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Status and Impact of Fluids and Plasma Physics for Education and Capacity Development in Africa

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Education and capacity development in the fields of fluid and plasma physics are extremely vital to technological advancement of any nation in generally and Africa in particular. Study of fluid and plasma enable prediction of space weather, medical treatments, and even water purification. Research in fluid and plasma physics are critical to the design of systems in nearly every field of engineering, including aeronautical, astronautical, mechanical, chemical, and civil engineering. In this talk, the three fundamental principles (mass conservation, Newton's second law and energy conservation) governing theoretical research in the field of fluid and plasma physics are discussed. The importance of research capacity development in the field fluid and plasma physics in Africa is emphasized.

Keywords: Importance of fluid and plasma physics; Conservation laws; Maxwell laws of electromagnetism; Africa research capacity development

Abstract Category

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