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Cape Town, 31 January 2022

Letter of Intent

Dear Sir/Madam,

As a senior researcher affiliated to the UNESCO-UNISA iTLABS/NRF Africa Chair in Nanosciences and Nanotechnology chaired by Professor Malik Maaza, it is an honor for me to share my letter of intent in building a strategy towards excellence in Fundamental and Applied Physics on our African continent.

Topic of interest

- Implementing a physics curriculum at school/undergraduate level focused on 1) connecting the fundamental and translational aspects of physics with its technological applications and 2) transforming physics curricula into a multidisciplinary curriculum by linking physics with other STEM fields
- Implementing a postgraduate module for physics fellows focused on science communication to promote communication of physics research and its the diverse and real-world applications to various stakeholders: the general public, policy makers, funding agencies, and industry

Why?

Many African governments are diverting funds and support away from basic sciences to support grand challenges. Physics in essence is viewed as a complex and fundamental or basic science field that aims to improve our understanding of our universe and the world we live in. Yet, its powerful multidimensional link with innovation and technology is often underscored. An example that comes to mind here is the diverse applications of materials physics, and more specifically, nanotechnologies in various fields. More needs to be done at the grassroots level – education of young and early career postgraduate fellows in the fundamental, applied, and multidisciplinary links between physics and other STEM fields as well as the potential of public science communication to effectively share physics research with multiple stakeholders that may eventually lead to more robust governmental and industry support to promote innovation and technology underscored by fundamental physics principles.

Thank you for your consideration

Yours sincerely,



Karen Jacqueline Cloete