



Women in Physics in Africa

23rd July 2021

ASP2021 19-30 July

By Dr Cyulinyana Marie Chantal

Who Am I?

- ❑ A proud mother ; one daughter (young scientist!)
- ❑ Recently appointed as Science and Technology foresight analyst at NCST (National Council for Science and Technology).
- ❑ Lecturer at university where I transfer knowledge
- ❑ Supervisor: Masters and PhD student in Energy
- ❑ Research: Atmospheric Science, Renewable energy and Gender equality in STEM
- ❑ Member in different international and national organization (i.e. STEM) ...
- ❑ I am ASP Alumni 2016

Ange Cynthia Umuhire



- ❑ Space science analyst at Rwanda Space Agency
- ❑ PhD candidate At University of Rwanda
- ❑ 2019 NASA Recipient , and in different workshops and international conferences Young scientists/ astrophysics
- ❑ A proud mother
- ❑ Her research: [\(17\) Ange Cynthia Umuhire \(researchgate.net\)](#)

Prof Diale Mmantsae



- ❑ Researcher: Solar Energy Research
- ❑ Lecturing in Pretoria University
- ❑ Women in Physics leader in SA
- ❑ Supervisor
- ❑ A mentor
- ❑ A mother
- ❑ She was elected as Africa leader to get the ball rolling on getting more countries involved in women in physics
- ❑ She is hosting a women in physics in Africa meeting on 23 August 2021 ; please contact her on Mmantsae.diale@up.ac.za

Some a good initiatives

- South Africa: Promoting Women in Physics
- Physics Without Frontiers; Worldwide physics outreach
- ICTP, EAIFR
- OWSD
- TWAS,..
- ASFAP
- RAWISE (Rwanda Association for Women In Science and Engineering)
some info in next slides

**STEM
ACTIVITIES:
Visit RAWISE
Social media**



Email: info@rawise.org.rw

Website: <https://www.rawise.org.rw/>

Twitter: [@STEMWomenRwanda](https://twitter.com/STEMWomenRwanda)

Facebook: [@STEMWomenRwanda](https://www.facebook.com/STEMWomenRwanda)

LinkedIn: [Rwandan Association for women in Science and Engineering \(RAWISE\): Overview | LinkedIn](https://www.linkedin.com/company/rwandan-association-for-women-in-science-and-engineering-(rawise)-overview)

RAWISE Objectives

1

Encourage young women to take up studies in sciences and engineering;

2

Provide workshops to develop the careers of scientists and engineer's female;

3

Increase and promote female's participation in science and technology professions in Rwanda;

