

MODERN

INFORMATION TECHNOLOGIES

IN SCIENTIFIC RESEARCH
AND EDUCATIONAL ACTIVITIES

Sergii Kotlyk
Editor-in-chief



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**MODERN INFORMATION
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AND EDUCATIONAL ACTIVITIES**

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Sergii Kotlyk

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The monograph summarizes and analyzes the current state of scientific research in the field of interactive artificial intelligence systems, text generation systems, diagnostics of the competitiveness of specialists, in the areas of correct color rendering in image formation, informatization of the work of graduate students, accessible technology for creating 3D models.

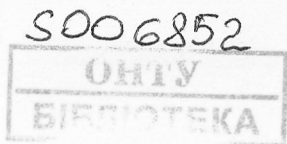
The monograph will be useful both to specialists and employees of companies working in the IT field, as well as teachers, masters, students and graduate students of higher educational institutions, as well as anyone interested in issues related to information technology.

The monograph was compiled based on the results of the XVI international scientific and practical conference "Information technologies and automation — 2023", which took place in October 2023 at Odesa National University of Technology.

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Nowadays, there is a rapid development of information technology, which entails the need to constantly improve and expand the capabilities of interactive artificial intelligence systems. This monograph combines several current topics related to the field of information technology.

One of the key topics is the methodology for enhancing the capabilities of conversational systems, with a focus on ChatGPT, which represents the latest advance in the field of artificial intelligence. The monograph also discusses text generation systems based on ontological representations, which open up wide opportunities for creating high-quality content.

A special place in the work is given to an automated computer system for diagnosing the competitiveness of specialists in the field of information technology. This helps to effectively assess the professionalism of specialists and determine the need for advanced training.

Theoretical aspects of correct color rendering and informatization of educational and research work of graduate students are important in ensuring the quality of education and scientific research.

And finally, the use of technology for creating 3D models has become an integral part of the modern information environment, which makes it possible to bring the most daring ideas and projects to life.

Research and development in these areas contribute to the improvement of information technologies, finding application in various fields of activity. The purpose of our monograph is to conduct analysis and research in these areas in order to promote the development of information technologies and increase their efficiency.

The monograph was compiled based on the results of the XVI international scientific and practical conference “Information technologies and automation — 2023”, which took place in October 2023 at Odessa National University of Technology.