

**Plenary Session I**  
**International Cooperation: Common goals – Common gain**

Monday, September 23

Location: Rectorate of the University of Belgrade, Studentski trg 1, Great Hall

Moderator: Žarko Vujošević, University of Belgrade/RS

Thomas Aigner, ICARUS/TMO/AT

*Big Data of the Past- Let's join the Time Machine Organisation!*

What would the world look like if we could access documents from the past as easily as present day's data? How would it be, if we could link all the data of our ancestors contained in any old record automatically with artificial intelligence?

A consortium of more than 500 research institutions is currently aiming at nothing less than building a Time Machine. To succeed, a series of fundamental breakthroughs are targeted in Artificial Intelligence, Robotics and ICT. Massive digitisation infrastructures and High-Performance Computing will be coupled with Machine Learning techniques to produce a multiscale simulation of more than 5000 years of history. Miles of archives and museum collections will be transformed into a digital information system. The so generated BIG DATA of the PAST will enable us to deal with historical information in fundamentally new ways real revolutions will happen.

The Time Machine project ([www.timemachine.eu](http://www.timemachine.eu)) will be this decisive turning point – turning a vision into (virtual) reality. The Time Machine plans to build a large-scale simulator capable to map 5,000 years of European history. This big data of the past, a common resource for the future, will trigger pioneering and momentous cultural, economic and social shifts.

Understanding the past undoubtedly is a prerequisite for understanding present-day societal challenges and contributes to more inclusive, innovative and reflective societies. The fundamental idea of this project is based on Europe's truly unique asset: its long history, its multilingualism and interculturalism. It aims to engage not only scholars but also European citizens, connecting millions of participants with millions of documents, massively participating to a unique endeavour: building a time machine to negotiate a common history of Europe. Today, science and technology can profoundly transform the conservation and experience of cultural heritage impacting research, education, new applications and, as a result, the European or global economy and society at large. Computer and data sciences, physics and chemistry, material sciences and robotics; these disciplines must join forces with the Humanities to get a new paradigm for historical sciences off the ground. To this end, a consortium comprised of the leading European institutions in Computer Science, Digital Humanities, Archival and Historical Sciences and Cultural Studies is aiming at becoming a future European large-scale research initiative. It seeks to effectively join forces with as many partners as possible who are willing to offer input from various professional backgrounds (science, technology, industry, content owners).

Miguel Ángel Bermejo Alonso, General Subdirector of the Spanish State Archives/ES; Dorottya Szabó, Hungarian State Archives/HU  
*European Digital Treasures: Management of Centennial Archives in the 21st Century*

European Digital Treasures is a project selected in 2018 by the European Agency "The Education, Audiovisual and Culture Executive Agency (EACEA)", in the Creative Europe-Culture Program. The State/National Archives of several countries (Hungary, Malta, Norway, Portugal and Spain) and renowned European institutions such as the International Center for Archival Research (ICARUS), Factoría Cultural and Cork Institute of Technology (CIT) are part of it. The General Subdirector of the State Archives of Spain leads the project which aims to address some of the challenges facing the archives in Europe. In this presentation we are going to present who we are and the dissatisfactions in the archives that encouraged us to present this project in order to try to solve them together. We will explain in more detail some activities that are already running such as transmedia exhibitions, surveys, summer camps, archival literacy online course, etc. To conclude we are also presenting the added value of the project, the challenges and problems we are facing and the solutions conceived.

Dragana Milunović, National Library of Serbia/RS  
*Our Small Place in Memory of the World: The Best of National Library of Serbia and the Serbian Library Network*

The paper presents general activities of the National Library of Serbia, as a central parent library, in coordinated development of the library system in Serbia. Its role is described especially from the point of the role it plays in international cooperation, including different activities and projects. Partnership with prominent international organizations and institutions is presented, cooperation with foreign publishers, databases establishing and maintaining, but research, conservation and preservation activities as well. The future potential as well as major concerns in further development process are also underlined.

Aleksandar Kostić, Audiovisual Archives and Digitalization Center of the Serbian Academy of Sciences and Arts/RS  
*The Audiovisual Archives and Digitalization Center of the Serbian Academy of Sciences and Arts: An Attempt to Establish the Standards*

The digitization of cultural heritage in Serbia was thus far approached in a nonsystematic way, not being part of a long-term cultural policy that would impose the highest technical standards, clearly defined procedures and obligatory legal framework.

Being aware of these problems in 2017 the Serbian Academy of Sciences and Arts founded the Audiovisual Archives and Digitalization Center with two primary goals. The first goal was aimed at specifying and applying the highest technical and procedural standards of digitization with respect to the nature of artefacts to be digitalized. The best equipment and IT infrastructure has been acquired that provides the highest quality of digitization. In addition, there was a seven months daily training for six operators supervised by a professional photographer and an expert in digitalization of cultural

heritage. Also, there were two workshops with experts from the PhaseOne company specialized for the equipment used in digitization of cultural heritage. Currently, there are seven workstations with various types of equipment that is still in testing phase. The second goal is to digitize and thus preserve the most valuable artefacts from SASA's archive and library that include medieval charters of Serbian rulers as well as valuable manuscripts that exceed local significance and can be considered to be part of world's cultural heritage. This, however, is a long-term goal and most probably it will be one line of permanent engagement for decades to come.

