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Towards a Pan-African Physical Society

The Eighth Biennial African School of Fundamental Physics and Applications (ASP2024), Marrakesh, Morocco

Azwinndini Muronga

9 July 2024

- Thanks to the IOC and LOC for the invitation – Mounia, Ketevi, Farida, Mohamed
- I am happy to be at ASP2024 in Marrakesh, Morocco.
- Thanks to Ms Dolly Ntintili for arranging my trip.
- ASP is a fantastic school.
- Students – you should use every opportunity to network.

THE EIGHTH BIENNIAL AFRICAN SCHOOL OF FUNDAMENTAL PHYSICS AND APPLICATIONS (ASP2024)

Co-organized by Cadi Ayyad University and Mohammed V University at Faculty of Science Semlalia, Marrakesh, Morocco

April 15th–19th and July 7th–21st, 2024

ASP MISSION
To increase capacity development in fundamental physics and related applications in Africa. The ASP has evolved to be much more than a school. It is a program of actions with directed ethos toward physics as an engine for development in Africa

SCIENTIFIC PROGRAM

► **TOPICS**

- Nuclear & Particle Physics
- Medical and Radiation Physics
- Applied and Industrial Physics
- Theoretical and Computational Physics
- Space Physics, Astrophysics & Cosmology
- Physics for Sustainable Development
- Condensed and Materials Physics Biophysics
- Capacity Development and Retention Discussion
- Physics Education, Outreach and Communication

► **ACTIVITIES**

- Outreach for Secondary Schools April 15th–19th, and July 15th–19th, 2024
- Physics lectures, tutorials and hands-on experimentation for students, July 7th–21st, 2024
- Workshop for High School Teachers, July 8-12, 2024
- ASP Forum, July 13th, 2024

INTERNATIONAL ORGANIZING COMMITTEE (IOC)
B. Acharya (ICTP and King's College London), K. Assamagan (BNL), C. Darve (ESS), F. Ferroni (INFN), M. Laassiri (HIP)

INTERNATIONAL ADVISORY COMMITTEE (IAC)
N. Blackburn (BNL), M. Campanelli (UCL), D. Charlton (University of Birmingham), S. Cornell (University of Johannesburg), A. Dabrowski (CERN), T. Ekelof (Uppsala University), J. Ellis (King's College London), L. Elouadrhiri (TJNAF), E. G. Ferreira (USC), H. Gao (BNL), J. Govaerts (UCL), J. Gray (ASP), B. Heinemann (DESY), H. Holtkamp (SLAC), J. Huston (MSU), O. Ka (UCAD), Y. K. Kim (Chicago), D. Kobar (IASZ), S. C. Lee (Academia Sinica), B. Masara (SAIP), H. Montgomery (TJNAF), S. Muanza (CNRS-IN2P3), R. Nemutudi (Themba LABS), M. Nkurumia (NRF), R. Quevedo (University of Cambridge), L. Rivkin (PSI & EPFL), L. Serfati (INFN), H. Severini (Oklahoma), P. Skands (Monash), E. Tsessmelis (CERN), L. Vacavant (CNRS-IN2P3), Z. Vilakazi (Witwatersrand), H. B. White Jr. (Fermilab), J. Yu (UTA)

LOCAL ORGANIZING COMMITTEE (LOC)
A. Adachoua (UCA), A. Arhrib (UAE), A. Belhaj (UM5), D. Benchekroun (UH2C), Z. Benkhaldaun (UCA), A. Boskri (UCA), M. Daoud (UIT), L. B. Drissi (UM5), M. Gouighi (UIT), Y. Hassouni (UM5), A. Hoummada (AH2ST), A. Jabiri (UCA), T. Khatla (UCA), Y. Khoulaki (UM5), A. Lahbas (UM5), B. Manout (UM5), M. Ouchrif (UMP), R. Sebti (UM5)

CHAIRS
Mohamed Chabab (UCA)
Farida Fassi (UM5)

<https://www.africanschoolofphysics.org/asp2024/>

Why should there be a Pan-African Physical Society? Is there a need?



<https://www.un.org/fr/teach/SDGs>

Who should be asking and who should be answering this question?

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AGENDA 2063
The Africa We Want

- Aspiration 1** (Green): A prosperous Africa based on inclusive growth and sustainable development
- Aspiration 2** (Orange): An integrated continent, politically united and based on the ideals of Pan Africanism and the vision of Africa's Renaissance
- Aspiration 3** (Blue): An Africa of good governance, democracy, respect for human rights, justice and the rule of law
- Aspiration 4** (Black): A peaceful and secure Africa
- Aspiration 5** (Light Blue): An Africa with a strong cultural identity, common heritage, values and ethics
- Aspiration 6** (Dark Blue): An Africa where development is people-driven, unleashing the potential of its women and youth
- Aspiration 7** (Light Green): Africa as a strong, united and influential global player and partner

Logos for African Union and NEPAD (Transforming Africa) are also present.

