ABOUT ONE MODEL OF TEACHING ELECTRODYNAMICS

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ABSTRACT

We propose the integrated course of learning of some theories of physics, mathematics and computer science, combining the well known and hot problems of electrodynamics. Each task selected is constructed of several modules: theory and methods of decision, specifics of problem, visualization of numerical results and analysis. We consider the electromagnetic waves diffraction on a circular cylinder of infinite length. Modifying the electric properties of system and grouping the tasks based on the skills and experience of participants gives possibility to work in team. To learn the physical systems by modeling and learn to modeling by means of physical systems is the approach applied in work.

Keywords: Electrodynamics, electromagnetic diffraction, dielectric bodies, modeling.