

Minutes

174th Meeting of the Council of the South African Institute of Physics with Specialist Group Chairs

Date: Wednesday, 5 July 2006

Time: 19h00

Venue: MTN ScienCentre, Century City, Cape Town

1 Opening and Welcome

The President of the SAIP, Prof. Moraal welcomed all to the meeting and explained that the meeting would be chaired by the Specialist Group (SG) Liaison on Council, Dr. Rohwer and co-chaired by the President-Elect, Prof. Chetty. Dr. Rohwer invited people to introduce themselves.

2 Attendance

Name	Email	Affiliation
G. Arendse	gja@sun.ac.za	Physics Education
D. Britton	dtb@science.uct.ac.za	Condensed Matter Physics and Materials Science
N. Chetty	chettyn@ukzn.ac.za	SAIP Council/UKZN
A. Combrink	attie@hartrao.ac.za	SAIP Council
J.A.A. Engelbrecht	Japie.Engelbrecht@nmmu.ac.za	Condensed Matter Physics and Materials Science
S. Goedhart	sharmila@hartrao.ac.za	Astrophysics and Space Science
D. Grayson	dgrayson@absamail.co.za	SAIP Council/Andromeda Science Education
P. Martinez	peter@sao.ac.za	SAIP Council/SAAO/NRF
L. McKinnell	L.McKinnell@ru.ac.za	Astrophysics and Space Science
K. Meyer	applied@saip.org.za	Applied and Industrial
H. Moraal	fskhm@puk.ac.za	SAIP Council/NWU
K. Müller-Nedebock	kkmn@physics.sun.ac.za	Theoretical
J. Padayachee	secretary@saip.org.za	SAIP Council
C. Rijdsdijk	particles@mweb.ac.za	Physics Education
E. Rohwer	egr@sun.ac.za	SAIP Council
Z. Vilakazi	zzv@tlabs.ac.za	Nuclear, Particle and Radiation
E. Zingu	zingu@julian.mantec.ac.za	SAIP Council/Mantech

3 Minutes Of Previous Meeting (R170 held 5 July 2005)

The minutes were accepted without amendment.

4 Matters Arising From The Minutes

There were no matters arising from the minutes not captured under agenda items.

5 Shaping The Future Of Physics In South Africa

Prof. Zingu reported that 5 of the 14 recommendations have received funding from the Department of Science and Technology (DST).

DST notified the President of the NRF on 15 March that R 329 000 would be made available. The recommendations that received direct funding or explicit attention were:

1. Recommendation 3: Public Understanding of Physics, R 250 000.
2. Recommendation 4: Physics in Industry, R 79 000.
3. Recommendation 15: SAIP Office, funding will be ring-fenced for a period of 3 years, pending an SAIP plan to demonstrate sustainability after that.
4. Recommendation 5: Human Resource Development; it is recommended to NRF that dedicated funding will be ring-fenced for postgraduate students in Physics.

5. Recommendation 12: National Institute for Theoretical Physics; the letter mentions that this initiative is in the process of being funded.

Mr. Rijsdijk was disappointed on the lack of response on the funding of the South African Olympiad.

6 SG Terms of Reference

Prof. Chetty reported that the SAIP constitution was in the process of being re-written. The section on Specialist Groups needed particular attention. Clauses in the new constitution should enable Specialist Groups to operate efficiently.

He requested that Specialist Groups discuss Council's *Guidelines for Specialist Groups* and explained that the terms of reference are for each group to decide. The terms of reference should be revised annually. Each group should remember that the election process of SG committees has not been sufficiently transparent in the past.

The discussion that followed focussed on the lack of interest of SG members, with some groups stating that it was impossible to get responses to emails. In these cases it was most productive to hold a face-to-face discussion at the Specialist Group's AGM, with elections also being done at the Group AGM.

7 Reports from the Specialist Groups

Prof. Moraal suggested that Dr. Rohwer report at the SAIP AGM on behalf of all Specialist Groups. SG chairs should provide a short submission for this report. SG chairs were also reminded to submit a written report for inclusion in the minutes of this meeting.

