

## Preface

The main aim of the Thirteenth International Conference *Digital Presentation and Preservation of Cultural and Scientific Heritage (DiPP2023)* is to bring together as many interested institutions as possible working on digitising, recording, documenting, archiving, presenting, protecting and managing cultural and scientific heritage, so that they can share their advanced thoughts, know-how and experience. Public and specialised libraries, museums, galleries, archives, community centres, research institutions and universities are expected to share and acquire knowledge, skills, and expertise at the event.

Four types of papers are presented – invited papers, full papers, short papers, and project papers. The first three types discuss current scientific results, trends and achievements in the field of digital preservation and presentation of cultural and scientific heritage. The project papers present developments in progress, part of them experimental, made by memory institutions during their institutional projects.

- *Invited papers*

The paper by Gizella Börcsök, Róbert Z. Nagy, Krisztián Vollmuth, Zsolt L. Márkus, András J. Molnár, György Szántó, Tibor Szkaliczki, Miklós Veres and Zsolt Weisz presents video documentation, virtual tours, and other ICT tools, used for the multimedia documentation of the chapel of Assumption of Mary in Budapest, Hungary.

The paper of Sevdalina Turmanova presents activities of the Association "Regional Academic Center of Bulgarian Academy of Sciences" in Burgas is participation in the development of methods and technologies for digitalization of the cultural and historical heritage of the Black Sea region.

The paper by Marco Scarpa, Marta Riparante and Desislava Paneva-Marinova describes the collaboration between philologists and computer scientists for the ongoing palaeographic research project "Fourteenth Century South Slavonic scribes and scriptoria (palaeographical attribution and online repertorium)".

The paper by Daina Valeine overviews the status of institutional repositories in Latvian higher education identifying the purpose, performance and use of repositories, with a focus on the digitisation and sharing of scientific heritage.

The paper by Petya Osenova discusses the creation of the multilingual corpora from parliamentary debates as part of the ParlaMint infrastructure.

The paper by Galina Bogdanova, Todor Todorov and Nikolay Noev focuses on semantic design techniques and taxonomy models for the digitization of resources intended for people with disabilities.

- *Full papers*

The paper by Maxim Goynov, Detelin Luchev, Desislava Paneva-Marinova, Silvia Najdenova, Lubomir Zlatkov, Lilia Pavlova and Evita Pilege outlines the design and the development of the digital library for noteworthy scientific literary heritage, created for the needs of the Central Library of the Bulgarian Academy of Sciences.

The paper by Margaret Dimitrova, Maxim Goynov, Konstantin Rangochev, Detelin Luchev and Gita Senka discusses users' search behaviour in the Encyclopaedia Slavica Sanctorum, a calendar-oriented multimedia platform illustrating *die Rezeption* of the Christian saints' cults amongst the Bulgarians since the Middle Ages to the present day.

The paper by Rosen Ivanov and Victoria Velkova presents the architecture of a Web application designed to deliver personalized content to museum visitors.

The paper by Dušan Tatić, Radomir S. Stanković, Marko Jovanović and Jovan Stojanović presents the enhancement of the features of the multimedia guide for the open-air War Museum of Niš, Serbia.

The paper by Dimitrina Popova introduces the digital reconstruction of destroyed houses from the 19<sup>th</sup> century in the town of Teteven, Bulgaria.

The paper by Marta Riparante and Milena Davidović compares the distinctive features of two of the 14<sup>th</sup> century Dečani manuscripts, as part of the development of scientific method applicable for South Slavic digital palaeography.

The paper by Maria Teresa Artese and Isabella Gagliardi proposes an approach for creation of semantic graphs from archive contents.

The paper by Veneta Tabakova-Komsalova, Asya Stoyanova-Doycheva, Alexander Petrov and Laska Kostadinova-Tzankova explores the existing international standards for presenting cultural heritage and proposes a formalism for presentation of Bulgarian folklore knowledge.

The paper by Julie Agrain, Antoine Poulain and Adélaïde Albouy-Kissi introduces a new method for designing 3D bobbin lace patterns.

The paper by Alexander I. Iliev examines the benefits and security issues associated with big data analytics and proposes a data analysis approach for digital presentation and preservation of cultural heritage.

The paper by Emanuela Mitreva, Alexandra Nikolova, Vladimir Georgiev and Ani Gigova reviews different approaches of providing personalization for cultural heritage content.

The paper by Evita Pilege outlines a digitally based career guidance system for the needs of the cultural and creative industries.

The paper by Evgeniya Nikolova, Mariya Monova-Zheleva and Yanislav Zhelev presents the main results of a survey on the readiness of universities to provide inclusive Industry 4.0 education, conducted in Bulgaria, Greece, Italy and Latvia.

