Abstracts

Technology-based electromagnetic education

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In this paper, we briefly review the various roles of technology in stimulating interest and deepening understanding of abstract and highly mathematical subjects such as electromagnetics (EM). The general advantages of using technology in offering Web-based courses and professional training are described and examples of the ongoing activities in this area are summarized. Focus, however, is placed on the development and effective use of multimedia assets in the modern teaching of fundamental EM and more advanced microwave courses. Development and use of interactive components such as virtual laboratories, virtual instruments, simulation software, animation, and virtual participation in practical applications are described. The new "Conceptual Learning of Engineering" project is also described, and examples demonstrating the various ongoing activities are presented.

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