Action: SG Chairs

7.1 Applied and Industrial Physics

The chair of the group, Dr. K. Meyer presented his report.

1. New committee. An electronic election process was held before the conference. The new committee is:
 - Chair: K. Meyer
 - temporary secretaries: F. Vorster and E. van Dyk
 - other members: M. Diale and N. Kgabi
 - student representative: C.Radue
 - Co-opted member: T. Derry
2. The AIP is still in the process of transformation. AIP group members will be consulted to help produce group guidelines and direction.
3. At the AIP group meeting, the committee was asked to formulate a response to NRF with respect to THRIP funding, expressing dissatisfaction with the organisation of the fund, especially with respect to policy changes. All SAIP members wanting to participate in the formulation of this response document are requested to contact the group after the conference by sending an email to "applied@saip.org.za".
4. Attendance at presentations is well up this year.
5. The high number of MSc entries for the student prize bodes well for the future.

7.2 Astrophysics and Space Science

The chair of the group, Dr. S. Goedhart reported that the new committee was elected at the SG meeting at the annual conference of the SAIP. It was decided that the portfolios of the committee and the terms of reference needed to be revised. The members of the new committee are:

- Chair: Dr Lee-Ann McKinnell (L.Mckinnell@ru.ac.za)
- Secretary: Prof. Phil Charles (pac@sao.ac.za)
- Fundraiser: Dr Ramotholo Sefako (rrs@sao.ac.za)
- Student Representative: Jasper Snyman (fskjs@puknet.ac.za)

7.2.1 Annual conference

Once again, there was good representation from the student community for the student awards. There were 9 MSc (oral), 6 PhD (oral) and 5 poster presentations. The presentations were of high quality. Prizes were generously funded by HMO, SAAO and HartRAO. Arrangements have been made for all transfers of funds to be made electronically, using the SAIP account, in order to have greater accountability.

A total of 47 oral presentations, with three non-specialist talks, and eight poster presentations were contributed, leading to a full programme at this year's conference. The SG committee is grateful to the conference organisers for working closely with us on the programme, enabling us to have themed sessions.

The Hermanus Magnetic Observatory organised a winter school "Introduction to Space Physics" for the first day of the conference .

7.2.2 International Heliophysical Year 2007 (IHY2007)

This is an international programme of scientific collaboration to increase our knowledge of the heliosphere and its interaction with planetary bodies and the interstellar medium. Activities will be occurring during the period 2006-2008. A session during the SAIP 2006 conference was dedicated to the IHY2007 and it is planned to have the same during 2007 and 2008. Further details on this initiative can be found at: <http://ihy2007.org>

7.2.3 HMO Flagship Workshop

The NRF organised a two-day workshop in April to discuss the proposed HMO flagship project: "Ihlabathi: From core to space". Stakeholders were invited to the workshop, including a representative from the SAIP specialist group. Prof. Marius Potgieter agreed to represent the SG and submitted the following report: The workshop was attended by 'stakeholders' in mainly Space Physics from all over South Africa; about 30 people. The main Space Physics groups and role players were present (e.g., UKZN, NWU). People from Space Applications (US), Engineering Applications (UCT) etc. were also present. All role players made presentations of their research related to Space Science, as did all researchers from the HMO and international collaborations were highlighted. The proposal was very well received: all stakeholders endorsed it with no controversy. The Outreach Program of the HMO was appreciated and encouraged. The Students' Programme was considered excellent and the facilities are excellent. Dr. Mokhele attended and gave appreciated input and concluded that the workshop was a success - he made recommendations for the final report and encouraged the HMO to continue with their mandate to do Space Physics, even at a higher level than proposed. Thus, this is a very positive development for Space Physics in South Africa.