The span of the Audiovisual Archives' activities is not limited to projects related to heritage preserved at SASA. The Archives is opened for cooperation with cultural institutions both in Serbia and abroad. An example of such cooperation is provided by the project *Diplomatarium Serbicum Digitale* (Srpski digitalni diplomatar). This project is dedicated to the digitization of the corpus of Serbian medieval documents – 95% of which is today preserved in institutions outside Serbia – with the aim of creating a comprehensive virtual archive and digital edition readily accessible to researchers.

Finally, there is a hope that standards and procedures established at SASA's Audiovisual Archives and Digitalization Center will at one point become generally accepted and applied in digitizing Serbian cultural heritage.

## **Plenary Session II**

### **The Time Machine Project – Exemplary Initiatives and Possibilities**

Tuesday, September 24

Location: Faculty of Philosophy, Čika-Ljubina 18-20, Room No. 108

Moderator: Katalin Fazekasné Toma, Budapest City Archives/HU

Katalin Fazekasné Toma, András Sipos, Budapest City Archives/HU

*Partnership in creating City Time Machines*

In our presentation we would like to introduce the audience with our City Time Mashine project plan. Our plan is to establish an easy-to-use, quick-responding, innovative IT framework (a platform), which will be based on interdisciplinary knowledge and databases and made accessible for all interested. The platform will make it easy for each partner city to construct their own city time machine. The project plans to involve cities because the practical use of time machines is best demonstrated in cities, and city time machines are relatively easier to construct.

Budapest City Archives and a number of potential partners in the planned project have already gained experience of the partnership in the project entitled *Community as Opportunity – The creative archives'and users'network* implemented between 1 December 2014 and 30 November 2018. Our Archives is an important partner in the development and operation of the already operational Budapest Time Machine. We wish to share our experience and working practices with our partners and also with interested institutions from different cities and also learn about their experience and

methods so that we can identify mutual benefits and develop an open source framework which can be a ready tool for developing and operating city time machines all over Europe.

Antonella Ambrosio, Antonello Migliozi, University of Naples Federico II, MUSA/IT  
*Through the Naples Time Machine. A starting Point and the Motivation*

With this presentation we intend to introduce the starting point and the motivation that drove our research group to start in 2019 the Naples Time machine in order to contribute to the creation and use of big data referred to the millennial history of the city of Napoli (<http://www.coop-unina.org/naples-time-machine>). This project is part of the ambitious setting up and implementation of the European Time machine, of which it represents one of the 18 Local Time machines envisaged (<https://www.timemachine.eu>).

The interdisciplinary research group, coordinated by Antonella Ambrosio and Antonello Migliozi, is constituted by specialists in history/humanities (Dept. of Humanistic) and in ecology and landscape (Dept. of Agricultural Sciences/Museum of Agricultural Sciences – MUSA), both of the University of Napoli Federico II – UNINA. The goal is to create a “Naples/South Italy Time Machine”. In fact with the term “Naples” we actually refer not only to the city of Naples, but also to the whole Southern Italy because the documentation preserved in the local archives, from the 9th to 19th centuries, regards all Southern Italy that as a whole or independently had intense relations with the European West and the Byzantine and Arab world in the Mediterranean.

Since 2008 the group has been working on the digitisation of the historical documentation and has carried out the related scientific research, within national and particularly European projects, in order to reconstruct the dynamics of the evolution of the landscape of the Campania region and to identify and put in order, in digital archives standardized at European level, the historical documentation as witness of these changes. Many of the data and results of these projects will be used for the Naples/South Italy Time machine.

Within this context a path has been planned for some time that considers the historical reconstruction of the strategic construction of the monasteries of Naples and then of the royal palace of Portici, nowadays the premises of the Department of Agricultural science and the Centro MUSA of the University of Naples Federico II (<https://www.centromusa.it>). In both cases precious sources (charters and documents at the State Archives of Naples – SAN, but also the rich cartographic material preserved at the SAN and at the MUSA) would allow creating a temporal modelling of the phases that have led to the construction of the historical buildings, the gardens and the woods nearby. Finally, the same methodology could also be used for the historical reconstruction and evolution of a rural landscape in the hilly and mountainous inland area of the Campania region. In both cases, the similarities with the trends of other European nations could be highlighted and the common development elements seized.

Peer Boselie, Stichting De Domijnen/NL  
*Voluntary Time Travellers: The Limburg Time Machine*

The Limburg TimeMachine is a project in which there is big collaboration between professional and volunteer organizations in the field of landscape and occupation history. Massive analogue cadastral (and other) archival documents are turned into digital files. The project started in Sittard-Geleen in 2008/2009 as the “Aezel Projek” (donkey-project). Over 70 volunteers invested 170,000 hours of work until now. Now dozens of Dutch and some Belgian municipalities are participating. The historical mass data is becoming increasingly interesting for historians, but also for municipalities and provinces. This is because many layers of cultural-historical data are possible, which can be presented together in context. Money can be saved in the field of e.g. archeology and monument care. A website has started (under construction!). This is being realized together with the LGGI foundation and the University of Leuven. The Limburg TimeMachine is one of the European examples of the European TimeMachine.

