South African Institute of Physics



NPO Registration Number: 130-172 NPO SAQA Professional Body ID: 777

http://www.saip.org.za/

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Prof. P. A Woudt (President)

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Date: 27 May 2019

Dear SAIP Member

Election of Council for the Term 2019 - 2021

A new Council for the South African Institute of Physics needs to be elected. We will be making use of electronic voting on the OMS system which was successfully used the previous years. You are encouraged to participate in this election to help determine your representatives for the SAIP 2019–2021 Council.

Voting will be open from 27 May 2019 and will close end of business on 21 June 2019.

Below is a list of nominees for the next SAIP Council.

1. <u>Election of President-Elect</u>

Nominee: Prof Makaiko Chithambo

Current Position: Professor and Head of Department, Physics Department, Rhodes University

Proposer: Prof Deena Naidoo Seconder: Prof Patrick Woudt

As only one nomination was received, Prof Makaiko Chitambo is elected unopposed.

2. <u>Election of Secretary</u>

Nominee: Prof Regina Maphanga

Current Position: Principal Researcher, Council for Scientific and Industrial Research **Proposer:** Prof Deena Naidoo **Seconder:** Prof Patrick Woudt

As only one nomination was received, Prof Regina Maphanga is elected unopposed.

3. Election of Treasurer

Nominee: Prof Ernest van Dyk

Current Position: Professor and Director at PVinsight (Pty) Ltd, Nelson Mandela Metropolitan University (NMMU)

Proposer: Prof Deena Naidoo Seconder: Prof Patrick Woudt

As only one nomination was received, Prof Ernest van Dyk is elected unopposed.

4. <u>Election of 4 Ordinary Members</u>

Your ballot allows you to vote for four Ordinary Members of Council. Seven nominations were received. Kindly indicate your choice with a mark next to the names **of no more than** four candidates on the online voting system.

The Nominees for Ordinary Member on Council are listed in alphabetical order below. Their brief CVs and Manifestos are attached to this letter.

Nominee: Dr Rudolph Erasmus

Proposer: Prof Deena Naidoo **Seconder:** Dr BA Mathe **Current Position:** Senior Lecturer - School of Physics, University of the Witwatersrand

Nominee: Dr John Bosco Habarulema

Other Council Members

Proposer: Prof Deena Naidoo **Seconder:** Prof Patrick Woudt

Current Position: Currently serving on SAIP Council as Conferences Representative on Council.

Research Scientist - South African National Space Agency

Nominee: Dr Richard Harris

Proposer: Prof Ted Kroon **Seconder:** Prof Deena Naidoo **Current Position:** Senior Lecturer - Physics Department, University of the Free State

Nominee: Dr Zama T Katamzi-Joseph

Proposer: Dr John Bosco Habarulema Seconder: Dr Shimul Maharaj

Current Position: Researcher - South African National Space Agency

Nominee: Prof Manny Mathuthu

Proposer: Dr Morgan Madhuku **Seconder:** Dr Caspah Kamunda

Current Position: Professor - Centre for Applied Radiation Science and Technology, North West University

Nominee: Mr Itumeleng Phage

Proposer: Alfred Mashalane Seconder: Jan Mphuthi

Current Position: Lecturer - Department of Mathematics, Science and Technology Education, Central

University of Technology

Nominee: Dr Iyabo Usman

Proposer: Prof Deena Naidoo **Seconder:** Prof Patrick Woudt **Current Position:** Senior Lecturer - School of Physics, University of the Witwatersrand

Currently serving on SAIP Council as Industrial Liaison Representative on Council

5. Results of the Election

The results of the election will be announced at the Annual General Meeting of the SAIP at Protea Hotel The Range in Polokwane on Friday, 12 July 2019.

Yours truly, Regina Maphanga Honorary Secretary SAIP

VOTING INSTRUCTIONS

Please to login to the SAIP OMS System and cast your vote on or before 21 June 2019.

- 1) Go to the SAIP Online Membership System http://www.saip.org.za/index.php/component/users/
- 2) Use your last login details (If you have forgotten login details just enter your email address then click on either: **Forgot your password?** Or **Forgot your username?**)
- 3) Under User Menu on your left-hand side click on "SAIP Voting System"
- 4) Under Category Select "All" Click on "SAIP Council 2019"
- 5) Click on green arrows next to your choice to vote for them. After clicking a red arrow appears to indicate that you have vote that individual.

