

## Table of Contents

### Invited Papers

1. *Charalampos Symeonidis, Jason Karakostas, Efstathia Martinopoulou, Ioannis Pitas* – Image-based 3D Shape Reconstruction of Byzantine and Paleochristian Monuments .....21
2. *Nektarios Moumoutzis, Yiannis Sifakis, Stavros Christodoulakis, Desislava Paneva-Marinova* – A Reference Framework to Establish and Sustain Onlife Communities and Its Use. Rich Learning Experiences in History with ViSTPro .....27
3. *Szabolcs Czifra, Adrienn Pálkás, Zsolt László Márkus, Tibor Szkaliczki, Miklós Veres, Zsolt Weisz* – Smart Solutions for Guided Cultural Routes along the Iron Age Archaeological Sites of the Danube Basin .....43
4. *Niv Ahituv* – What Should be Taught in an Academic Program of Data Sciences? .....55
5. *Kiril Simov* – Integrated Language and Knowledge Resources for a Bulgarian-Centric Knowledge Graph .....65

### Full Papers

6. *Danail Dochev, Radoslav Pavlov, Desislava Paneva-Marinova, Lilia Pavlova* – Towards Modeling of Digital Ecosystems for Cultural Heritage .....77
7. *Joanna Spassova-Dikova* – Transdisciplinarity and the New Ways for Preservation and Investigation of the Cultural and Historical Heritage .....89
8. *Huiling Feng, Xiaoshuang Jia, Yanyan Wang, Li Niu, Yongjun Xu* – Digital Memory: A New Paradigm for Cultural Heritage .....101
9. *Rosen Ivanov* – An Approach to Developing Internet of Things (IoT)–Based Services for Smart Museums .....111
10. *Benjamin Hanussek* – Out of Order: How External Multimedia Companies "Errorize" Archaeological Exhibitions .....123

11. <i>Desislava Paneva-Marinova, Jordan Stoikov, Maxim Goynov, Detelin Luchev, Radoslav Pavlov, Lilia Pavlova</i> – Intelligent Data Curation in Virtual Museum for Ancient History and Civilization .....	131
12. <i>Michela Tramonti</i> – Art and Science: Combining Learning Tool .....	145
13. <i>Orlin Kouzov</i> – The Role of the Educational Multimedia Games to Build Lasting Interest among Young People in the Cultural and Historical Heritage .....	153
14. <i>Magdalena Stoyanova, Lilia Pavlova</i> – Edge Detection Algorithms in Mapping the Condition and Historic Phases of the Last Judgment Mosaics in Torcello/Venice .....	163
15. <i>Ivan Derzhanski, Olena Siruk</i> – The Intensifying Prefix <i>pre-</i> in a Corpus of Bulgarian and Ukrainian Parallel Texts .....	177
16. <i>Radoslav Pavlov, Detelin Luchev</i> – Providing Open Access in Digital Repositories for Social Sciences and Humanities Publications – Problems and Best Practices .	189

### **Short Papers**

17. <i>Radovesta Stewart, Stanislav Simeonov</i> – Transformed Into Digital Resources - a New Life for the Cultural Heritage Related Research and Scientific Archives .....	205
18. <i>Nikolay Noev, Galina Bogdanova, Todor Todorov, Negoslav Sabev</i> – Innovative Approach to the Presentation of Cultural Heritage in the Game Module of Serious Game for Blinded People .....	213
19. <i>Neli Simeonova, Radovesta Stewart, Ekaterina Gospodinova</i> – Technologies for the Introduction of Digitalized Cultural Heritage to Visually Impaired People .....	219
20. <i>Elena Zaharieva-Stoyanova</i> – Digital Representation of Color Stitches in Craft Software .....	225
21. <i>Galina Bogdanova, Todor Todorov, Nikolay Noev</i> – Digital Cultural Heritage APIs .....	231
22. <i>Stefka Kovacheva, Ludmila Dimitrova</i> – Web based Application for Presentation of Bulgarian Cultural and Historical Heritage under the Protection of UNESCO .....	237
23. <i>George Simeonov, Peter Stanchev</i> – Using Dspace Platform for Creation of Open Access Local Repositories .....	245

24. *Atanas Georgiev, Krassen Stefanov* – Bulgarian Open Science Digital Library - First Prototype .....251
25. *Peter Stanchev, Krassen Stefanov* – Bulgarian Open Science Cloud .....259