7.2.4 SA COSMO II

The second SA COSMO workshop (highlighting cosmology) was held on Saturday 8 July at UWC, immediately after the SAIP annual conference. Details can be found at <http://sacosmo.saa.ac.za/index.html> To quote Bruce Bassett (SAAO/UCT):

Underlying the philosophy and success of these meetings (UK COSMO) is the insight that many skills required for top-flight research are common to all disciplines. Presentation skills, the ability to work in teams, the ability to start new collaborations - all these are skills that are not specific to cosmology and hence students from neighbouring areas can benefit greatly from attending and presenting at the meeting. Initially we expect only one or two meetings per year, but the frequency is solely determined by demand - first from potential organizers and secondly from the students and post-docs themselves. The SA COSMO series will provide a low-cost, home-grown alternative to expensive international schools and conferences which we hope will attract students and post-docs from beyond the borders of SA, forming a nucleus for Southern Africa.

7.3 Condensed Matter Physics and Materials Science

The chair of the group, Dr. J. Engelbrecht reported that two meetings of the Executive were held during the past year. A final document for the Terms of Operation of the CMPMS was prepared and submitted to Council.

At the 2005 SAIP Conference at the University of Pretoria, Prof W Soboyejo of the Princeton Institute of Science and Technology, USA presented a Plenary Lecture on "Frontiers of BioMEMS and Bio-Technology : The Role of Africa", while no less than three Non-specialist Invited Lectures were delivered by Prof P Ngoepe ("Probing material properties with computational modelling"), Prof JH van der Merwe ("The phenomenon and impact of periodic intercrystalline interfacial interactions") and Prof W Wesch ("Primary effect of damage formation in semiconductors"). Speakers have also been identified for the 2006 and 2007 conferences.

A special Winter School for SAIP 2006 was planned in honour of Prof FRN Nabarro, who turned 90 this year, in recognition for his excellent and unselfish service to the South African physics community over many years. Two further conferences are also being planned under the auspices of the CMPMS.

A new Executive was elected after calls for nominations in a free and fair election. The new committee is:

- Prof DT Britton (UCT) - Chair
- Prof HC Swart (UFS) - Deputy Chair
- Prof K Terblans (UFS) - Secretary
- Prof JAA Engelbrecht (NMMU) - Treasurer
- Prof D McLachlan (US/Wits)
- Prof JB Malherbe (UP) - Co-opted
- Mrs M Diale - student member

7.4 Physics Education

The chair of the group, Mr. C. Rijdsdijk, presented his report.

7.4.1 Committee for 2006/8

- Gilian Arendse, University of Stellenbosch. Chair
- Kevin Govender, SAAO
- Sam Ramaila, University of Johannesburg.
- Tinjiko Nkune, Student representative

Diane Grayson, Council representative on Education would work closely with the committee in communicating activities to the appropriate stakeholders. Case Rijdsdijk would continue with the SA Physics Olympiad and report to the committee whatever progress he makes or problems he encounters.

7.4.2 Target Activities for 2006/7

1. Focus on the teaching of Physics at first year university. There was some discussion on this and it was felt that during next year's SAIP Conference the ESG should facilitate a workshop or seminar with HODs, and other interested parties, on the relationship between the FET curriculum and first year teaching at university.
2. Liaison with other Stakeholders. These included the following:
 - (a) Department of Science and Technology, DST
 - (b) Department of Education, DoE,
 - (c) SA Association Science and Technology Educators, SAASTE
 - (d) SA Association of Science and Technology Centres, SAASTEC
 - (e) SA Association for Research in Maths, and Science Education, SAARMSE.

During discussions it was decided that a delegate from each of these bodies (and any other similar ones) be invited to attend the ESG sessions and in particular take part in such workshops or seminars that are organized for each conference, see 1 above.

It was felt that such a liaison was important to avoid clashes with other relevant conferences as happened this year with the SAASTE Conference taking place in Durban at the same time as the SAIP conference.