If you have any problem logging in or voting please email: tebogo.mokhine@saip.org.za

MANIFESTOS & BRIEF CVS

Prof Makaiko Chithambo - President Elect

Brief manifesto:

I am an NRF B2 rated researcher and current member of the SAIP Council. This brief statement is based on my professional contributions, research and administrative ability. I am now in my second term as head of department at Rhodes University and have served or serve on numerous university committees. I also served as deputy dean of science from July 2011 to July 2013. All this has given me suitable experience in administrative and committee work. In terms of national service to our profession, I was honoured to serve as a member of the Group of Experts which looked at tackling the issue of teaching and learning of physics in South Africa. I am a member of the Council of the SAIP for which I served as honorary secretary from 2015 to 2017. I am in involved in research and publish in international peer-reviewed journals. I serve as a referee for many journals and have been listed as a valued or outstanding reviewer in several instances. I have organised international conferences and have served on organising committees of some or contributed as an invited speaker in some instances. I currently sit on the scientific advisory committee of the International Conference on Solid State Dosimetry (2016, 2019). I am interested in and have fostered relevant research collaboration nationally and internationally. I look forward to assisting the SAIP achieve its goal of promoting physics in South Africa.

Brief curriculum vitae:

Education

PhD University of Edinburgh, UK; Solid State Physics, 2000

Employment

2015- Professor, Rhodes University

2010- Head, Physics Department, Rhodes University

Professional services

Reviewer of many international journals including

Journal of Luminescence, Radiation Measurements, Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, Journal of Physics D: Applied Physics, Physics and Chemistry of Minerals etc **Member** of numerous national and international committees, SAIP Council

Service of grant review panels for the NRF, CSIR, National Science Centre (Poland)

External examiner – various national and international universities

Supervision – MSc, PhD students and postdoctoral research fellows

Awards

- a) Research rating B2 National Research Foundation, South Africa, 2019 -
- b) Merit award, Rhodes University, 2013
- c) Vice Chancellor's Distinguished Research Award, Rhodes University, 2006

Publications

100 or so papers

<u>Books</u>

Makaiko L Chithambo 2018 *An Introduction to Time-resolved Optically Stimulated Luminescence* Morgan & Claypool Publishers Book chapter

Makaiko L Chithambo 2019 *Time-resolved Luminescence: Progress in Development of Theory and Analytical Methods.* In *Advances in Physics and Applications of Optically and Thermally Stimulated Luminescence* Ed. By Reuven Chen and Vasilis Pagonis World Scientific.

Prof Regina Maphanga – Honorary Secretary

Brief manifesto:

The growth and development of every nation in the 21st century is directly linked to the development of science and technology in that particular nation. Thus, science and technology has a profound effect on nation's ability to compete in global markets. Hence, physics as a science subject contributes to employment, health, human well-being and prosperity worldwide. My mission is to be a South African Institute of Physics agent, by articulating its visions, mission statements, action and business plans with integrity. Also, I believe the institute needs to retain young physicists to enhance its sustainability and prepare them to take part in policy and decision makings for future South African physics community.

Brief curriculum vitae:

Regina Maphanga is a Principal Researcher at the Council for Scientific and Industrial Research – Next Generation Enterprises and Institutions Cluster. Prior to joining CSIR she was an Associate Professor of Physics at the University of Limpopo and is currently appointed as a Research Associate at the same institution. In 2012 Regina was appointed as a Junior Associate at the Abdus Salam International Centre for Theoretical Physics in Italy. Her research focuses on using computer simulations methods to probe materials properties and design new materials, mainly for energy storage. She is an alumni member of South African Young Academy of Science and Global Young Academy – the voice of the young scientists around the world. Amongst various professional committees she serves, she is an Honorary Secretary and Executive Council Member for South African Institute of Physics and an elected member of C20 Commission on Computational Physics of International Union of Pure and Applied Physics (IUPAP).

