



African Physical Society

$$\left[\frac{-\hbar^2}{2m} \nabla^2 + V \right] \Psi = i \hbar \frac{\partial}{\partial t} \Psi$$



african association
of physics students

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African Physical Society

www.africanphysicalsociety.org

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Slides prepared by Lawrence Norris

The African Physical Society is a non-governmental professional association legally incorporated under the laws of the Republic of Ghana, along with the African Association of Physics Students and African Physics Teachers Association as subsidiary organizations.



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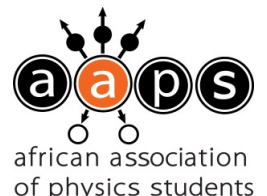
African Association of Physics Students

African Physics Teachers Association

Links

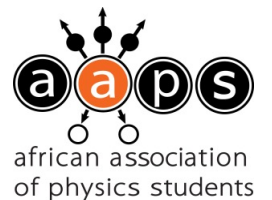
Originally launched in 1983 as the **Society of African Physicists and Mathematicians (SAPAM)**

Due to growth in both the African applied maths and physics communities, SAPAM was relaunched in 2010 as the African Physical Society, with warm regards for the **African Mathematical Union, which was founded in 1976 in Rabat, Morocco**



The vision of the African Physical Society (AfPS) is to enhance the timely development in Africa of physics education, research, training, and both national and transnational collaborations for the benefit of Africa and the global physics community.

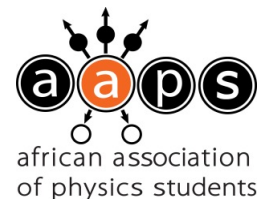
From African Physical Society Strategic Plan
Adopted October 2022



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To achieve this vision, the AfPS sets the following **GOALS** for immediate action:

1. Enhance and promote the development of physics education, research, and training in Africa at all levels, including primary and secondary schools, universities, and research centers.
2. Apply the outputs from physics research to the socio-economic development of all Africa.
3. Promote communications and the sharing of information with the general public about recent progress in physics and its applications.
4. Promote partnerships with other physical societies, both in Africa and globally.
5. Maintain strong education, research, and training partnerships with the Abdus Salam International Centre for Theoretical Physics (ICTP), International Union of Pure and Applied Physics (IUPAP), International Union of Crystallography (IUCr), and other prominent organizations.
6. Maintain a strong partnership with the African Light source (AfLS).



To achieve its Goals, the AfPS will do the following:

- I. Establish Standing Projects that involve countries from all regions of Africa. Examples are the following:
 - a. Assist in the establishment of a Physical Society in each African country.
 - b. Award AfPS prizes annually.
 - c. Collaborate with African National Physical Societies to visit primary and secondary schools for physics demonstrations.
 - d. Send researchers to universities to give colloquia on the latest advances in physics research and applications.
 - e. Develop mechanisms to facilitate international research and training collaborations.
 - f. Establish a Working Group to promote gender equity in physics education, research, and training.
 - g. Organize various types of meetings, including conferences, workshops, schools, seminars, and colloquia, both in-person and virtually, in order to inform physics researchers, educators, and students about the latest developments in various physics subdisciplines.

- h. Publish a bimonthly Bulletin/Newsletter that includes featuring one professional and one student in each edition, as well as advertising upcoming events.
- i. Publish the online newsletter Waves and Packets.
- j. Ascertain the status of existing journals, such as The African Review of Physics, and determine the role of the AfPS in enhancing scientific publications.
- k. Partner with EBASI (<https://ebasi.org/>) to engage African Americans with physicists in Africa.
- l. Partner with the LAM Network and African Laser Centre (ALC) (<https://www.africanlasercentre.net/>) to enhance laser research and training in Africa.
- m. Develop new, and enhance existing, training programs, such as X-TechLab (<https://www.xtechlab.co/>) in Benin.
- n. Partner with African governments to establish innovation hubs and technology transfer programs, such as Sémé City in Benin.
- o. Launch a campaign to ensure that all physics students become fluent in English.
- p. Hold bimonthly Webinars to inform physicists about potential international funding, opportunities to utilize international facilities, and best practices for writing proposals for both.
- q. Maintain a strong AfPS presence in the global society by maintaining an up-to-date AfPS Website and utilizing popular social networks.

- Put the necessary programs and safeguards in place to ensure the AfPS's financial sustainability.
- Convene regular Physical Society Scientific Conferences
 - ❖ The AfPS should convene one (1) Annual Conference per year.
 - ❖ Each country's Physical Society should convene two (2) meetings per year.
- Establish MoUs with other organizations, such as AfLS; African Crystallography Association (AfCA); Lightsources for Africa, the Americas, Asia, Middle East and Pacific (*LAAAMP*); global Physical Societies.
- Assume a strong role in promoting the construction and operation of a Pan-African AfLS.
- Encourage AfPS Board members to become active members of non-African Physical Societies

Specific Projects for 2024

Establish More National Physics Societies

Online Community of Practice – (Private Social Network for AfPS et al)

African Physics Teachers Association (AfPTA)

Federation of Pan African Physics Societies (FPAS)

Support the 2024 & 2026 African School of Physics (ASP) and 2025 African Conference of Physics (ACP)

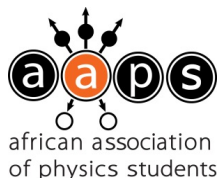
Support the African Optics and Photonics Society (AOPS, www.africanopticsphotonicsociety.org) and International Commission on Optics Conference

Monthly Seminars by Zoom

General Physics Topics	Last Thursday of Every Month (Must pre-register by Zoom)
* Biophysics	Last Wednesday of Every Month (Must pre-register by Zoom)
** Materials Science	First Thursday of Every Month (Must pre-register by Zoom)

