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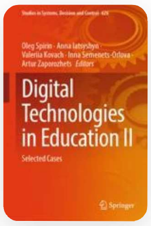

Digital Technologies in Education II

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Abstract

This chapter analyzes different approaches to the concept of the term "virtual laboratory". Based on modern trends in the digitalization of education, the high expediency of using virtual laboratories by future teachers of natural and mathematical disciplines in distance learning has been proven. The essential advantages of using virtual laboratories in the educational process of universities as simulators are outlined. Web-oriented and local models of virtual laboratories, and the principles of their operation, are described. As example, the practical implementation of laboratory works based on Arduino in the TinkerCAD Circuits online software and Proteus application software is provided. Operation with the specified software products confirms the high level of training and full acquisition of professional skills of the students when working with the equipment.

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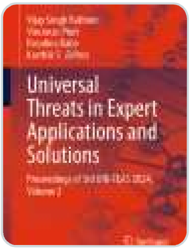

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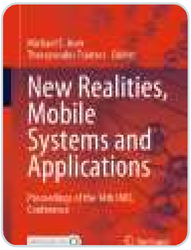

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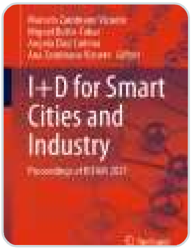

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