Prof Ernest van Dyk - Treasurer

Brief manifesto:

I currently serve on the SAIP Council as the representative for Divisions and am also currently the Treasurer of the Applied Physics Division. My association with the institute started in 1983 as a student and I have been a member of the SAIP since 1990, and am currently also registered as a Professional Physicist. I have, in the past served as secretary and treasurer of the Division for Physics of Condensed Matter and Materials. I have also been actively involved in the Applied Physics Division as Chair and now Treasurer. During the time that I have been associated with the Applied Physics Division we have built the Division into a strong and viable entity of the Institute. I believe I am have the relevant experience to make a contribution to the Institute and it would be an honour for me to serve as the SAIP Council for 2019-2021 as Treasurer.

Brief curriculum vitae:

Professor Eugene Ernest van Dyk BSc (Physics and Applied Mathematics), BSc Hons (Physics), MSc (Physics), PhD (Physics), Pr.Nat.Sci., Pr.Phys.

Professor of Physics: Nelson Mandela University Director: PVinsight (Pty) Ltd

Ernest van Dyk obtained his PhD in Physics at the University of Port Elizabeth in 1994. He teaches Physics at Nelson Mandela University and is also the leader of the Physics Departments Photovoltaic Research Group (PVRG). He was the Director of the Centre for Energy Research (CER) at the university from 2006 to 2017. The CER was involved with several renewable energy research projects for industry and government agencies. He is currently the Director of a spin-off company, PVinsight, which is a SANAS accredited laboratory which conducts quality assurance testing on Photovoltaic modules.

Prof van Dyk's research interests are in the field of Solar Energy, specialising in Photovoltaics. He has supervised 21 MSc and 14 PhD student projects to completion and is currently supervising 4 MSc and 4 PhD students. He has published 58 scientific journal articles in the field of Photovoltaics and has authored or coauthored 47 international conference papers and 181 national conference presentations. Prof van Dyk has a passion for teaching Physics and researching Renewable Energy Technologies. He also regularly consults on Photovoltaics and Solar Energy to national and international companies.

Dr Rudolf Erasmus – Ordinary Member

Brief manifesto:

I have been involved with Physics research and Physics-related teaching since my undergraduate degree at the University of Pretoria in 1990. As an experimental physicist in Solid State Physics and Materials Science in academia for the past 18 years, and for a short period before that in industry, I am aware of the importance of mutual support and collaboration between science practitioners to advance knowledge in our chosen field(s) of research. Without this support, and associated networks, productive research is hampered. The importance of the transfer of skills and knowledge, especially to post-graduate students, has also been strongly highlighted through my interactions with these students. I value inter-disciplinary research highly and view the importance of cooperation between different science and engineering disciplines as essential in order to make advances, both in fundamental research and applied fields.

I can contribute to the business of the Council of the SAIP by drawing on my extensive experience of working with staff and post-graduate students from various disciplines and my awareness and appreciation of the importance of networks and people in research.

Brief curriculum vitae:

I obtained my MSc from the University of Pretoria in 1996 and thereafter spent two years at the De Beers Diamond Research Laboratory as a Senior Scientist. I subsequently obtained my PhD from the University of the Witwatersrand.

I have been responsible for the Raman and Luminescence Laboratory at the University of the Witwatersrand since 2001, initially as Senior Research Officer, and as Senior Lecturer in the School of Physics since 2013. I have a partial secondment to the Wits Microscopy and Microanalysis Unit (MMU), also since 2013. I have published 77 papers in peer-reviewed journals and 26 papers in reviewed conference proceedings. This has resulted in a Web of Science hindex of 15 (Jan 2018).

I have strived, where possible, to make the Raman laboratory facilities readily accessible to users both within Wits and from other institutions. The Laboratory has a substantial user group, with 96 users (staff and postgraduate students) making use of the facilities to various degrees during 2018. I am involved in collaborative projects in Physics, Chemistry, Geology and Engineering, where I am responsible for the spectroscopic characterisation and interpretation.

I am one of the lecturing team for first-year Physics for Engineers and also teach a module in Materials Characterisation Techniques for the third year Materials Science students. I am currently supervising one PhD students.