3. Conference Activities. This year's seminar "Strategies for Teacher Training in Developing Countries" is hopefully the first of a regular feature at SAIP Conferences, the foundation of which was laid at the 50th SAIP Conference in Pretoria, when there were a substantial number of teachers who took part in the "Physics on Parade" session which tried to identify the needs of various aspects of Physics Education. Next year it is intended to have a workshop/seminar with HODs, see 1 above.

In addition it was felt that interaction between Physicists and teachers was important and that the ESG should remain pro-active in this area, and that some sort of activity that involves teachers should be held during each conference.

In order to promote physics, some sort of activity for learners should be held at each conference as well. It could well be that they attend some of the Plenary sessions and then have some other interactive experience, which could well include career opportunities.

7.4.3 Activities for 2005/6

1. IYP. This had taken up a considerable amount of the chairman's time and two of these were covered in the report of 2004/5. The first SA Physics Olympiad, SAPHO, was held and facilitated with other members of the ESG in Cape Town (see report to Council). In addition the "Physics of Toys" exhibition formed part of the MTN Sciencecentres "Play-to-Learn" exhibition which is still travelling around SA. The fifth and final part of the IYP was the presentation of the "Physics in Film" lecture series which was delivered in science centres around SA ending in March this year at SASOL SciFest.
2. Liaison with DoE and DST. Prof Diane Grayson had had a workshop with the DoE in October 2005 with some positive results which are at present being taken on and hopefully next year's report will reflect this. The intention here is the avail the DoE with the services of the expertise within the SAIP to upgrade the physics knowledge content of science teachers.

She also continues to liaise with the DoE in connection with the curriculum

Case Rijdsijk attended several meetings at DST in the course of 2005 to establish a framework within which all Olympiads can operate. Because this framework was not in place, there was no SAPHO this year, but it is anticipated that 2007 will see the SAPHO sustainable part of physics in SA. It is felt that SAPHO will make a significant contribution to promoting physics in SA in general and amongst its youth in particular.

7.5 Lasers, Optics and Spectroscopy

The chair of the group, Dr. E. Rohwer, presented his report.

7.5.1 SAIP 2006

The 2006 conference has once again been a success for the group, with around 40 oral and poster presentations. The NLC user group report back meeting was held on Monday, as an extension of the SAIP conference. The representative of the NLC, Dr Paul Motalane, 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. The new format of the conference requires a rethink how the meeting can be attached to the SAIP conference since one would like to continue with this model.

The subgroup again managed to secure sponsorship from The NLC, Scientific Development and Integration, A&J scientific and the SAIP for student prizes.

The Development of a Strategy for Femtosecond Laser Research and Applications in Africa.

The subgroup through its members is continuing to work on a strategy to promote a flagship projects in femto second science. Cooperation between the NLC, the Laser Research Institute, Prof Dino Jaroszynski, Director: Strathclyde Electron and Terahertz to Optical Pulse Source (TOPS), Department of Physics and Applied Physics, University of Strathclyde, Glasgow, Scotland and Dr Heinrich Schworer, Institute for Optics and Quantum Electronics, Friedrich Schiller University, Jena, Germany, has been started. At present the NLC together with the LRI and iThemba LABS are seeking funding for a 'Workshop on Nuclear physics and Plasma physics and high power lasers.

7.5.2 The ALC

The ALC is now registered as a section 21 company. The African Laser Centre (ALC) initially appointed the then CSIR Group Executive Director: Research and Development, Dr Phil Mjwara, as the chairperson of its Board of Directors. He has now been replaced by Dr Thulani Dlamini, who is the director of the CSIR National Laser Centre. Prof von Bergmann is the other South African member of the board. The ALC is aimed at encouraging research collaboration between African researchers and facilitating researcher and student exchanges between African institutes. Several cooperative projects in Africa are already running, involving also South African Universities. US-Africa Advanced Studies Institute on Photon Interactions with Atoms and Molecules was held on November 3 - 12, 2005 in Durban, South Africa. Several scientists from the US and the RSA attended, and students from America and Africa took part

7.5.3 Outreach

The subgroup has started a program Public Awareness and Understanding of Lasers (PAUL) aiming at students in grade 10-12. The intention is to encourage students who are intending to study in science or engineering,

to consider a career in laser science. This is supported by the NLC and the LRI at this stage. The subgroup has a website www.lasers.co.za.