The paper by Todor Todorov and Pajtim Vela overviews some of the popular scientific databases and their accessibility to people with visual disabilities, and presets the application of scientific resources and databases in Kosovo's education institutions.

The paper by Yavor Dankov and Andjela Dankova proposes a classification of educational video games in the domain of cultural heritage.

The paper by Yavor Dankov presents a summary model of the design process of educational video games for cultural heritage and exemplifies the usability of the model for educational games design.

The paper by Ivet B. Koleva, Borislav R. Yoshinov and Radoslav R. Yoshinov discusses an educational model for COVID-Rehabilitation.

The paper by Ivet B. Koleva, Borislav R. Yoshinov and Radoslav R. Yoshinov describes the application of Digital Health technologies for prevention of paravertebral pain.

- *Short papers*

The paper by Todor Todorov and Shpend Lutfiu focuses on watermarking techniques, used in the digitization process and analyses of algorithms for protecting intellectual property of digital heritage content

The paper by Irena Peteva, Daniela Pavlova and Ivanka Pavlova explores cloud technologies' role in cultural preservation and promotion, analyzing accessibility, collaboration, and cost-effectiveness.

- *Project papers*

The paper by Maria Teresa Artese, Isabella Gagliardi, Mattia Fortunati and Tiziana Pasciuto proposes heritage dissemination digital storytelling tools and games based on the Querylab's ICH Discovery section resources.

The paper by Michela Tramonti, Alden Dochshanov and Fabrizio Casadio presents two Erasmus Plus projects that utilize digital storytelling in education and training.

The paper by Alden Dochshanov and Michela Tramonti describes the design and implementation of a programmable Arduino-based bot with an accent on the underpinning principles educational robotics.

The paper by Mariya Monova-Zheleva, Yanislav Zhelev, Michela Tramonti and Alden Dochshanov discusses an approach for improvement of the digital skills and competencies of adult educators.

The paper by Ivan Krachanov and Dimitar Minev presents a concept for a serious game based on an augmented reality representation of a mural artwork located in the National Library "Ivan Vazov" in Plovdiv, Bulgaria.

The paper by Daniela Pavlova, Irena Peteva and Ivanka Pavlova explores the intersection of e-Governance and cultural heritage digitization.

The paper by Radovesta Stewart gives a comprehensive overview of the interactive exposition centre at Aquae Calidae, Burgas, Bulgaria.

The paper by Radovesta Stewart and Colin Stewart investigates the digital approaches for the presentation of tourist sites with historical significance, including the use of virtual reality, digital libraries and interactive web platforms.

The paper by Emanouil Atanassov, Todor Gurov and Aneta Karaivanova analyses the current state of the Bulgarian Centres of Competence in High Performance Computing.

- *Workshops and Demos*

*The Workshop and the 14<sup>th</sup> National Information Day: Open Science, Open Data, Open Access, Bulgarian Open Science Cloud*, chaired by Peter Stanchev, Aneta Karaivanova, Yanita Zherkova, Hristiyaniya Klisarova, Jordan Iliev, Radoslav Pavlov and George Simeonov gives an overview of the current landscape and the activities on national and institutional level regarding Open Science, Open Access to scientific information, Open Data and the overall development of the Bulgarian Open Science Cloud.

The *Workshop on Promoting the Green Transition through University Education on Green Standards*, chaired by Yanislav Zhelev, Mariya Monova-Zheleva and Diana Sabotinova describes the approach and concept of the international project Boosting the Green Future via University Micro-Credentials (B-Green-ED), funded by the Erasmus+ program KA220-HED - Cooperation partnerships in higher education.

*The Information Day: Research Infrastructure Services in the Humanities and Social Sciences*, chaired by Desislava Paneva-Marinova, Radoslav Pavlov, Detelin Luchev, Maxim Goynov and Nikolay Noev presents results of the work of the Institute of Mathematics and Informatics at the Bulgarian Academy of Sciences on the project CLaDA-BG, the Bulgarian National Interdisciplinary Research e-Infrastructure for Resources and Technologies in Favor of the Bulgarian Language and Cultural Heritage, Part of the EU Infrastructures CLARIN and DARIAH: the development of the humanities and social sciences data storage, retrieval and curation environment and its implementation in the digital library of the Central Library of the Bulgarian Academy of Sciences and in the digital library “Encyclopaedia Slavica Sanctorum”. The improvements of the previous implementation (digital library “Virtual Encyclopedia of Bulgarian Iconography”, digital library of “Ivan Vazov” Regional Library in Plovdiv and “Peyo Yavorov” Regional Library – Burgas) are also discussed.

Burgas, Bulgaria  
September 07, 2023

Desislava Paneva-Marinova,  
Radoslav Pavlov, Peter Stanchev  
Detelin Luchev (Editors)