Martina Bolom-Kotari, University of Hradec Králové/CZ

*Broumov Benedictine Library: Discovery, Digitization, Cataloguing, Exploitation, Protection and Presentation*

Broumov Benedictine Library belongs to the masterpieces of the Late Baroque Era and the The Age of Enlightenment. Its destiny was very difficult especially during the 20th Century. That is why we know only a little about it so far. With the use of modern methods and technologies we try to discover it, catalogue the books, digitize them if necessary, present the Library and the books and make them accessible for the researchers and public. In the years to come we would like to continue with 3D model of the Library in the form of the late 18th Century, when the oldest yet discovered catalogues come from. We use the data to prepare specialized databases, which will be accessible to the public and researchers as well. Discovery of the Library is only a small piece of planned research and massive digitization not only of written documents, but of three-dimensional sources too. Attention is going to be paid to the Broumov Monastery as the whole, to the town Broumov and finally to the Broumov region. In our opinion it is a great opportunity how to discover the history of the place and make it everyone's matter.

Marika Ceunen, Stadsarchiv Leuven/BE

*A Toponymic Database as Basic Layer for a Time Machine?*

In the past decades some researchers, academic ones as well as local historians, made several toponymic inventories of the historical part of the city of Leuven. They gathered the names of streets, places, houses, parks, rivers, bridges, etc. that once were used by the inhabitants. Some of those inventories mention also some explanation of these toponyms.

Since five years the city archives are working on a project to combine all the available toponymic information about Leuven in one big database. The design of the database has not only been developed to give the future users with one click an overview of all the existing information about a specific place in Leuven or about a specific toponym. It's also our ambition to integrate visual information such as maps, drawings and photos into the database. And since the city archives have an ongoing volunteering project to

transcribe the 15th century registers of the chambers of eldermen, we would like to link the toponymic database also to the search function of our transcription database. That would give the online users the opportunity to find with one search operation all the textual citations that contain the toponym that was looked up.

## **Parallel Sessions**

### **Digital Platforms and Digital Research of Archival Sources**

Tuesday, September 24

Location: Audiovisual Archives and Digitalization Center of the Serbian Academy of Sciences and Arts, Knez Mihailova 35, Room No. 102

Moderators: Nebojša Porčić, University of Belgrade/RS; Georg Vogeler, University of Graz/AT

Georg Vogeler, University of Graz/AT

*Historical Texts and Objects in the Digital Transformation*

The digital transformation of our society is on its way: digital technology represents many facets of our life, from communication to finance. Cultural heritage in its various expressions from archival sources to art work is part of this. A major driving force of the digital transformation is the data, i.e. the digital representation of activities and objects, which allows organizations and individuals to create comprehension of these activities and objects. We as humanists contribute to this data in various ways. The talk will highlight some consequences of this data creation from information seeking to machine learning and try to draw some conclusions on the methods and considerations the data creators should bear in mind if they wish to keep the digital representation of objects and texts meaningful.

Sébastien Barret, Institut de recherche et d'histoire des textes/FR

*Digital Research on Archives and Archival Documents in France: A Panorama*

The landscape of French research on archives and archival documents is very diverse. This may be due in part to the specific structures of the relevant organizations: notably, archivists and university historians tend to work separately. Similarly, financial means for digital-driven research seem to concentrate on a few institutions, whether they are universities or not. This landscape also reflects, often indirectly, the evolutions and debates that have taken place in the field commonly known as “digital humanities”. While some projects rely mainly on the digital dissemination of primary sources or of the results of fundamentally traditional approaches, others try to get digital technologies to influence the very core of research methods. And of course, depending on their objectives, these projects will try to associate various parts of the greater public. While certainly an asset in itself, this great diversity is certainly also one of the reasons why

the French scholarly milieu experience some difficulties in finding a common ground on what exactly is to be understood under “digital research”.

Konstantinos Patseas, Lampros Alexopoulos, Holy Monastery of Pantokratoros – Mt. Athos/GR

*The Project “Athos Digital Heritage”: The Case of the Holy Monastery of Pantokratoros*

Athos Digital Heritage is a 10-million-euro project funded by the PA (Partnership Agreement for the Development Framework) 2014–2020, which constitutes the main strategic plan for growth in Greece with the contribution of significant resources originating from the European Structural and Investment Funds (ESIF) of the European Union. The main objective of the project was to create and develop a digital repository that would contain historical and religious items of the participating monasteries, exploiting modern information and communication technologies by digitalizing, documenting and disseminating Mount Athos’ cultural heritage. Athos Digital Heritage has a twofold objective. On the one hand, it aims to communicate, and disseminate the outcomes of this enormous digitization and documentation project with the view to meet the needs of the academics and research community in general. On the other, through the digital applications and the dissemination of the digitized content, it strives to support, contribute in and develop spiritual values, innovative digital pedagogical tools and applications.

Antonella Ambrosio, Maria Rosaria Falcone, Vera Schwarz-Ricci, University of Naples Federico II/IT; Georg Vogeler, University of Graz/AT

*A Digital Scholarly Edition of Medieval Documents on Monasterium.net: Santa Maria della Grotta (1200-1250)*

The edition of the documents of Santa Maria della Grotta near Benevento (1200-1250) had two goals. Firstly, the creation of a dynamic digital edition with Monasterium.Net (also the first pilot test of the user-friendly editor EditMOM3), and secondly, the creation of a paper-like output in pdf, in other words, a stable version. From the technical point of view, the digital edition adopts XML-Encoding following the standard of Charter Encoding Initiative to ensure generality and usability, while the especially developed transformation program performs a XSL-FO conversion of the XML and is transformed into a pdf (in print) with the help of an XSL-FO processor. The result is a cooperative, social edition and a use case for the “transmedialisation” of editorial practices.

