

InterPARES 2025 SUMMER SCHOOL

June 23-28, 2025

San Benedetto del Tronto (Ascoli Piceno), Italy



Palazzo comunale di San Benedetto del Tronto – Town Hall of San Benedetto del Tronto

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Overview

The InterPARES Summer School program is designed to present the most significant findings of 25 years of research about trustworthy digital records creation, maintenance, preservation, use, and access across technologies, discussing both theory and best practice for digital records and archives management. Professional archivists will come in contact with the latest developments in archival science and the use of artificial intelligence in archival work.

Day 1 – Monday, 23 June

8:30 **Registration**

9:15-10:30 **Welcome and Introductions**

Welcome from government officials and the School's organisers; students' introductions; logistic details.

10:30-11:00 **Coffee Break**

11:00-12:15 **Luciana Duranti**, *Authentic Digital Records*

InterPARES tested the traditional concept of record in the digital environment, determining the characteristics of digital records as well as their necessary and sufficient attributes. This class will discuss the findings of InterPARES with respect to the nature of digital records, how to maintain their authenticity and how to ensure that it will be verifiable over time.

12:15-13:45 - **Lunch**

13:45-15:00 **Joe Tennis**, *Records Metadata*

InterPARES has established Benchmark and Baseline requirements for keeping and preserving authentic records in digital systems. These, along with the Chain of Preservation Model, have been used to create the InterPARES Authenticity Metadata (IPAM). This class will present these findings from InterPARES and discuss their relevance in the emerging technological environment.

15:00-15:30 **Break**

15:30-16:45 **Hrvoje Stančić**, *Technological Authentication*

The digital era brought new challenges to the archives. The underlying archival theory and concepts are the same for analogue and digital records. However, the technical manifestation of digital records, their variety, speed of creation, volume, and volatility require new computational approaches, especially regarding record authentication. Digital signatures bring another layer of complexity to the long-term preservation of digital records, because the certificates they rely upon expire much sooner than the records' retention period. Blockchain and distributed ledger technologies (DLT) can support records' integrity, confirm their sequence, enhance non-repudiation, but also help preserve the validity of digital signatures. This class will present the TrustChain model, resulting from the InterPARES Trust project research, together with the use case of a system for authenticating analogue university diplomas by connection to the blockchain.

Day 2 – Tuesday, 24 June

9:15-10:30 **Tracey P. Lauriault**, *Data as artifacts and as records*

This class will present the relationship between metrology and data, and discuss how to consider data beyond normalized technological understandings. Examples will be drawn from the InterPARES 2 General Studies about the concepts of reliability, accuracy and authenticity in the sciences, and from the InterPARES Trust AI case studies about digital twins and smart grids. The class will end with a discussion of the relationship between data and records.



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10:30-11:00 *Break*

11:00-12:15 **Corinne Rogers**, *Trustworthy Digital Preservation*

What is required to preserve trustworthy digital records over time and through technological change? This is a question that InterPARES has addressed from the beginning. The first two InterPARES projects formulated and elaborated the concept of the chain of preservation, providing a basis for judging the trustworthiness of records' preservation. This class will examine the functional and data requirements for digital preservation as derived from the Chain of Preservation Model (COP), and, under the rubric of Preservation as a Service for Trust (PaaST), will outline a comprehensive model developed by the 4th phase of InterPARES (InterPARES Trust) for integrating what is required in digital preservation with technical approaches for meeting such requirements in the cloud.

12:15-13:45 *Lunch*

13:45-15:00 **Erik Borglund**, *Records in the Cloud*

Modern cloud service as we see it today was established by Amazon in 2002, when it was used as an internal service. In 2006, Amazon offered the service outside the company. The cloud as a technology and the related service providers have been a challenge for records and archives professionals, and others. The focus of this class is on the findings of InterPARES Trust, "Records in the Cloud", but it will also discuss the cloud technology challenges that one can encounter today.

15:00-15:30 *Break*

15:30-16:45 **Pierluigi Feliciati**, *Trusted and easy access to records and archives*

This class will present and discuss the InterPARES main concepts and issues related to archival reference and access. It will focus on access as presented in the main archival conceptual models and standards, on the role of records managers and archivists in mediating between authentic records and users in digital environments, and on how the related activities could be successfully managed. One of the topics will be a user-centred approach in the phases of conception and development of reference and access services, considering the organization of user studies to conceive, build and maintain good archival digital services. Part of the class will be discussing and evaluating some archival access services to better focus on the notion of "quality" and the primary metrics for its evaluation.

Day 3 - Wednesday, 25 June

Classes will be held in the city of Fermo.