I have served on the organising committees of several local workshops and conferences, including SAIP 2007 when it was held at Wits University. I have assisted in the organisation of two international conferences held in South Africa. I chaired the organising committee of the third SA Raman Workshop that was held in Stellenbosch

in November 2017. I have volunteered at several Wits University Open Days and have facilitated job shadowing arrangements by aspirant physicists in Grades 11 and 12.

I have acted as referee for the South African Journal of Chemistry, Analytical Chemistry, Journal of Applied Physics, Journal of Physical Chemistry, Physica Status Solidi c (conference series), Journal of Alloys and Compounds, Physica B and Journal of Raman Spectroscopy. I have acted as external examiner for dissertations and theses from Nelson Mandela Metropolitan University, University of Pretoria, University of Johannesburg, Wits University and University of Stellenbosch.

Dr John Bosco Habarulema – Ordinary

Brief manifesto: John Bosco Habarulema has been an ordinary council member of SAIP since 2015. He is currently in charge of the conference and proceedings portfolio of SAIP. SAIP is an important platform for advancement of the Physics voice and it has been a pleasure to serve the Physics community in the SAIP council. If given an opportunity, I will continue to advance the interests of Physics especially for the inclusion of students in decision making for the future of Physics.

Brief curriculum vitae: John Bosco Habarulema is a research scientist at the South African National Space Agency. He has served in the SAIP council as an ordinary member since 2015. He is also a research associate in the department of Physics and Electronics, Rhodes University

Dr Richard Harris – Ordinary Member

Brief manifesto:

I am currently a senior lecturer at the University of the Free State's Physics Department. I was previously employed as a Scientist at Mintek's Advanced Materials Division. I therefore have experience in challenges experienced in both industry as well as in academia. I have also spend some time abroad working in the labs at the Oak Ridge National Laboratory (ORNL) in Knoxville, Tennessee, USA as well as the Iberian International Nanotechnology Laboratory (INL) in Braga, Portugal.

A fairly large disconnect currently exists between industry and academia in South Africa. Many students obtain funding from industrial partners for post-graduate studies, but their projects seldom lead to tangible outputs that are beneficial to both the companies sponsoring the students, the students themselves and the South African economy at large. Too few new jobs and related new industries are therefore created despite the large number of academic outputs in the form of papers and conference proceedings.

The South African Institute of Physics plays a crucial role in aligning the national strategic initiatives as reflected in national strategies like the National Development plan and the 10-year Innovation Plan (among others) with academia, industry and post-graduate student training. I am therefore passionate about finding solutions to successfully integrate new post-graduate students (after graduation and with ample and sufficient "real-world" experience) into industry so that they will become beneficial to our local industries and economy.

Brief curriculum vitae:

Qualifications

2003 – BSc – University of the Free State

2004 - BSc Hons. - University of the Free State

2006 - MSc - University of the Free State

2010 - PhD - University of the Free State

Professional Experience

2004 - 2010 - Research Assistant: Dept. Physics, UFS

2010 - 2015 - Scientist, Advanced Materials Division, Mintek

2015 - Present - Senior Lecturer: UFS Committees:

2014 – 2017: South African Nanotechnology Initiative (SANi) – Portfolio: Secretary

2014 – 2018: Division for Physics of Condensed Matter and Materials – Portfolio: Additional Member

2018 - Present: Division for Physics of Condensed Matter and Materials - Portfolio: Secretary

2016 - Present: Biosafety and Environmental Ethics Committee, UFS

2018 - Present: 4th Industrial Revolution Committee, UFS

Dr Zama T Katamzi-Joseph – Ordinary Member

Brief manifesto:

There are far less women in Physics with PhDs, who participate as lecturers, student supervisors and are NRF grant holders in South Africa. WiPiSA can be used as an instrument to encourage more female into academic career in Physics as well as more women participation in SAIP, however many students and academics are unaware of WiPiSA and its activities within the community or even if aware do not participate in WiPiSA. If elected as a member of the SAIP council, I am going to advocate to increase activities, and exposure of WiPiSA (Women in Physics of South Africa) to encourage more female participation in Physics academia and SAIP, for WiPiSA workshops every 3-2 years to promote relevant issues to women and female students, as well as special WiPiSA social, networking and professional events during the annual SAIP conferences.

