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## **Free/Open source Simulators as an Alternative to Commercial Simulators for Teaching Electrical and Electronics Engineering in African Universities.**

Electrical and Electronics Engineering (EEE) is essential for the development of African nations. The EEE courses in the universities are structured to enable students acquire not only theoretical knowledge, but also a practical experience for the covered topics. To expedite the bridging between the theory and the physical reality of the EEE systems, as well as speeding up of the design process, simulation tools are incorporated and used. In the developed nations, students perform the design simulations before proceeding to building the prototype utilising commercial simulations tools. These tools are out of reach in most of the developing countries due to cost and availability. In this presentation, free and open source simulations tools (FOSST) are discussed as alternatives to commercial tools for EEE design. The tools are grouped into electrical, electronics and numerical analysis tools. From the survey conducted, there are ample number of FOSSTs available for almost every aspect of EEE teaching, learning and research process.

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