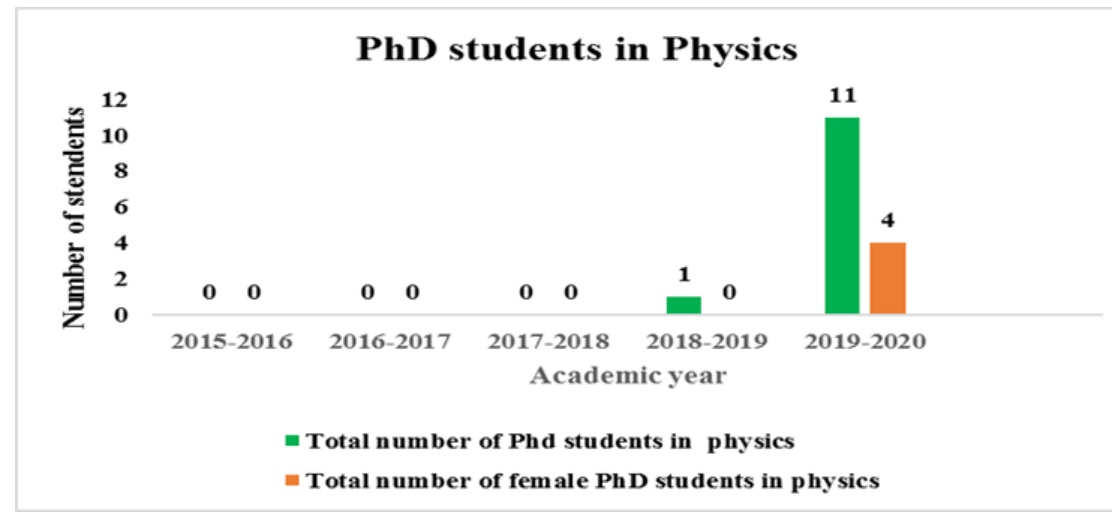
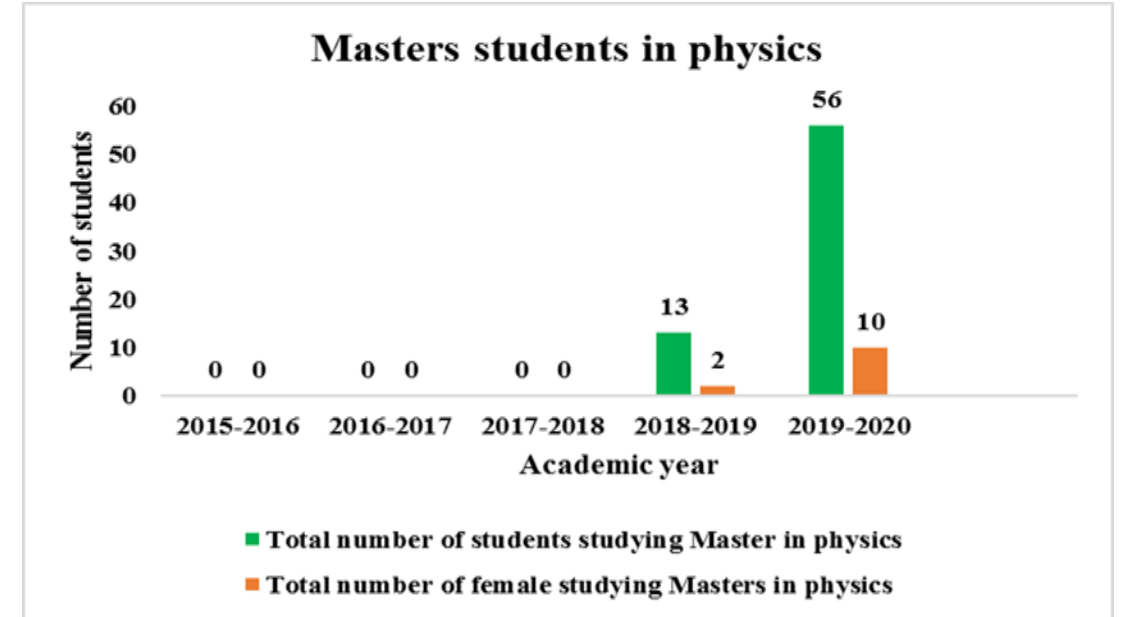
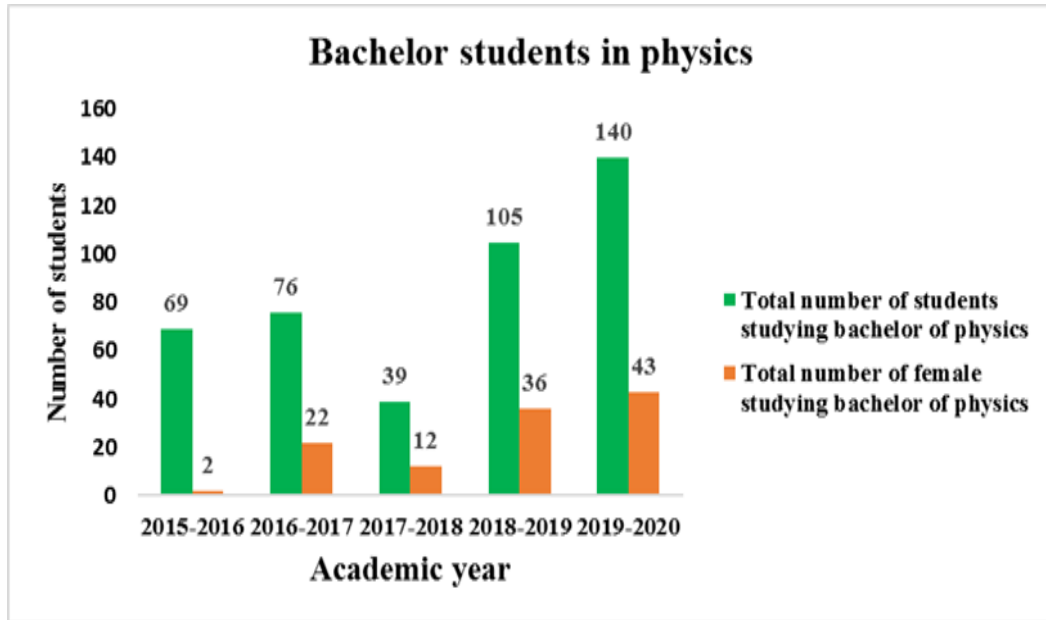
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Conduct research on the STEM-relate projects.