There are a large number of students that attend SAIP's annual conferences, but there are few activities dedicated to encouraging them to remain within the field. If elected I will work towards introducing events for young people to socialize and network amongst each other as well as to engage with senior academics to discuss the future direction of the community, current opportunities for future growth and other topics related to helping the students see Physics academia as a viable future career for themselves.

Brief curriculum vitae:

Education:

University of Bath, United Kingdom PhD — Ionospheric Physics (201 1)

Rhodes University, South Africa
MSc — Astrophysics with distinction (2008)

University of Cape Town, South Africa

BSc Hon — Astrophysics and Space Physics (2006) BSc - Physics (2005)

Work Experience:

Researcher, South African National Space Agency (SANSA), South Africa (2012 — current)

Postdoctoral Researcher, Hermanus Magnetic Observatory (HMO)/SANSA, South Africa, (2011)

Professional Membership

American Geophysical Union (2018 — current)

ISCU national board member (2017 — current)

URSI national committee member (2013 — current)

South African Institute of Physics (2006 — current): Treasurer for SAIP Division D (2012 — 2013) and co-chair of Division D (2018 — current)

Prof Manny Mathuthu – Ordinary Member

Brief manifesto:

My Policy: All graduate student must have equal access to Nuclear Science Knowledge, through academic and exposure to the NRF Nuclear Industry Facilities around the Country and abroad (eg. Joint Institute for Nuclear Research (JINR).

Aim and Objective:

If elected into the SAIP Council Ordinary Membership, I am to foster and promote the teaching of Nuclear Science in formally disadvantaged Universities (eg. North-West University - Mafikeng Campus, etc.)

This will be achieved by encouraging University students to:

- Participate in SAIP Competitions,
- > NWU Science week
- Visit our state of the art, Gamma spectrometry and NRF Nuclear Forensics ICP-MS Laboratories, both located in the Mafikeng campus.

Brief curriculum vitae:

BIO-DATA FOR DR MANNY MATHUTHU 16 May 2019

FAMILY Name: **MAIDEN Name:** Middle name(s): First name: Sex:

MATHUTHU MANNY М

Nationality at birth: Date of birth: Place of birth (City and Country):

ZIMBABWEAN ESIGODINI/ ZIMBABWE 21-01-1962 **MARRITAL**

STATUS MARRIED

Full name/address of permanent Institution: **Physical Address**

North West University (Mafikeng) Cnr Albert Luthuli and University Drive Center for Applied Radiation Science Mmabatho, RSA and Technology (CARST), E-mail: mathuthu@gmail.com P Bag X2046, Mmabatho, 2735 Manny.Mathuthu@nwu.ac.za

RSA Cell No: +27 76 507 3327 Tel. No: +27 18 389 2777

Professional Training 1.

Nuclear Science (e.g. NAA) North Carolina State University Sept 2008 - May 2009 Laser Spectroscopy Lund University, Sweden April- June 2001 Laser Induced Breakdown

Spectroscopy (LIBS) National Laser Center, RSA July 2005- Mar 2006

Awards & Honors 2.

- January 2018 to December 2023: South Africa National Research Foundation (NRF) C3- Rating (Distinguished Scientist)
- January 2018 to December 2022; NRF NUCLEAR Forensics Award of ZAR 5,000,000.00 (Five million Rands) for setting up a Nuclear Forensics Programme at CARST.
- January December 2021: International Atomic Energy Authority

(IAEA) Funded CRP Project J023100 on Nuclear Forensics (EURO 7000; February 2019)

IAEA 2016 Fellowship at University of Tennessee, Knoxville, USA. Joint IAEA-ICTP Training Course, Trieste (Italy) on Physics and Technology of Water Cooled Reactors through the use of PCBased Simulators 16TH -27TH Feb 2015

Education (Higher Degrees)

University or equivalent **Degree Name and place**

> UNIVERSITY OF ZIMBABWE PhD, MPhil, BSc Hons Physics & BSc.

4. Employment and Academic Responsibility

Employment and Work Experience:

August 2012 to Curren Professor at the Center for Applied Radiation Science and Technology (CARST)-North West University (Mafikeng), RSA

APRIL 2011 TO JULY 2012 TECHNICAL SERVICES MANAGER (RPAZ)- APRIL 2006 TO

MARCH 2011 PRINCIPAL SCIENTIST - SCIENCE & (SIRDC)

JAN 20098 TO MAR 2006 SENIOR LECTURER, LECTURER (PHY DEPT, UZ)

5. Research Experience

Applied Radiation Science and Technology, Nuclear Spectroscopy: Research Laser Induced breakdown spectrometry, etc.