7.5.4 New committee

SG Committee for 2006-2008

- Chairperson: E G Rohwer
- Fund Raising, Industrial Liaison: LR Botha
- Secretary, Treasurer: A Forbes
- Publicity, Membership, General: Dr V Couling
- Public awareness, Schools Liaison: Dr G Arendse
- Student representative: G Bosman
- Webmaster: A du Plessis

7.6 Nuclear, Particle and Radiation Physics

The chair of the group, Dr. Z. Vilakazi, presented his report.

7.6.1 General

1. There were 32 submitted (and accepted) abstracts for oral and 10 for poster presentations, respectively. This was after a handful of abstracts were rejected for not meeting the expected requirements of an oral presentation. As usual, the prizes were sponsored by BioTeknik.
2. Matters arising
 - (a) There was no 2006 Summer School due to logistical problems. It was to have been held in Mozambique, but for various reasons, it did not happen. Since it is already too late to arrange sponsorship for 2007, the next one will be in 2008 with Elias Sideras-Haddad as chair, as proposed by Krish Bharuth-Ram.
 - (b) The specialist group's Wiki webpage is up and running courtesy of Mark Dalton. It is linked to the main SAIP webpage. It can be edited by anyone, provided that they obtain the password from Mark. All contributions will require the author's name and e-mail address - anonymity will result in summary deletion.

7.6.2 Fast Neutron Workshop 2006 (hosted by UCT)

Ricky Smit reported that there were ≈ 80 presentations which will be published electronically in Proceedings of Science (connection via High Energy Physics enables free access). The MCPNX course was run before the workshop, but there was virtually zero overlap of attendance between the two. There was also an unfolding course held after the workshop, run by the collaborators from PTB, Germany.

7.6.3 Winter School 2006 (hosted by iThemba LABS)

Kobus Lawrie reported that there were ≈ 70 attendees, including 5 overseas speakers and a large number of local students. The talks will be posted at the SAIP website. Roger Fearick commented that he was disappointed that there was little discussion about future research possibilities at iThemba LABS. Kobus Lawrie pointed out that there had been a meeting at iThemba LABS that involved a NACI Task Team to look into major equipment initiatives in South Africa. One such initiative was the proposal for a radio-active ion beam facility at iThemba LABS headed by Rob Bark. There was also a report to the DST authored by Anton Botha.

7.6.4 iThemba LABS Director's report

Krish Bharuth-Ram introduced his report and outlined recommendations from the NRF Review Panel of iThemba LABS to establish a theory group (for details see: www.nrf.ac.za/publications/reviews/iThembaLABSReview1104.pdf) As a first step, Sandy Perez (Professor emeritus from UCT) has been hired part-time. Also, Anthony Cowley is on contract with the aim of increasing research outputs. Plans are underway to facilitate honorary associations for regularly visiting scientists and for setting up joint appointments with universities, in the first instance with UWC and Unizulu, perhaps also UKZN.

The iThemba LABS Programme Advisory Committee (PAC) is now the autonomous Programme Committee. A Director's Council has been set up, chaired by Prof. T Mdaka. The NRF Board has approved the go ahead for the Major Radiation Medical Centre (MRMC), which would make use of a dedicated 230MeV cyclotron and hence give more beam-time for physics. A presentation made to the Minister and DG, DST, on the MRMC was favorably received. An application has been made, via the NRF, to the DST for R7M which is urgently needed for purchase of a new CT scanner which will enable the resumption of proton therapy.

The first in series of technology meetings with the IAEA will take place from 2006-11-07 to 2006-11-10.

Cooperative Agreements have been signed with the Abdus Salam International Centre for Theoretical Physics (ICTP) and the Academy of Sciences for the Developing World (TWAS) to support research visits at iThemba LABS of up to 20 visiting scientists from Africa for up to 3 months a year. Students can make direct applications - see www.ictp.it/pages/collab/twas.html.