Michael Gervers, University of Toronto/CA

*The Temporal Ordering of Historical Documents Using a Quantitative Method*

We outline a method for the temporal rank ordering of historical documents. The method is based on exploiting a feature of informative words, that is, words whose probability of word usage is not uniform across a time range. The performance of the

method is shown on a collection of two different corpora – the State of the Union Address and Documents of Early England Data Set (DEEDS). Having established the reliability of the method, we are now applying it to England’s surviving corpus of pre-Conquest (-1066) charters. While most are internally dated or have been assigned dates, there is considerable uncertainty about the accuracy thereof. Temporal ordering will provide innovative alternatives, indicating differences with current opinions.

Colin Sippl, University Library of Regensburg/DE; Manuel Burghardt, Computational Humanities Group, Leipzig/DE; Christian Wolff, Media Informatics Group, Regensburg/DE

*Modelling Cross-document Interdependencies in Medieval Charters of the St. Katharinenspital in Regensburg*

Digital editions that merely rely on text-oriented encoding like CEI-XML have some limitations, like the inability to model overlapping structures or parallel annotation hierarchies. To overcome these limitations, graph-based data models and event-based ontologies like CIDOC-CRM have been considered for the creation of digital editions. We apply the graph-based approach to model charter summaries (*regesta*) and extend it with the CIDOC-CRM ontology, as it allows us to integrate information from different sources into a flexible data model. Our use case are the charters from the St. Katharinenspital, a former medieval hospital in Regensburg, Germany. By analyzing the charter *regesta* with natural language processing methods, we generate additional metadata. The extracted information allows us to model cross-document interdependencies of the charter *regesta* and the extracted entities. Building up on this, we present a web application that allows exploratory searches in the database.

Marija Mandić, Institute for Balkan Studies SASA/RS; Ana Vukomanović, Ilija M. Kolarac Foundation/RS

*Digital Serbian Folklore Collections: What has been done and what is to be done*

In this paper we first give an overview of the main and the best known digital Slavic folklore collections and data bases, with specific emphasis on South Slavic folklore. Then we focus on Serbian folklore. We present digital data bases of the 10-syllabic epics created by Mirjana Detelić and Branislav Tomić. Based on this data base, we emphasize importance of searchability of digital folklore collections for research in folkloristic and other humanities. Searchability also enables communication within different humanistic disciplines and therefore presents a ground for further interdisciplinary studies. We also present the digital edition of the oldest collection of oral poetry in the Shtokavian speaking region – the Erlangen Manuscript (18th century). Besides, we comment on the digital collections of the National Library of Serbia, and the Serbian Academy of Sciences and Arts which are related to the folklore. Eventually, we outline what is to be done in the domain of folklore digitization.

## **The Topotheque Platform: Opportunity for Communities and Individuals to share our Common Past**

Tuesday, September 24

Location: Faculty of Philosophy, Čika-Ljubina 18-20, Room No. 108

Moderator: Vlatka Lemić, ICARUS Hrvatska/HR

Vlatka Lemić, ICARUS Hrvatska/HR

*The Topotheque Idea – Networking Local History and Community Stories*

The Topotheque platform was founded in the framework of co:op project and continues to live and grow after the project's end. The Topotheque associates and ICARUS continue their work on the Topotheque network with initiative for establishing a new working group within the ICARUS aimed at coordination and support for Topotheque collections. Topotheque potentials for local communities, education, heritage and other cultural fields have already been proven in practice, but current activities on building national and international Topotheque network, establishment of sustainable organization and running of Topotheque platform in the future still need cooperation from all included parties. The session will present ideas, suggestions and examples of Topotheque issues with open invitation for all interested to join in.

Katalin Fazekasné Toma, Budapest City Archives/HU

*How to sustain and increase the content and number of several European topotheques?*

Nearly one year has passed since the project Community as Opportunity – The creative archives' and users' network project supported by Creative Europe program ended. Within four years the project partners created 56 national topotheques and the whole number of the participating communities increased incredibly, in 2014 there were about 40 topotheques, the majority evident from Austria and this number till now increased to 266 from Austria and 11 other countries (in March the number was 232). The number of the images ran over 400.000! Since the end of the project there is a great challenge for the project partners how to continue the activity, how to sustain and increase the content and number of the topotheques beyond Austria. I am convinced, that our institutions have to expend a lot of energy and time for the topotheques, otherwise they will be slowly forgotten.

In my presentation I will make an attempt to present the experience of the earlier project partners they have collected in supporting of existing topotheques, what kind of ideas they have to make the topotheques bilingual. Finally I will present some ideas, how to make the topotheque platform much more familiar in scope of scholars and in the education.

**Plenary Session III**  
**Archives and Challenges of the Digital Society – Part 1**

Tuesday, September 24

Location: Historical Archives of Belgrade, Palmira Toljatija 1

Moderators: Francesco Roberg, Hessian State Archives/DE; Slobodan Mandić,  
Historical Archives of Belgrade/RS

Tijana Kovčić, Jelena Nikolić, Slobodan Mandić, Historical Archives of Belgrade/RS  
*The Digital Repository of the Historical Archives of Belgrade*

The presentation will introduce Digital Repository of the Historical Archives of Belgrade, an on line repository available to all Internet users interested in research of Belgrade population in 18<sup>th</sup>, 19<sup>th</sup> and beginning of 20<sup>th</sup> century. It was created as a result of digitization of archival material of extraordinary significance. The repository consists of two segments: Belgrade Citizens Card Register and Church Registry Books. First segment contains 1 009 031 digitized certificates of residence of Belgrade citizens. It was kept by Administration of the City of Belgrade from 1922 until 1954. Each certificate contains personal data of a person who lived or visited Belgrade for shorter or longer period of time – first and second name, address, profession, citizenship, date and place of birth, marital status, religion, mother and father's name, information on other family members etc. These certificates can be searched on line by first and second name and by father's name.