8:30 *Bus leaves from the School for Fermo*

9:30-10:45 *Tour of the State Archives of Fermo*

11:00-12:30 **Peter Sullivan**, *Artificial Intelligence (AI) / tools for Audio Visual Archives*

To make audiovisual materials available to the public can often be challenging for archival institutions. Accessibility laws for instance may require subtitles or audio descriptions for material that is published online, and this may be laborious to produce by hand. Finding the needed records may also be challenging, as item-level metadata are required to search through an institution-run web portal. As part of InterPARES Trust AI work, we've looked deeply at how AI tools may play a role in addressing these challenges. AI may be a suitable tool for generating first-draft transcriptions of audio recordings, identifying the language or dialect of a spoken audio file, as well as improving existing metadata to aid in search engine discovery. This class will look at the ecosystem of tools that are now available, contextualize their proper use, and draw lines around existing gaps in their application.

12:30-14:00 *Lunch*

14:00-15:30 **Eng Sengsavang**, *Digitization and Audio Recordings at UNESCO*

This class will focus on lessons learned and best practices from a case study of UNESCO's digitized audio recordings.



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Challenges related to archival description, indexing, cataloguing, and publication of digitized corpora are commonly experienced during digitization projects, particularly where incomplete or even inaccurate information exists for historical records. As part of InterPARES research, we have experimented with creating labels taken from diplomatic analysis, a centuries-old method for analyzing the form of documents, to test whether this can improve AI tools developed to assist with metadata generation for the digitized recordings. The results of the research will be presented, as well as overall trends in AI-assisted digitization of archives.

15:30-18:00 *Visit to the city*

18:00-20:00 *Aperitif with appetizers*

20:00 *Bus leaves Fermo for San Benedetto del Tronto*

Day 4 - Thursday, 26 June

9:15 – 10:30 *Jessica Bushey, Managing & Preserving Digital Images Collections*

In this class participants will learn about managing and preserving aggregations of digital images, based on InterPARES research into digital image creation and recordkeeping practices. The role of metadata to capture information contributing to the reliability and authenticity of an image will be explored, along with standards and best practices for metadata and image formats for access and preservation. Images held in social media collections and the challenges these platforms present to access and preservation will be also discussed. The class will end with an exploratory discussion about the opportunities and potential problems in using Artificial Intelligence to manage and preserve digital images.

10:30-11:00 *Break*

11:00-12:15 *Zeljko Trbušić, Building Archival Artificial Intelligence (AI) on Digitized Image Collections*

This class focuses on the development of AI models designed to analyse digitized archival images and documents, facilitating the extraction of metadata and the automatic identification of visual elements. These technologies (e.g. YOLO family of AI models) streamline workflows, enhance accessibility, and contribute to modernizing archival practices. By leveraging advances in artificial intelligence, archives can improve the visibility and usability of their holdings, ensuring their relevance in the digital age. The discussion will explore real-world applications of AI in handling archival digitized images. Emphasis will be placed on the technical methodologies employed to build and train AI models for recognition and analysis of archival photography. The lecture will also address key challenges, including ensuring data provenance, mitigating AI bias, and preserving AI systems over the long term.

12:15-13:45 *Lunch*

13:45-15:00 *Scott Cameron, The Role of Paradata in Ensuring Trust in the Use of Artificial Intelligence (AI) Systems*

Even as it promises revolutionary changes in the information and computing fields, artificial intelligence presents new risks for archivists and information professionals. Too often using opaque processes to arrive at their conclusions, AI systems present challenges for archivists accustomed to documenting human activities in contexts which value transparency and accountability. If unable to understand the AI tools and processes used to manage archival materials, archivists will be unable to evaluate the strengths and limitations of AI technology solutions, and to account for their own actions as professionals. This class will introduce the concept of paradata, presented as an analytical lens that may be used to assess the documentation needs of the use of AI tools within archival contexts. Defined as information recorded and preserved about records' processing with AI tools, this class will illustrate the need for robust paradata documenting AI applications in archives and will provide the vocabulary necessary to articulate archival needs for transparency and understandability of AI tools.

15:00-15:30 *Break*



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15:30-16:45 **Emanuele Frontoni**, *Leveraging Deep Learning and Appearance-Based Techniques in Archival Science*

This class will delve into the ground-breaking project "Perganet", which exemplifies the integration of deep learning and appearance-based techniques in archival science to revitalize ancient documents. It will begin by laying a foundational understanding of the challenges related to the degradation of historical documents and the consequential loss of valuable information. It will then introduce the adeptness of convolutional neural networks (CNNs) at handling visual data, explore appearance-based techniques, and elucidate how these methods aid in the analysis and reconstruction of the physical and textual attributes of aged documents.

A central portion of the class will be dedicated to the 'Perganet' project: we will dissect the methodology employed, illustrating how deep learning algorithms are trained on vast datasets of historical documents to recognize and interpret patterns, damages, and ink fading. Finally, we will discuss the broader implications of such technologies for archival science.