<https://au-watch.org/agenda-2063/>

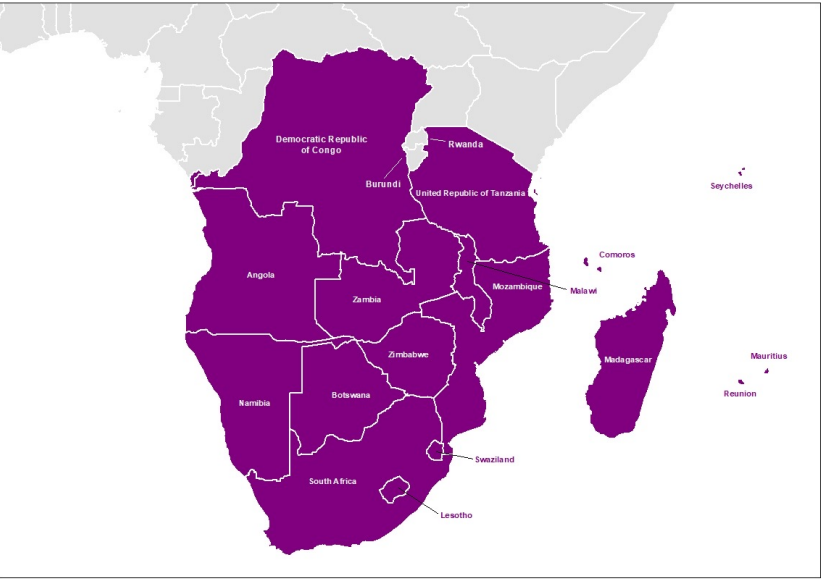
NATIONAL DEVELOPMENT PLAN

2030 NDP
Change the World

<https://www.dominofoundation.org.za/national-development-plan/>

What should be the role of grassroots physicists? –individually , nationally, regionally

SADC Region



AU Regions: Southern Africa



<https://eela-project.org/sadc>

https://www.researchgate.net/figure/Countries-in-the-southern-African-region_fig2_331359647

Please see Oumar Ka's yesterday presentation/talk on SOAPHYS/WASP

Towards a sustainable Southern Africa Physics Network

- A key **catalyst** is important - Oumar Ka
- Sensitivity and respect for diversity
- Compelling concept note – **the why?**
- Participation on equal footing
- Rules of engagement – ala IUPAP statement(s)
- Involve all key stakeholders

First Consultative Forum Co-Creating the Southern Africa Physics Network (SAPhysNet) Draft Programme: 05 July 2024: 09:00 – 13:00(SAST)

HYBRID MEETING	Online Link	Join Zoom Meeting https://us06web.zoom.us/j/85099773323?pwd=FxZreRha80t9kapel6a04Rz5a3pY1 Meeting ID: 850 9977 3323 Passcode: 335554
	In-person Venue	Rhodes University – SAIP2024 Physics for Development, Education and Outreach Parallel Session Room

Programme Facilitators: Prof Igle Gledhill (Wits) and Prof Rudolph Erasmus (Wits)

Time	Activity	Speaker
08:30 – 09:00	Registration	SAIP
09:00 – 09:10	Welcome and House Rules	Prof Sam Ramaila (UJ) & Facilitators
09:10 – 09:20	SAPhysNet Background & Historical Context	Prof Muronga (NMU)
Session 1: Role of Science Networks in Development		
09:20 – 09:30	Role of Policymakers in International Cooperation	Ms Lindiwe Gama (DSI)
09:30 – 09:40	Support for Regional Networks & Africa Cooperation	Mr Michael Nxumalo/ Ms Busi Molefe (NFR)
Session 2: Status and Lessons from Other Science and Physics Regional Networks		
09:40 – 09:50	IUPAP promoting regional networks	Prof Nithaya Chetty / Prof Igle Gledhill (Wits)
09:50 – 10:05	Lessons from other regional science networks	Prof Farai Mhlanga (UL) SAMSA President
10:05– 10:20	West Africa Regional Physics Network - lessons and benefits	Prof Oumar Ka (UCAD, Senegal) WASP President
10:20 -10:30	Opportunities African Networks & Societies: Large Scale Infrastructure & Events	Prof Simon Connell (UJ)
10:30 – 11:00 Tea Break		
11:00 – 11:30	Input on physics networks and societies in Southern African countries	Facilitators
11:30 – 12:30	Questions and open discussion	Facilitators
Session 3: Way forward for our region – Southern Africa Physics Network		
12:30 – 12:55	Way forward, discussion and next steps	Facilitators
12:55 – 13:00	Vote of thanks	Prof Rudolph Erasmus
13:00 – 14:00 Lunch Break		

Towards a Sustainable Network of Physicists in Southern Africa

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Nelson Mandela University

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South Africa

First Southern Africa Physics Network Forum, 5 July 2024

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Motivation

- Challenges faced by countries in Southern Africa require a well coordinated, integrated approach.
- Opportunities within the Southern Africa region could be better harnessed by collaborating.
- Physics is the key in addressing the challenges faced by the Southern Africa region.
- Physics in Southern African countries faces multiple and often unique challenges.
- Please add pointers for motivating why there is a need for a sustainable physics networking in Southern Africa - the science case, the social case, and the sustainability case. Or is there a need?
- ...