Second part of the repository includes momentarily 222 birth, death and marriage church registries kept by three main confessions in Belgrade-Orthodox, Catholic and Jewish confessions from 18<sup>th</sup> century until 1918. The books are searchable by year, church and municipality.

These new, online available archival resources represent inexhaustible source for researches of demographic and other important characteristics of the Belgrade history (capital of the Principality of Serbia, Kingdom of Serbia, Kingdom of Serbs, Croats and Slovenes/Yugoslavia and later of the Federal People's Republic of Yugoslavia).

Ciro Romano, Archive "P. Francesco S.M. D'Aria SJ"/IT

*Importance of the experience of historical-religious archives for the history of communities*

The documentation preserved in the archives of the Catholic Church is an immense and precious heritage. It is sufficient to consider the large number of archives that were formed following the presence and activity of the bishops in the episcopal cities. Among the oldest are the bishops' archives and the parish archives. Due to the antiquity and importance of the collected material, the archives of monasteries of various traditions are significant. In fact, cenobitic life played a primary role in the evangelization of the population surrounding religious settlements; it has launched important charitable and educational institutions; has transmitted ancient culture and more recently has provided the restoration of archival documents by setting up specialized laboratories. It is really

impossible to fully describe the geography of the ecclesiastical archives; despite the observance of the canonical dispositions, they are autonomous in their regulation, different in organization, proper to each of the institutions formed in the two thousand year history of the Church.

In this presentation two archives will be presented, by way of example: one that no longer exists but can be "virtually" reconstructed from the suppressed monastery of Saints Peter and Sebastian of Naples (XIV-XVIII centuries), and another, currently active, which is the historical archive of the female congregation "Le Ausiliarie della Madonna" (20th century -) and, in a comparative and diachronic vision, will be presented the importance of archival institutions annexed to religious institutions for the community history, and not only for ecclesiastical or religious scopes.

Anabella Barroso, Historical Archives of the Diocese Bilbao/ES  
*Digital Users, Digital Services in the 21st Century*

In this communication we want to present the process of creating the digital service in the AHEB - from the digitalization of documents to online access and the creation of a file interpretation center for users to interact with documents and know the functions of the archive.

We will focus the presentation on the impact indicators of the digital service and on the use of all the services in the archive.

Vladan Vukliš, Saša Đukić, Vesna Đaić-Škondrić, Archives of the Republic of Srpska/RS  
*DIY Archives: Towards Self-Reliance in the Digital Environment*

It has been noted recently that neoliberalism has been encroaching the library and information field (Cifor/Lee, 2017). In practical terms, this translates into a constant struggle of archival professionals to keep their institutions above the market currents, in defence of culture as a public service and not a commodity. Recently, however, heritage institutions have been outflanked by market forces through public-private partnerships with the IT sector, aiming to produce necessary digital tools. But for every successful – and expensive – project there has been one failure. In order to alleviate the burdens of corporate interests governing the new digital environment, we should direct ourselves as towards self-reliance based on open source systems. In this presentation we shall discuss our own experience with open source solutions (most notably AtoM). In addendum, we will reflect on how these new directions affect our work flow, organization, processing, services and human resources.

Tijana Rupčić, Historical Archive Kikinda/RS  
*When Records are Missing: The Role of the Historical Archives in Search for Genealogical Records for Jewish Families in Northern Banat*

What to do when important records are missing? During last few years in the Republic of Serbia this was a hot topic question in a matter of records related to the former Jewish residents of Yugoslavia in northern Banat. During Second World War all records (birth, death and marriage) were destroyed in a whirl of war and became a problem when restitution of Jewish property was on agenda. Many of descendants of former Jewish residents were in need of such records to prove their relations and lack of records became a problem. Focus of this paper is what solutions were made and essential role of Historical Archive Kikinda in such process. Author will present ways of creating database similar to records needed to prove family heritage not just in cases of restitution but in general.

Hadewijch Masure and Marika Ceunen, Stadsarchiv Leuven/BE

*Itinera Nova: An Ambitious Digitization and Disclosure of the Leuven Bench of Aldermen Archives*

In 2008 the Leuven City Archives, Belgium, decided to launch an ambitious and challenging project to protect authentic registers of the Bench of Aldermen and make them accessible by digitizing and disclosure them on [www.itineranova.be](http://www.itineranova.be). The technical support is done by the Cologne Centre for eHumanities of the University of Cologne.

The Leuven Bench of Aldermen was an institution presiding over civic affairs for centuries from the Middle Ages until the French Occupation in 1795. The Bench ratified transactions between civilians and pronounced judgment in disputes. Its jurisdiction extended far beyond Leuven to the Grand Duchy of Brabant as a whole.