Mr Itumeleng Phage - Ordinary member

Brief manifesto:

Itumeleng Phage has a passion in the teaching of learning of physics in schools. He intends to establish a capacity building and development training for Physics teachers in schools as well as in Technical and Vocational Education and Training (TVET) College. He has been a physical science teacher at high schools, lectured engineering science and physics at TVET (former Technical) college for several years before joining Higher Education Institution as a Physics instructor and the Teaching Methodology in Physics for prospective physical science teachers. His research study focuses on determining a model for effective teaching physics in the Senior and Further Education and Training Phases. This will also help to form a discussion forums, seminars, and workshops for these physics educators, both in schools and TVET colleges. This will help these educators to get involved in research and participate in the curriculum development of physics, decision or policy making and implementation by the National Departments of Education. The other purpose would be to raise the public interests and awareness in Science (Physics) Communication. Mr Phage has been a member of SAIP since 1994 to present. He has presented papers at national and International conferences and have published papers in accredited journals and conference proceedings. Through SAIP, he will be able to engage and unite all stakeholders in the physics teaching and learning such as teachers, academics and researchers including enforcing collaborations and networks at national and international level.

Brief curriculum vitae:

Mr Itumeleng Phage is a Physics and Physics Education lecturer, PhD candidate in the Department of Mathematics, Science and Technology Education (MSTE) at Central University of Technology, Free State (CUT), Bloemfontein campus. He started at CUT since July 2009 as a Physics Laboratory Technician before becoming a lecturer. He has vast experience in teaching Physics and Mathematics at High Schools and Technical and Vocational Education and Training (TVET) colleges, former Technical and FET Colleges. His research focus is on investigating the enhancement and effective teaching and learning of Physics in Secondary Schools, Senior Phase (SP) and Further Education and Training (FET) Phase, including TVET

Colleges, to promote and support learners and students to follow studies and careers in the Science, Technology, Engineering and Mathematics (STEM) fields. He is a registered member of South African Institute of Physics (SAIP) and South African Council of National Scientific Professions (SACNASP).

Dr Iyabo Usman - Ordinary Member

Brief manifesto: My name is Iyabo Tinuola Usman, aand PhD at the University of the Witwatersrand, Johannesburg. My work entails performing nuclear physics experiments using light particle beams available at iThemba LABS SSC cyclotron in conjunction with the state-of-the-art K600 Magnetic Spectrometer, analyze the data obtained with sophisticated nuclear models/theories and supervise postgraduate students. To be an ordinary member of the SAIP Council is a privilege and I am determined to contribute to this professional organisation by seeking different ways of doing things because efficient is not the same as effective.

During my service as a member of SAIP Council with the Industrial Liaison Portfolio (2017-2019), I have organised the first ever "Physics in Industry" workshop during the SAIP 2018 conference with successive continuation in the upcoming conferences. Continue to be a key player in making industrial connections for SAIP. Focus will be on increasing the collaborative work with industry and Physics researchers across South Africa and international, for advancement of science innovation. Action plan to drive inviting industrial partners to give talks at SAIP conferences. Technological development has a strong influence on a nation's economy, and its ability to provide for its citizens. Physics has a strong utilitarian role to play in global competitiveness.

"In the final analysis it is basically mastery and utilisation of modern science and technology that distinguishes the South from the North." Abdus Salam, Nobel Laureate in Physics in 1979.

Brief curriculum vitae:

- . 2012 Date: Senior Lecturer School of Physics, University of the Witwatersrand, Johannesburg.
- · 2010 2012: Postdoctoral Researcher iThemba LABS, Cape Town
- · 2005 2009: Tutor School of Physics, University of the Witwatersrand, Johannesburg
- Duties: Teaching, Research, International Collaboration and Community Interaction
- Degrees:
- · 2009 (PhD Physics)
- · 2007 (MSc Physics)
- · 1998 (BTech Hons Pure and Applied Physics)