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Activities Related to Scientific Visualization at National Research Nuclear University "MEPhI", Moscow, Russia: Research, Education and Publications

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In this paper we present the results of scientific visualization research as a joint project of the NRNU MEPhI (Moscow, Russia) and the National Centre for Computer Animation, Bournemouth University (Bournemouth, United Kingdom). We consider scientific visualization as a modern computer-based method of data analysis. The essence of this method is to establish the correspondence between the analyzed initial data and their static or dynamic graphical interpretation analyzed visually. The results of the analysis of graphical data are interpreted in terms of both the initial data and the reality behind it.

The method of scientific visualization as a method of scientific data analysis is a method of spatial modeling of those data. It allows for utilizing enormous potential abilities of a researcher and their spatial imaginary thinking in the process of data analysis. In the general case, the process of data analysis using the method of scientific visualization can be quite complex, iterative and interactive.

This article is devoted to results of research and educational projects. These projects are quite different and multidisciplinary. The goals of the data analysis can be different as well. As a result, in most cases significantly different graphical representations can be involved.

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