The preserved registers of this medieval institution are a large source of 1127 volumes, with a total of approximately 475 000 folios (950 000 pages) of handwritten text. They cover a long period (1362-1795) and are characterized by an exceptional wealth of historical facts for Leuven and its surroundings. The acts are written in Middle Dutch, Latin, and sometimes French. They not only provide us with a great amount of information about the city's history and institutions, but they are of great interest to scientific research in other disciplines as well, such as linguistics, toponymy, daily life history, law and genealogy.

At this moment almost all registers are scanned and available on our website, and almost 55000 acts have been transcribed. They are frequently used by researchers from several disciplines. We keep improving our website and usability. We've started an upgrade of our website and plan to add searchability on f.i. type of act and place, and link our data to GIS-layers and other databases. Furthermore, we have developed a handwritten text recognition (HTR) model using Transkribus, with a default rate of only 3,26 %, still being improved with every new manual transcription.

We also reach a larger public with our easily accessible website [www.schepenbankregisters.be](http://www.schepenbankregisters.be), a newspaper with funny stories and by organizing events and tours. Over the next years, we aim to further develop this public and educational aspect. We for instance think about developing an exposition in the old City Hall, the original location of the Bench of Aldermen.

The project is also valuable from the perspective of crowdsourcing and community building. It unites over 50 volunteers from various backgrounds who have embedded

themselves in every aspect of the project, from digitizing the registers, helping to increase the accessibility by transcribing the acts, to searching for funds and even promoting our very own ‘clerical’ beer. By giving the volunteers work that suits their needs without any pressure we allow them to enrich themselves as well as give back to the community. Furthermore, we organize all sorts of social gatherings since most of our volunteering work can be done from home. That way we create opportunities for the volunteers to get to know each other. In 2018 we have expanded our volunteering team with a number of enthusiastic prisoners. In this way, we hope to further increase the social relevance of the project.

Jasenska Ferber Bogdan, Croatian Academy of Sciences and Arts, Fine Arts Archives/HR

*Extending the Reach – Fine Arts Archives Digitization Projects*

Croatian Academy of Sciences and Arts’ Fine Arts Archives, documentation centre and archives for national art history, is continuously engaged in digitization process of its archival holdings. Due to Academy’s open access institutional repository platform ([dizbi.hazu.hr](http://dizbi.hazu.hr)), Archives’ digitized material, such as exhibition catalogues and photographs, has been available to much wider scientific and expert community. DiZbi allows connecting of various and rich Academy units’ holdings into joint digital collections, thus heightening the boundaries of one institution and providing new forms of collaboration with national and international institutions. Yet, along with the progress, the process of Fine Arts Archives’ digital transformation brought few challenges, such as metadata standardization or new competencies requirements of both art information professionals and users to take full advantages of newly created possibilities.

Jelena Čupić, Susanne Göttlich, University of Music and Performing Arts, Graz/AT  
*Archives in the Course of Time – Creating an Archival Collection in the “Archiv der Gegenwart” of the University of Music and Performing Arts, Graz*

“Archiv der Gegenwart” or “Archive of the present” is a project initiated by the University Archive of KUG. This multimedia collection aims to make contemporary composers and their work more visible and available to the research community as well as the public.

Foundation of the online platform is the “Portrait” event series, documented in sound and vision. These events portrait individual composers, their music and their personalities.

In addition portrayed composers are asked to submit further material to the University Archive e.g. scores, sketches, manuscripts, programmes, etc., which are then stored and partially digitalized. This presentation will show different approaches to storing of multimedia holdings. Using “Archiv der Gegenwart” as an example, we will also highlight the concerns about making the archival material available to online research. Because of the combination of the scholarly relevant archival materials with the multimedia collection presented on the homepage, this project is challenging on more

than one level. Not only the criteria of the “digital era” and data protection need to be met, but the requirements of today’s science and research standards too.

Nataša Petrović, Jelena Glišović, National Library of Serbia/RS

*Digital Approaches to Special Collections – National Library of Serbia Case*

Digital tools and methods are an inseparable part of high quality studies within humanities and the National Library of Serbia (NLS) uses them for a fostering of a special collections potential as a useful educative tool and a strong didactic force.

Digital approaches also increase the public dissemination of information contained in these collections as an important part of Serbian cultural heritage and a valuable source of historical data associated with specific periods in the past. Digital interface as a user friendly tool makes search and retrieval of these information easier and existing data more expandable and efficient in connecting historical textual sources and descriptions with NLS collections.

With aim to provide new solutions that can assist researchers and scholars NLS uses different platforms and repositories which gives users possibility to see the past with the eyes of today. The aim of this paper is to show most recent and current thematic projects and activities in this filed with the special focus on specific used formats and data organisation.

Zoran Zdravković, Milanka Babić-Vukadinov, Belgrade City Library/RS

*Digitization of Written Old and Rare Materials at Special Collections of the Belgrade City Library*

Impact of digitization on society in the new technological age will be shown through digitization in libraries, museums, archives and other GLAM heritage institutions. The focus will be on digitization processes in the domain of preserving, protecting, presenting and popularizing written material cultural heritage, especially archival material, historical written material, and old and rare books.

Digitization as a method of preserving cultural heritage, digital sources, international cooperation and initiatives as new way to bring history closer to the public will be discussed through the processes and methods of forming a digital library, the preservation of Belgrade City Library Special Collections, the presentation of the Digital Belgrade City Library and the dLibra digital platform. Special Collections Department activities, projects and programs will be analyzed through technical capacities improvement, staff education, digital equipment acquisition and empowering the institution capacities, as well as presentation of restoration and conservation projects of materials within the National Conservation and Restoration Laboratory.