Facts and Challenges

- ❑ The challenges faced by women scientists start from the elementary schools and colleges
- ❑ Religion, social, economical, political practices and backgrounds
- ❑ Poverty and social violence toward women, intimidation, lack of mentorship stereotype and superiority among men
- ❑ Gender inequality is an existential threat to career progression for women, world over.
- ❑ The teachers teaching the courses
- ❑ The environment etc.
- ❑ The isolation that many women in physics suffer, and no where did this seem more severe than in African countries..

Physics enrolment picture @University of Rwanda (2015-2020)



Purpose of Women in Physics forum

Enhancing the participation of women in physics, how do we treat gender gaps in science/ Physics? What is the future of women in Physics?

Producing a strategy to answer the above questions.

Strategy : Women in Physics Forum

- ❑ To create allies between other working groups in ASFAP, Africa and globally
- ❑ To establish a system to encourage more girls to study physics and physical science
- ❑ To promote the recognition of the scientific achievements of senior women physicists within Africa and the international community
- ❑ To increase the scientific productivity and efficiency of women physicists
- ❑ To sit and discuss how to bring everyone to gather on the consensus of inclusivity in Physics
- ❑ Data Collection , regular survey
- ❑ To emphasize on the role played by men in this (i.e hear women voice, ...)
- ❑ Produce a White paper from letter of interest ideas
- ❑ To strengthen research efforts and training opportunities of young women physicists

Solution to gender gap in STEM and Physics in particular

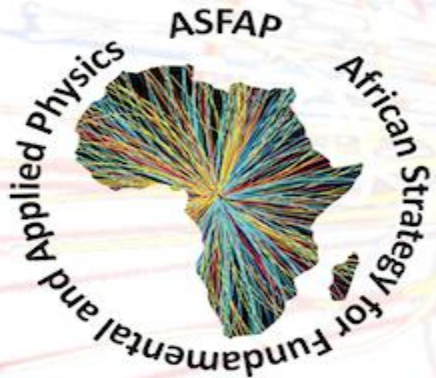
- The campaign should start from primary schools
- The level of responsibility at the place of work should be investigated
- Challenging the Stereotype: culture
- They should be given opportunities in the decision-making positions (they should take initiative to be part)
- Provision for support to hold conferences to exhibit their research and scientific projects
- Climbing the Scientific Ladder
- Bringing Feminist Perspectives into Physics
- All African countries should be involved (Women need motivation)

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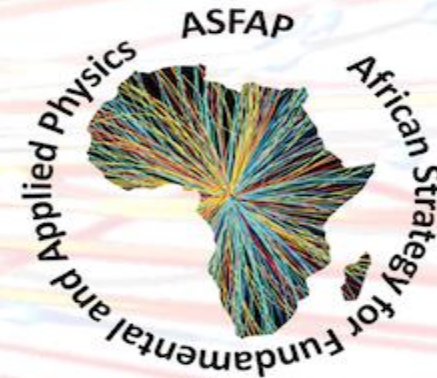
- Awareness
- Making the science course interesting
- Evaluation and monitoring
- Guidance councilors and mentorship
- Funding of science projects for women
- Removing age limit for women in science

Take home message

- ❑ Intelligence can be developed with advanced mindset to embrace challenges, learn from criticism, see effort as path to mastery, persist despite obstacles and be inspired by others.
- ❑ Believing in the potential for intellectual growth improves outcomes
- ❑ No one said it would be easy; just try harder



African Strategy for Fundamental and Applied Physics



Conveners: Women in Physics forum

Dr. Marie Chantal CYULINYANA (Rwanda)

Dr. Iroka Chidinma Joy (Nigeria)

Dr. Dephney Mathebula (South Africa)



Contact us : ASFAP-WomenPhysics@cern.ch

