

Web Teaching Tools in Electromagnetism

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Abstract

Electromagnetism is a core course in physics and engineering curricula. One of the main difficulties experienced by students is the execution and visualization of numerical results. In fact, many design tasks require the evaluation of sequences of algebraically complex formulas. Moreover, significant insights are gained in the physical understanding and phenomena interpretation through graphical representation of magnetic and electric fields.

The purpose of our STEM project is the development of series of web apps for assisting students in the solution of common problems in electromagnetism, such as the calculation and representation of electric and magnetic fields inside a rectangular waveguide.

The tools will be developed with software tools such as `Python` and `Django`.

Our presentation will report on the progresses and experience gained during the project development.