* With African Light Source, South African Institute of Physics, Societies of African Biophysics Societies

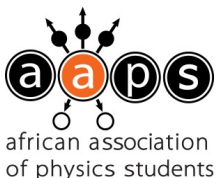
** Put on by the African Materials Research Society



Federation of Pan African Physics Societies (FPAPS)

This African Physical Society is endeavoring to create a ***Federation of Pan African Physics Societies (FPAPS)*** consisting of

1. African Association of Physics Students (AAPS)
2. African Physics Teachers Association (APTA)
3. African Astronomical Society (AfAS)
4. Society of African Biophysics Societies (SABS)
5. African Crystallographic Association (AfCA)
6. African Geophysical Society (AfGS)
7. African Materials Research Society (AMRS)
8. African Optics and Photonics Society (AOPS)
9. African Physical Society (AfPS)
10. African Seismological Commission (ASC)
11. Federation of African Medical Physics Organizations (FAMPO)
12. Associação Nacional de Estudantes de Física Afrodescendentes (ANFADE) (a Brazilian organization)
13. CARICOM Physics (Physics in the Caribbean Community)



The raisons d'être for FPAPS follow from the history of the [American Institute of Physics](#), the [Association of Asia Pacific Physical Societies](#), the [European Physical Society](#). That is, we would achieve certain economies of scale in basic administrative functions, publications production, conference planning and execution, marketing and membership management, member services, educational programs, and policy advocacy.

There are at least 6 positive outcomes from FPAPS.

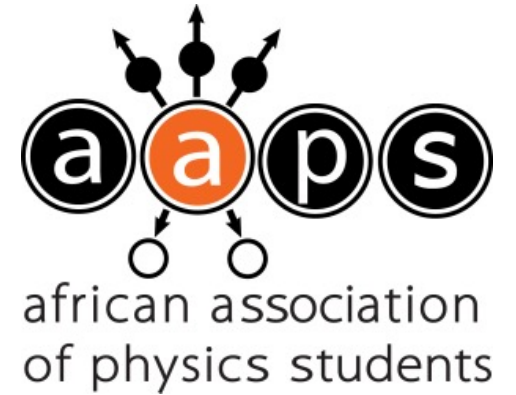
1. Interlocuting with similar organizations in the Americas, Asia, and Europe.
2. Following the benefits articulated in this 2008 article by Gretchen Smith, [Mapping Social Networks among Crystallographers in South Africa](#), it is possible to build an online professional community of practice where all our African sister societies can have their own customized portal, but the community is all one big common database. So all the colleagues across organizations can do all the social networking things across organizations. Tools can be built in that are relevant specifically to researchers, e.g., cv pages and bibliographies with scientometric tools. Think of it as a private and customized Facebook with social networking tools specifically customized for scientific researchers.
3. An **FPAPS publications office** would help produce more editors, articles, and special issues for scholarly journals and newsletters, e.g., The African Review of Physics, Waves and Packets, and The African Physics Newsletter.

It is also possible to create a collection of bibliometric and scientometric websites that display data on the published work of Africans in physics, astronomy, geophysics, materials science, etc. That is, we can get a meta-data output file from the SCOPUS database of papers where at least one author lists an African address, or we can query for specific people, i.e., known astronomy/astrophysics researchers in Africa and members of whatever Society. That output file, which would include links to the actual paper via the DOI, can be used as input for a platform like TIVO. The result would be a compendium of the published work of African researchers in physics and astronomy whereby researchers around the world can identify potential African collaborators and vice versa.

4. FAPS is a way to organize colleagues around the design and location specification of multi-user, multi-purpose facilities, e.g., an [African light source](#), or an African supercomputing center.
5. It could be an advocacy force at the AU, regional communities, and national governments for investments in physics, astronomy, and cognate fields.

The **African Association of Physics Students** (AAPS) is an African, non-political, non-governmental, non-profit-making, educational association. It comprises of students and recent graduates who are interested in physics.

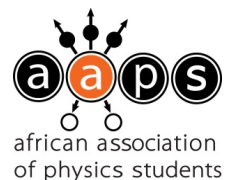
The purpose of the organisation is to encourage physics students in their scientific and professional work in an African and an international context as well as to promote relations between physics students from all over the world. The AAPS is committed to supplement physics education with an international scientific experience and it is affiliated with Physics societies and departments. aaps is open to all persons committed to physics



African Physics Teachers Association

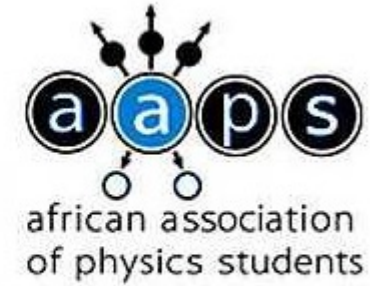
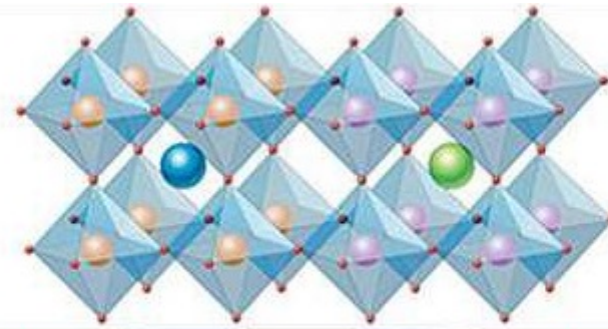
The African Physical Society has established the African Physics Teachers Association as a subsidiary organization, in the same organizational structure of the African Association of Physics Students.

The intent is to organize primary and secondary physics teachers into a professional learning community to improve the members professional praxis.





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You can join online and get involved today!

www.africanphysicalsociety.org/membership/

