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Modeling and computational simulation and the potential of virtual and augmented reality associated to the teaching of nanoscience and nanotechnology ALLAN RIBEIRO, Instituto Federal de So Paulo - Birigui/SP, HELEN SANTOS, Instituto Federal de So Paulo - Birigui/SP - Brazil — With the advent of new information and communication technologies (ICTs), the communicative interaction changes the way of being and acting of people, at the same time that changes the way of work activities related to education. In this range of possibilities provided by the advancement of computational resources include virtual reality (VR) and augmented reality (AR), are highlighted as new forms of information visualization in computer applications. While the RV allows user interaction with a virtual environment totally computer generated; in RA the virtual images are inserted in real environment, but both create new opportunities to support teaching and learning in formal and informal contexts. Such technologies are able to express representations of reality or of the imagination, as systems in nanoscale and low dimensionality, being imperative to explore, in the most diverse areas of knowledge, the potential offered by ICT and emerging technologies. In this sense, this work presents computer applications of virtual and augmented reality developed with the use of modeling and simulation in computational approaches to topics related to nanoscience and nanotechnology, and articulated with innovative pedagogical practices.

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