In responding ...

- Physics will need the other science disciplines and the social sciences.
- Physics will need the civil societies, policy makers, the private sector, and the institutions of higher learning.
- Physics should embrace inter-disciplinary and trans-disciplinary approaches.
- A strong regional network will contribute positively with one voice in shaping physics in the continent.
- Easy mobility of physicists across the borders of Southern Africa region.
- Please add – What could be the benefits of a sustainable physics network in the Southern Africa region?
- ...

The Network ...

- SAPHysNet is a working name. I am the chair of the Task Team to co-create SAPHysNet.
- The network should be co-created by the physicists in Southern Africa for physicists in Southern Africa.
- Co-created through robust and yet focused discussions.
- Diversity, Equity and Inclusion should be part of the guiding principles.
- Ethical conduct , democratic ideals, transparency.
- Include research and training, physics education, innovation, and public/govt/industry engagement among the focus areas.
- Driven by the need for a strong physics for sustainable future of Southern Africa region.
- If there is a need for a network – what would you like to see as its characteristics?
- Looking forward to robust and fruitful discussions.

Summary of outcomes of the 1st grassroots discussions

- Messages of support from stakeholders were reassuring
- All participants responded to the need for a network
- Words of caution and warning by stakeholders were welcomed by participants and facilitators
- The Task Team leading up to the 1st Forum has completed its “task” and a new broader and inclusive Task Team was established by the grassroots with few other countries still to send a rep on the new task team
- The terms of reference for the new Task Team will be determined with clear mandate and time frames
- The task team has nominated members, volunteers , and coopted members.
- Some inputs from stakeholders
 - Have key point person from each country
 - In the end, please have a clear strategy and implementation plan
 - Have a constitution that will rule over all its participants
 - Have good , ethical governance structure(s) aligned to your strategy
 - AU Southern Africa region and SADC region

Possible challenges facing AfPS

- It is not visible within the continent but seems to be known outside the continent
- Individuals seem to be known and not the AfPS
- Strategy, implementation is on ad hoc basis.
- Good and ethical governance non-existent leads to constitutional non-compliance. - **Sitting on the seat until you fall with the seat!**
- Reliance on AfLS organized events
- From a distance it seem to be run like a “spaza” shop

Possible root causes

- It does seem like the “founders” who became perpetual leaders did not have the interest of physics and physicists in the continent
- Personal ambitions rather than vision for physics on the continent seem to have been the drivers
- That it seem AfPS was not actually conceptualized by Africans in Africa might be the biggest root cause of them all.

Towards a sustainable Pan-African Physical Society

- African physicists within the continent will have to start the movement themselves – the GenZ has arrived: they are in our classrooms and research labs.
- Strong founding principles should be developed by the African physicists themselves
- Involve policy makers and the private sector in the continent
- Involve the citizens of the continent
- Invite physicists from the diaspora to collaborate and assist us in achieving our own crafted vision and goals
- Invite physicists from outside Africa to collaborate to achieve our goals
- Ubuntu and Pan-Africanism should be part of the drivers
- The need for resources should be the last thing
- Understand the complexity of and within Africa
- **There is no one coming to save us from ourselves!**
- **We need those physicists in Africa who will say send me!**

In the spirit of Ubuntu and Pan-Africanism

To be an African,
you do not need to be born in Africa,
..... Africa must be born in you



Kwame Nkrumah
1st President of Independent Ghana
Pan Africanist



Thuma mina – Send Me

<https://www.youtube.com/watch?v=d4Bwux-btq0>

Musician: Hugh Masekela

<https://youtu.be/V-iBudsJFKE>

"IT IS IN
YOUR HANDS
TO CREATE A
BETTER
WORLD FOR
ALL WHO
LIVE IN
IT."

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"I WANNA BE THERE WHEN
THE PEOPLE START TO TURN
IT AROUND / WHEN THEY
TRIUMPH OVER POVERTY / I
WANNA BE THERE WHEN THE
PEOPLE WIN THE BATTLE
AGAINST AIDS / I WANNA LEND
A HAND / SEND ME."

HUGH MASEKELA

Change the World

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