

Project title:

**ADVANCED TECHNOLOGIES FOR THE DIGITAL
PRESERVATION AND PRESENTATION OF CULTURAL
HERITAGE**

Beginning of the project: 1 January 2026

Project duration: 3 years

Funding: Joint Research Projects Serbian Academy of Sciences and Arts and Bulgarian Academy of Sciences for the Period 2026-2028

PARTNER INSTITUTIONS:

From Bulgaria:

- Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Sofia, Bulgaria, (IMI-BAS)

From Serbia:

- Mathematical Institute of the Serbian Academy of Sciences and Arts, Belgrade, Serbia, (MI-SASA)

BULGARIAN LEADER OF THE PROJECT:

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BULGARIAN PROJECT COORDINATOR:

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SERBIAN PROJECT COORDINATOR:

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PROJECT DESCRIPTION:

Digital preservation and presentation of cultural heritage using information technologies (IT) is an important research topic that has multiple benefits in various fields such as culture, tourism, education, and other related areas. In recent years, various cultural institutions have been seeking and adopting innovative IT solutions that can improve the management of their archives, including also presenting their contents in an attractive way to the public and attracting the attention of contemporary visitors. The usage of information technology widely supports the development of software tools and multimedia technologies for digital presentation, preservation, and management of cultural and historical heritage (CH). New technologies (incl. artificial intelligence, AI) allow new possibilities for the development of innovative methods, scenarios, and tools for a deeper insight and better understanding of cultural and historical heritage and their application in intelligent content storage and use.

Despite significant progress, there is a need for continuous improvement, especially in the organization, search, and presentation of stored information. In this context, the bilateral cooperation between the Institute of Mathematics and Informatics, Bulgarian Academy of Sciences (IMI-BAS), and the Mathematical Institute of the Serbian Academy of Sciences and Arts (MI-SASA) aims to study and identify modern IT solutions applied in the field of innovative ways of presentation of cultural heritage. The planned research and development focus on exploration and usage of new augmented reality (AR), virtual reality (VR), and AI technologies for optimization of multimedia digital libraries, virtual environments, content management, recommendation systems, mobile and Web technologies, and educational applications. The collaboration will enable the exchange of ideas and sharing of knowledge focused on high-end technologies for the development of new interactive solutions well-suited to both a variety of different requirements from the cultural institutions, but also to the visitors' needs.

Through the close bilateral cooperation of specialists in the field of digital cultural ecosystems from the IMI-BAS and the MI-SASA, new solutions will be sought, and new applications will be created in this field. The project will contribute to the selection and exchange of research results for the development and usage of digital applications for tourism, creative industry, and education.