**Plenary Session IV**  
**Archives and Challenges of the Digital Society – Part 2**

Wednesday, 25 September

Location: Faculty of Philosophy, Čika-Ljubina 18-20, Room No. 108

Moderators: Karl Heinz, ICARUS/AT; Tomi Ahoranta, The National Archives of Finland/FI

**International projects**

Slobodan Mandić, Historical Archives of Belgrade/RS

*Digitising the European Archival Heritage: Challenges and Opportunities of Archives Portal Europe*

Since the beginning of the millennium, archives and cultural heritage institutions have started to reflect on new challenges and opportunities brought by the digital age. The guidelines created in 2002 by the International Council of Archives indicated full digitisation and online availability of archival material as the main objective for archives in the digital age. For Historical Archives, investing in digitisation is a very expensive, time consuming, and complex endeavour –Even in a utopian world where archives had infinite budget and resources, this is a very long-term and ambitious goal. It is well worth the effort, but it is fundamental to implement all the opportunities that digital technologies offer to archives.

The advantages for researchers are obvious. Hardly anyone engaging in archival research today does not start by looking for the digital space of the archives they plan to visit. Still, this is just the tip of the iceberg in terms of the opportunities offered by digital technologies. Since 2009, in parallel with the creation of national or local research portals, countries around Europe have started to design a system to integrate these online spaces into a single catalogue that would allow accessing the whole of the European archival heritage through one single research portal. In 2012, after three years of research, [Archives Portal Europe](#) was published as an online repository of all European archival catalogues.

This paper aims are two-fold: in first instance, it aims to describe the technologies and challenges of setting up and expanding Archives Portal Europe; from the integration of different archival standards into one, to the creation of taxonomies for research and recall that take into consideration issues of multilingualism and description frameworks; from the problem of digitisation of historical documents to the hindrances related to copyright, privacy, budget. In second instance, the paper aims to present and explore the possibilities that a single entry point opens up to historical and archival research, with the potential of opening new fields to transnational and global history, as well as micro-history and historiography.

Additionally, it will be shown the possibilities of researching both, the regional history and the history of the city of Belgrade using the amount of various available information and archival resources at the Archives Portal Europe.

Peer Boselie, Stichting De Domijnen Sittard-Geleen/NL

*The Erasmus+ Project MobiDig – Mobile Digitizing: More Than “Press the Scan Button”!*

The project MobiDig (Mobile Digitizing, 2017-2019) is an Erasmus+ project that has focused on the correct choice, use and durability of mobile digitization equipment and the procedures needed for this. The goal of the partners (from Bulgaria, Austria, Portugal, Italy and the Netherlands) was to have in mind especially smaller organisations with little money, like convents, small libraries, archives or historical societies. They can find solutions and on-line help in a manual that covers all challenges you meet when you want to start digitizing. Because digitization is more than just “push the scan-button”!

More information: <http://mobiledigit.eu/>

Branislav Erdeljanovic, Jugoslovenska Kinoteka/Belgrade RS  
“The Film Corner Reloaded” Project

“The Film Corner Reloaded” is the follow-up project to “The Film Corner - Online and offline activities for film literary”, which involves seven European institutions in six EU countries. While the first edition was dedicated to a critical approach to film language and to film as an art form, and to a creative approach to film and filmmaking, the second edition of the platform “The Film Corner Reloaded” will be dedicated to an interdisciplinary and cross-curricular approach to film education centred on the main topic of film and its relationship with other subjects, such as history, arts and other topics.

Through this new section of the platform, the project aims to provide teachers with a prompt tool that supports them in fulfilling the objectives of the curricular didactical activity.

Philipp Wittwer, Stadtarchiv Dornbirn/AT  
*VIRAL – an Erasmus+ Project Using VR, AR and 360-degree Videos for Adult Education and Exhibitions in Archives, Museums and Libraries*

The project VIRAL (Virtual Reality Archive Learning), will supply high quality individual learning opportunities for adults and competence development for adult educators in the fields of Virtual, Augmented and 360-degree video Reality production. This will be carried out in the context of utilising archive material and the physical places and environments of post-industrial landscapes. We will use the often deep interest for the individuals local environment by exploring old industrial factories, mines, harbours, agricultural production centres that once stood at the centre of local communities but are now long gone. Investigating a heritage site is an excellent way of exploring cross-curricular themes and developing key concepts and processes. A visit to a site is by far the best way of engaging and inspiring adults. The creation of Virtual, Augmented Reality and 360 degree interactive videos based upon the heritage locations and training in the use of archives with material from the heritage sites will form the core of both the competence development for adult educators and individual programs to develop key competences for adult learners. They will learn to gather information

from a variety of sources (e.g., books, documents, using audio to capture memories, videos, internet) and to turn their findings into various forms (e.g., text, tables, images, sound, websites, surveys, exhibitions) which will then be included in learning how to create VR, AR and 360 degree productions.

The project highlights the need for high quality individualised adult education in areas of postindustrial decline, often associated with high unemployment and social problems. Such areas specifically need new and fresh ways of looking at the opportunities the physical environment provides, aimed at both finding employment and for the well-being of the individual and community. The first major part of the project focuses on training materials and courses for adult educators working with or in post-industrial areas, with reference to the heritage sector and upskilling them in VR, AR and 360 video techniques. The second major part of the project focuses on online training material where adult educators, archive and heritage professionals etc. can get access to high quality material for the target group. By using free software and low cost devices, virtual technology becomes affordable for the many small and medium sized archives, libraries and museums. Didactic tools, good practice examples and training courses allow experts and adult trainers to use these technologies effectively. Therefore, existing human knowledge can be used, chances increased and new skills acquired.