The refurbishment of iThemba LABS-Gauteng (iTL-G) is progressing as planned, though with considerable time and effort. A Memorandum of Agreement (MOA) has been signed with the University of Pretoria to facilitate the integration of its accelerator operations with those of iTL-G. Also, an MOA between iTL-G and NECSA is awaiting the latter's response. A Programme Management Committee has been tasked with designing a long-term research plan. A Research Planning Workshop took place at iThemba LABS-Gauteng on June26/27th 2006. Position of a Senior Scientist has been advertised, aimed at bringing bring closer interaction with the nuclear industry.

Five- and ten-year research plans are being drawn up for submission to the NRF to in order to facilitate planning in advance for new capital expenditure requirements.

7.6.5 Report back from Council

Terms of Reference for Specialist Groups. Zebulon Vilakazi, in his final announcement as chair of the NPR-SG, requested that everyone read the draft template of the ToR for SGs on the webpage. Following Zebulon's resignation, Greg Hillhouse was duly elected unopposed as the new chair of the NPR-SG.

7.6.6 New committee

Chairman: G Hillhouse [University of Stellenbosch]

Secretary: S Mullins [iThemba LABS]

Future Projects: R Bark [iThemba LABS], J Carter [University of the Witwatersrand]

Industrial Liaison : E Sideras-Haddad [University of the Witwatersrand]

Outreach : GJ Arendse [University of Stellenbosch]

International Liaison: Z Buthelezi [iThemba LABS]

Student representative: S Jones [University of Cape Town]

Webmaster: M. Dalton [University of the Witwatersrand]

7.7 Theoretical Physics

K. Müller-Nedebock presented the group report on behalf of the chair, Dr. H. Geyer.

The year featured two big highlights for the Organisation of Theoretical Physicists:

- A the start of 2006 a very successful Summer School in the Chris Englebrecht Series of Summer Schools in Theoretical Physics entitled, 'The Dark side of the Universe' took place in the Drakensberg Mountains.
- The National Institute of Theoretical Physics (NITheP) became a reality when the Department of Science and Technology announced it through a press release on the DST website. Professor Hendrik Geyer has been appointed as the interim Director of the Institute in its initial phase. The creation of this Institute follows from a long series of discussions throughout the community of theoretical physicists and can be seen as a direct response to the suggestions of the Report on shaping the future of physics in South Africa.

The next committee elections will be held in 2008 and present members will keep their positions until then.

8 General

8.1 Student Prizes

There was a discussion regarding the eligibility of students for prizes, i.e. is this restricted to student members. This item has been referred to Council for further discussion.

Action: Council

8.2 Money for Web Site Development (ZV)

A once-off payment of R1 000 would be made for the development of the Nuclear, Particle and Radiation Physics web site. The payment was approved in light of this SG always obtaining sponsorship for student prizes and never needing the SG prize money budgeted by Council.

8.3 Council Elections for 2007

Prof. Moraal called upon the SG chairs to assist with submitting nominations for Council elections.

8.4 Physics Olympiad (CR)

Mr. Rijsdijk reminded Council that having a South African Physics Olympiad is a good method of promoting physics. Mr. Rijsdijk requested that Council be more pro-active in supporting the Olympiad, by for example helping to secure funding. This item will be discussed at the next Council meeting. Approximately, R120 000 is required to cover the running costs and prizes for the Physics Olympiad.

Action: Council

8.5 Applied Component of Each Group (KM)

Dr. Meyer introduced the idea that Applied Physics be split from Industrial Physics. He suggested that the applied component of each group, be carried by the relevant group and requested that SG chairs submit ideas on how this could be handled.

