in the coming year to fulfil the guidelines laid down by Council.

6.4. Lasers, Optics and Spectroscopy

The 2004 conference has once again been a success for the group, with around 50 oral and poster presentations. Lectures were very well attended. On Monday, as usual by now, the NLC user group report back meeting was held. The representative of the NLC, Mr Henry Tromp has requested us to convey that it is appreciated that the SAIP and the conference organisers have once again been willing to host the event. We believe this arrangement is to benefit of all concerned, and would like to continue with this model. We were also fortunate to have Dr Schworer as an invited speaker through support of the NLC.

It has to be mentioned that towards the end of 2003 the ALC was launched as a NEPAD initiative. Next Monday delegates from Africa meet in Pretoria to finally constitute the ALC. Some of these guests are attending the SAIP conference.

One of the bigger projects that will be discussed in the near future in the laser community will be a high power fs laser project, in response to the Review panel's report. The aim of this project is to provide facilities for research in a broad spectrum of disciplines and industry as well. During the next year inputs from researchers in nuclear physics, space physics and material science will be requested, and we appeal for your support in this process to determine the level of interest, and eventually set up a proposal for funding.

Our group has identified a need for a regular, smaller winterschool of 3 or 4 invited lectures on introductory topics, which we hope to be able to fit into SAIP conferences in future, in consultation with the organizing committee.

The subgroup was again able to obtain sponsorships for the prizes for the student awards.

6.5. Nuclear, Particle and Radiation Physics

SAIP Conference: During the conference there were 20 oral and 5 poster presentations. Although this is down from last year's all time high of 29 oral and 4 poster presentations, the actual attendance during the sessions was very encouraging (~70 delegates).

The span of topics presented at the conference was very large. This follows from a trend set last year in which a sizeable contribution of high-energy physics continues to make an increasing impact in the group. WE are pleased to also report on the active participation by (mostly young) members from NECSA and NNR – this, it is hoped is indicative of interest that industry is beginning to show in SAIP.

Three prizes will be awarded (best MSc, best PhD and best poster presentation). Oscar Redivo from *BioTeknik* is the corporate sponsor – special mention needs to be made in this regard because Mr. Redivo has always responded very generously throughout the years.

Summer Schools: The Universities of Zululand and the Witwatersrand organised a highly successful Millennium School held at Ithala (KZN) in January. The organisers have reported a balanced budget. IT is clear that the summer schools are now a permanent feature of the Nuclear/Particle Physics community.

The next school is scheduled to take place at the Inaca Island (Mozambique) and will be organised by the Eduardo Mondlane University. They will, however be drawing on the expertise of the Wits Group. More information will be posted on the web page.

Web Page: The specialist group will soon flight its pilot web page – finances still to be finalised.

Committee for 2004-2006: Chair – ZZ Vilakazi (UCT), Vice-Chair – J. Keshaw (NECSA), Secretary – S. Mullins (iThemba LABS)

6.6. Condensed Matter Physics and Materials Science (CMPMS)

The Chairman, Prof. Engelbrecht reported that the CMPMS Specialist group submitted a document outlining the activities of the group to the International Panel on the "Future of Physics", and also assisted with the visit of the panel to various centres. Members of the specialist group were also part of the Management and Policy Committee, and several members attended the Report-back meeting at the NRF.

The group funded the visit by Prof Holloway to the conference in Bloemfontein. A successful conference on Photo-responsive Materials was also hosted by Prof Andrew Leitch (UPE) at Kariega Game Reserve, with 59 delegates from 12 countries (including from Africa) attending. The group also sponsored one of the African delegates. A total of 48 papers were delivered and the proceedings of the conference will be published in Physica Status Solidi C.

The group continued with their successful awards programme, and a total of 9 prizes are available to students.

The Chair was also involved in the screening of abstracts submitted by delegates for presentation at the Bloemfontein conference, for both Applied and Industrial Physics and the CMPMS..

6.7. Theoretical Physics

No report was presented. The chairperson, Prof. Geyer, was busy at the Theoretical Physics session that was still underway at the time of the meeting.

7. GENERAL

7.1. Report of the Conference Committee

Dr. Whitelock gave a brief summary of the recommendations of the Conference Committee with emphasis on the involvement of Specialist Groups in the organisation of the academic programme and requested that comments on the recommendations be sent to her.

There was a request for longer SG AGMs and for the Education Group's AGM not to clash with other AGMs.

7.2. Physics 2005

Prof. Moraal gave a short description of the background to the International Year of Physics 2005. DST has put together a steering committee that will co-ordinate activities in South Africa. A list of envisaged activities has been drawn up. He focussed on the special issue of the SA Journal of Science to commemorate the SAIP's 50th Anniversary and IYP2005. He requested that Chairs solicit papers for the special issue and highlighted the submission deadline of 31 October 2004.

7.3. Use of SAIP Website by Specialist Groups

Specialist Groups may use the SAIP web site to set up web pages for their group. All information for the Group's web pages should be sent to the Secretary.

7.4. Physics 2005

8. CLOSURE

The meeting closed at 17h40.

Secretary
Ms. J. Padayachee

President
Prof. E.C. Zingu