This project is developed together by seven partners from six nations, including: Coventry University (United Kingdom), City Archive Wuppertal (Germany), Museum of Slavonia (Croatia), Museum Fábrica Grande (Portugal), E-Learning Studios (United Kingdom), Elderberry AB (Sweden) and the City Archive, Dornbirn (Austria, Project Leader)

### **Theoretical Concepts, Best Practices**

Francesco Gelati, Leibniz Institute for Contemporary History/DE  
*Archival Authority Records as Linked Data Thanks to Wikidata, Friend of a Friend (FOAF) and the Records in Contexts Ontology*

More and more archival institutions share their authority records as Linked Data. The Milan-based CDEC (1) created a Holocaust-based ontology (2) for describing its archival authority records and holdings. On the other hand, a Swiss research team developed a non-archival-specific conceptual model (3) for persons using 9 different ontologies, including the Dublin Core and the Europeana Data Models, but excluding Wikidata.

In my presentation I would like to show these case studies and to explain how Wikidata (4) can be a handy dataset for both properties (e.g. “has birth place”) and entities (e.g. “Dublin”). Also, many Wikidata properties could be associated to their equivalent terms offered by other datasets, e.g. Friend of a Friend - FOAF (5) and the Records in Contexts Ontology (6), just like DBpedia (7) does. For doing so systematically, the website <https://lov.linkeddata.es> lists and describes 600+ Linked Data Vocabularies.

(1) Foundation Jewish Contemporary Documentation Center; <http://cdec.it/>

(2) <http://dati.cdec.it/lod/shoah/reference-document.html>

- (3) [http://campus.hesge.ch/id\\_bilingue/projekte/lodz/results\\_de.asp](http://campus.hesge.ch/id_bilingue/projekte/lodz/results_de.asp)
- (4) <https://www.wikidata.org>
- (5) <http://xmlns.com/foaf/spec/>
- (6) <http://skos.um.es/TR/ric/>
- (7) <https://wiki.dbpedia.org/>

Jasmina Živković, Archival Association of Serbia/RS  
*Archive Material on Digital Media and Protection of Data*

The development of information technology requires the adaptation of archival activities in order to facilitate communication and easier accessibility of archival material to researchers and users. Archives are increasingly using digital portals that contain data bases on archival material stored in archival depots. A significant amount of archival material has been digitized; also, relevant institutions in Serbia are working intensively on the establishment of electronic archives and the digitization of cultural heritage. The paper discusses the availability of archival material in digital form in cases when it contains confidential data or personal data that are protected by special laws. At the same time, the work is the result of our research into archival norms that regulate the availability of “sensitive” archival material in a conventional and unconventional form.

Mirjana Bogosavljević, Archives of Serbia/RS  
*Archivemata and AtoM: Integration and Connectivity of Digitized Archival Documents*

The overview of Archivemata, open source software package based on international standards and tailored for use by professional archivists was the topic of two of my papers: one published in the Proceedings of the Archival Association of Serbia: “Archival material in theory and practice”, Belgrade 2018, and the second in the magazine of the Regional Archive Maribor: “Modern Archivistics”, Maribor 2019.

The key issue of the digitalization in the countries of our region is linking of the archival material and establishing some form of integration between now separated state archives of ex-Yugoslavia. That actually means that additional efforts are required in order to establish the accord of the process of digitalization and coordination in the process of implementation because the final goal is the benefit of the user no matter where he is located. Enabling the use of archival documents in the digital domain as a whole raises the question of their security.

The paper shall address the potential methods of implementation of virtual archival fonds. The idea is that the digital documents shall stay stored at the archives across the region and they shall be virtually presented as an integral part of a united virtual fond.

Jasmina Nikolić, Dragana Miloradović and Nataša Milošević Dulić, Historical Archives of Požarevac/RS  
*“Millenials” in Archives – Making Video Clips using Archival Material*

The popularization of archival material and the increasing interest of younger generations in archives, requires of archivists to follow the latest achievements in modern technologies. Its purpose is to put the archival resources in use and make them more accessible to the public.

Historical Archives of Požarevac has implemented several projects in previous years, the realization of which required the participation of pre-school and school children.

By utilizing up-to-date technologies, Historical Archives of Požarevac implemented the project “Adventure in the Archive 2” in 2019 in order to apply its educational function, open the Archive to the public, educate and raise awareness in elementary school students of the importance of archival material as cultural heritage.

The project involved the participation of 7th and 8th grade elementary school children who recorded their stay in the Archives with their smartphones and digital cameras using the archival material and interior of the Historical Archives building as their short video clip theme.

The project was coordinated by Dr. Jasmina Nikolić, archival advisor and director of the Historical Archives of Požarevac, Dr. Dragana Miloradović, archival advisor, Nataša Milošević Dulić, Mirjana Stepanović and Milan Stanković, MSc, archivists.

The associates of this project were Goran Seger, principal of the Elementary School “King Alexander I” in Požarevac and their history, informatics, and Serbian language teachers.

The realization of this project will be presented in the paper.