Action: SG Chairs

8.6 2006 Conference

Dr. Martinez reported that there had been good interaction between the local organising committee and the SG Chairs. However, there were problems with the placement of the Applied and Education AGMs. These *must* be separate from all other conference activities. Further, no indication was given on the abstracts as to whether the presentation was a poster or an oral. This made setting out the programme difficult for the SG Chairs.

9 Next Meeting

July 2007, University of the Witwatersrand, Johannesburg.

10 Closure

The meeting closed at 21h04.

Dr. E. Rohwer
SG Liaison

Miss. J. Padayachee
Secretary

Date

11 Appendix: Terms of Reference

TERMS OF REFERENCE FOR THE SPECIALIST GROUP FOR APPLIED AND INDUSTRIAL PHYSICS

Committee structure

1. Chair
2. Deputy Chair (Liaison and general matters)
3. Secretary
4. Committee member
5. Committee member

When required, additional members may be co-opted.

Committee Portfolios:

Sponsorship, academic liaison, industrial liaison, student liaison, and marketing.

Goals

1. Promoting teaching and research in the fields of applied and industrial physics in South Africa.
2. Informing members, students and general public about the advantages and benefits of research and activities in this field of physics.
3. Assisting the Conference Organisers with the academic programme of the specialist group at annual SAIP conferences, ensuring acceptable scientific integrity and standards.
4. Rewarding and promoting excellence in postgraduate research at annual conferences.
5. Organising workshops and presentations on issues relevant to the Specialist Group.

Tasks

1. Have an electronic presence, containing information about the Specialist Group, its executive and activities. Website should contain information about opportunities, bursaries, major research initiatives and industry programmes.
2. Obtaining of sponsorships for awards programme.
3. Organise workshops, schools, symposia or conferences on a regular basis.
4. Liase with other Specialist Groups with a view of cross-disciplinary interactions.
5. Encouraging senior physicists to attend and act as "role models" at national conferences.
6. Election of members of the Executive every alternate year to Council Elections.
7. Encourage industry to communicate its physics needs and encourage the physics community to address these needs.
8. Encourage the physics academic community to communicate its needs of industry and encourage the industrial community to address these needs.
9. Provide information to assist physicists in providing services to industry.

South African Institute of Physics
Terms of Reference for the Astrophysics and Space Science Specialist Group

Portfolios of Specialist Group Committee

1. Chairperson (currently held jointly by two persons)
2. Secretary
3. Publicity, Webmaster, Schools Liason
4. Treasurer, Fundraiser
5. Student Representative

Tasks

1. Coordinate and oversee Specialist Group activities; liaise with Council
2. Correspondence, taking and filing of minutes of meetings
3. Ensure Group Website is up to date, publicise the activities of the Group, promote the public image of Astrophysics and Space Science, liaise with media if appropriate
4. Handle all Group finances as appropriate
5. Promote Astrophysics and Space Science among students; encourage & oversee formation of Astronomy Societies in the Universities; liaise with student societies to organize inter-university Astronomy activities that enable students from different universities to mix & get to know each other and which can be used to attract students to Astrophysics & Space Science

Goals

1. Act as a forum for to promote collaboration across our sub disciplines (?), maybe via the vehicle of SALT and the SKA – these telescopes potentially will be useful to Space Scientists and Astrophysicists alike
2. Investigate the viability of a programme whose object is to expose students to front-line research and researchers
3. Provide a platform for students to present their work and to become accustomed to the interrogative world of Academia

TERMS OF REFERENCE FOR THE SPECIALIST GROUP FOR CONDENSED MATTER PHYSICS AND MATERIALS SCIENCE

Portfolios

1. Chairperson
2. Deputy Chair (Liaison and general matters)
3. Secretary/Treasurer
4. Industrial Representative
5. Conferences
6. African Representative
7. Student Representative

When required, additional members may be co-opted.

Goals

1. Promoting teaching and research in the fields of condensed matter and materials science in South Africa and in Africa.
2. Informing members, students and general public about the advantages and benefits of research and activities in this field of physics.
3. Assisting the Conference Organisers with the academic programme of the specialist group at annual SAIP conferences, ensuring acceptable scientific integrity and standards.
4. Rewarding and promoting excellence in postgraduate research at annual conferences.
5. Organising regular symposia, workshops, specialist schools or conferences on topical issues/topics in the field of CMPMS.
6. Striving for diversity in the Specialist Group.