### **Project Papers**

26. *Jihong Liang, Dazhi Sun, Xiaoyu Wang, Kejing Lin, Xinxin Wang* – Rite in the Forbidden City: The Cultural Interpretation and Digital Reconstruction of Guangxu Emperor’s Wedding .....267
27. *Dongqi He, Qingtang Wang, Jia Fei, Sitong Zhou* – On Inheriting Kunqu Opera – Digital Teaching and Mass Popularization of Gong-Che Notation .....273
28. *Xiaoshuang Jia, Yue Tan, Qianyun Xiong, Yifang Li, Wei Hai* – Designing Edutainment Games for Intangible Cultural Heritage: the BNREG Project .....281
29. *Alden Dochshanov, Michela Tramonti* – G.A. STEM Project: Gaming through Cultural Heritage .....287
30. *Daniela Pavlova* – Conceptual Model of a Mobile Application for Educational Purposes to Help Preserve the Country's Historical Heritage and Promote the Cultural Identity of the Nation .....295
31. *Yanyan Wang, Yuhan Zhou, Weiwen Liu, Huiru Chen, Yifang Li* – Using Digital Storytelling in a Virtual 3D-Museum for Beijing Old Objects .....303
32. *Pavel Hristov, Emiliyan Petkov* – Study of 3D Technologies for Web .....309
33. *Guancan Yang, Huilin Zhang, Xiaomei Zhang, Yue Yu, Jie Yang* – Digital Inheritance of POPF Based on Image Database and Identification Model .....315
34. *Lichao Liu, Shushu Zheng, Li Niu, Luolin Wang* – Digital Preservation and Presentation of Institution Photo Archives: the Anhui University Memory Project Experience .....323
35. *Alexander Herschung, Martin Oelgeklaus* – File Format Migration as Digital Preservation Strategy – A Report on Practical Experiences .....331
36. *Maria Teresa Artese, Isabella Gagliardi* – Sharing ICH Archives: Integration of Online Inventories and Definition of Common Metadata .....337
37. *Xinyu An, Qi Zhou, Qianyun Xiong, Jiaqi Wang* – Further Reflection on the Protection of Cultural Heritage: The AOH Project .....345

38. <i>Neli Simeonova, Ivaylo Belovski, Georgi Torlakov</i> – Preservation and Protection of Cultural Heritage through Digital Security System .....	353
39. <i>Xiaoshuang Jia, Yuan Liang, Kexin Wang, Shengnan Yao, Leiqian Han, Xingzhuan Chai</i> – Designing a Mini-Program for Culture Learning and Creative Product Customization: DIY RADP .....	359
40. <i>Mariya Monova-Zheleva, Yanislav Zhelev, Radovesta Stewart</i> – An Approach for Valorisation of the Emerging Tacit Knowledge and Cultural Heritage in Rural and Peripheral Communities .....	367
41. <i>Ivan Kratchanov</i> – Sustainable Development of the Practices of Digitization in National Library “Ivan Vazov” – Plovdiv .....	375
42. <i>Dimitar Iliev, Elina Boeva, Polina Yordanova</i> – Challenges and Perspectives in Creating a Digital Epigraphy Collection Using TEI XML and Front-end Services .....	383
43. <i>Petros Alvanitopoulos, Sotiris Diplaris, Beatrice de Gelder, Alexander Shvets, Maurice Benayoun, Panagiota Koulali, Ayman Moghnieh, Yash Shekhawat, Christos Stentoumis, Tyson Hosmer, Refik Anado, Marta Borreguero, Alejandro Martin, Piera Sciamia, Kostas Avgerinakis, Panagiotis Petrantonakis, Alexia Briassouli, Simon Mille, Anastasios Tellios, Luis Fraguada, Holger Sprengel, Ilias Kalisperakis, Nestor Cabanas, Spiridon Nikolopoulos, Stavros Skouras, Verena Vogler, Despoina Zavraka, Jens Piesk, Lazaros Grammatikopoulos, Leo Wanner, Tobias Klein, Stefanos Vrochidis, Ioannis Kompatsiaris</i> – MindSpaces: Art-driven Adaptive Outdoors and Indoors Design .....	391

#### **Workshops and Information Days**

44. <i>Peter Stanchev, Karina Angelieva, Yanita Zherkova, Radoslav Pavlov, George Simeonov</i> – The Tenth National Information Day: Open Science, Open Data, Open Access, Bulgarian Open Science Cloud .....	403
45. <i>Radoslav Pavlov, Desislava Paneva-Marinova, Detelin Luchev, Lubomir Zlatkov</i> – Workshop on Serious Games and their Educational Applications .....	409