Tasks

1. Have an electronic presence, containing information about the Specialist group, its executive and activities. Website should contain information about jobs, bursaries and major research initiatives.
2. Annually, identify CMPMS plenary speaker and invite via the SAIP organizing committee.
3. Obtaining of sponsorships for awards programme.
4. Organise workshops, schools, symposia or conferences on a regular basis.
5. Liaise with Specialist Groups of : Applied and Industrial Physics, Education, Optics and Nuclear Physics with a view of cross-disciplinary interactions.
6. Encouraging senior physicists to attend and act as “role models” at national conferences.
7. Election of members of the Executive every alternate year to Council Elections.

South African Institute of Physics
Terms of Reference for the Lasers Optics and Spectroscopy Specialist Group

Portfolios of Specialist Group Committee

1. Chairperson: E G Rohwer
2. Fund Raising, Industrial Liaison: H von Bergmann
3. Secretary, Treasurer: A Forbes
4. Publicity, Membership, General: Dr V Couling
5. Public awareness, Schools Liaison, Webmaster. Dr G Arendse
6. Student representative: A Singh

Tasks

1. To promote scientific research in the field of lasers, optics, spectroscopy and related disciplines.
2. Organize regular workshops, and specialist conferences
3. Initiate and coordinate relevant projects between various institutions
4. Promote cooperation between industry and academia
5. Promote international participation in projects
6. Promote awareness among students and the public in general

Goals

1. Establish a flagship research program in the field of laser, optics and spectroscopy
2. Increase participation of scientists from the African continent
3. Increase industrial participation in the SAIP subgroup's activities.
4. Find sponsorship for keynote speaker for every SAIP conference
5. Increase student numbers in the field of laser, optics and spectroscopy

Present committee

Chairperson: Dr EG Rohwer

Vice chair: Prof HM von Bergmann

Secretary: Dr A Forbes.

Co-opted members: Dr V Couling, Dr G Arende.

Student member: A Singh

Next election date July 2006

South African Institute of Physics
Terms of Reference for the Nuclear, Particle and Radiation
Physics Specialist Group

Portfolios of Specialist Group Committee

1. Chairperson: Dr. Z. Z. Vilakazi [iThemba LABS/UCT]
2. Webmaster: M. Dalton [U. Witwatersrand],
3. Industrial ,Publicity & Schools Liaison (tbc)??
4. Secretary/Treasurer: Dr. S. M. Mullins [iThemba LABS]
5. (Head) Future Projects Task Team: Dr. R. Bark [iThemba LABS]
6. Student representative: [To be elected]
7. Africa Representative

Tasks

1. Have an electronic presence, containing information about the Specialist group, its executive and activities. Website should contain information about jobs, bursaries and major research initiatives.
2. Annually, identify NPR plenary speaker and invite via the SAIP organizing committee.
3. Secure – on an ongoing basis - sponsorships for awards programme.
4. Organise workshops, schools, symposia or conferences on a regular basis.
5. Liaise with Specialist Groups of: Lasers, Applied and Industrial, Education, Theoretical and CMPMS specialist groups with a view of cross-disciplinary interactions.
6. Encouraging senior physicists to attend and act as “role models” at national conferences.

Goals

1. Gradually increase attendance at SAIP to requisite levels – in order to increase the pool of potential researchers in the field.
2. Establish an entrenched “tradition” of summer schools.
3. Reward academic excellence of graduate student research at the conference(s).
4. Strive to achieve overall excellence, equity and diversity in the group.
5. Increase awareness (especially among industrial partners) of the importance of nuclear physics research in the (re-) emergent nuclear industry.
6. Formulate a clear vision/mission of the future of Nuclear/Particle physics research in the country.