17:00 *Bus leaves from the School to go to the town of Montalto*

Day 5 - Friday, 27 June

9:15- 10:30 **Jim Suderman**, *Privacy and Ethics in the Era of Artificial Intelligence (AI)*

This class will peek behind the curtain of AI tools and techniques and their potential application in the archival field. These tools provide incredible possibilities to enhance appraisal, description and access to archival holdings, but their strengths and limitations must be understood in terms of how and why they were developed, so as to mitigate the risk of undermining the fundamental values that drive archival work. Similarly, responsibly providing records for transformation into data to train AI models requires archivists to consider how this might affect the individuals identified in such records. This session will reflect on ethical principles from both the archival and AI communities and share practical experience gained within an InterPARES Trust AI study, especially with regard to privacy protection.

10:30-11:00 *Break*

11:00-12:15 **Jason R. Baron**, *Laws and Regulations Concerning Artificial Intelligence (AI)*

With the recent passage of the Artificial Intelligence (AI) Act, the European Union has established a regulatory framework governing the development and use of AI within the EU. A primary goal of the AI Act is to ensure that AI systems are used in ways aligned with EU values, including transparency, accountability, privacy and human rights. While the AI Act does not expressly address the use of AI in the records and archival management context, key aspects of the Act have applicability to how records are described, classified, managed, retained, and accessed by the public. This class will discuss examples of how the AI Act may influence the use of AI in performing records and archival management functions in the future. It will also look at how the AI Act intersects with the EU's General Data Protection Regulation on matters governing sensitive personal information in records repositories. Finally, the EU's experience in enacting AI regulations will be compared and contrasted with the AI legal and regulatory environment in the United States.

12:15-13:45 *Lunch*

13:45 – 15:00 **Moises Rockembach**, *Artificial Intelligence (AI) Literacy Framework for Records Managers and Archivists*

AI is reshaping records management and archival practices, offering new opportunities alongside complex challenges. This class will discuss how records managers and archivists can acquire the interdisciplinary skills to integrate AI responsibly and effectively in their work. The class will examine AI's role in improving accessibility, preservation, and management of archival materials, with practical applications such as automated classification and natural language processing (NLP) for information retrieval. It also tackles critical issues like data overload, algorithmic bias, and ethical considerations, highlighting the need for transparency and accountability. Participants will gain basic understanding of machine learning, NLP, and generative AI, along with insights into ethical practices, user-focused system design, and governance frameworks for aligning AI with organizational objectives.



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15:00-15:30 **Break**

15:30-16:45 **Richard Arias-Hernandez**, *Education for Archivists in Artificial Intelligence (AI)*

Developing confidence among archival professionals and students to effectively use AI for the processing of records requires careful curriculum design and integration into existing archival educational and training programs. In this class, attendees will go through a demonstration of a lesson plan designed to introduce archival professionals to a specific use of machine learning for the processing of digital records. The demo is interactive, and attendees will experience going through the activities. Meta-reflections on the design of the lesson plan and its pedagogy will be provided throughout the demo and will showcase a concrete application of free/open educational resources created and made available by researchers of the InterPARES Trust AI project.

17:00 ***Bus leaves from the School to go to Ascoli Piceno for city tour and dinner***

Day 6 - Saturday, 28 June

9:15- 12:15 **Discussion with all faculty and participants**

Participants will discuss the content of the course with all faculty and colleagues in light of their own working environments.

12:15 **Adjourn and Farewell**

Faculty bios



Richard Arias Hernandez, University of British Columbia, Canada

Dr. Richard Arias is an Associate Professor of Teaching at the School of Information at UBC, focusing on digital libraries, digital collections, information systems, information visualization, data management, analytics, and visualization at the iSchool graduate programs and in the Bachelor of Media Studies (BMS). His current research focuses on curriculum design for archival studies programs to leverage and incorporate artificial intelligence and machine learning into archival and records management practices.



Jason R. Baron, University of Maryland, USA

Jason R. Baron joined the College of Information at the University of Maryland in 2020 as a Professor of Practice, focusing on the intersection of law, archives, and information retrieval. His research interests involve practical applications of Artificial Intelligence, including providing public access to government records. Previously, Mr. Baron served as a trial attorney and senior counsel at the US Department of Justice, where he litigated landmark lawsuits involving White House records, and was the first appointed Director of Litigation at the US National Archives and Records Administration.



Erik Borglund – Mid-Sweden University, Sweden

Dr. Erik Borglund is a Professor in archives and information science at Mid Sweden University, campus Sundsvall. Erik has been involved in InterPARES since 2012, as well as in the Digital Records Forensic Project (UBC). Erik's main research focus is on current recordkeeping in the crisis management domain.



Jessica Bushey - San José State University, USA

Dr. Jessica Bushey is an Assistant Professor in the School of Information at San José State University in California, where she teaches courses on Reference and Information Services in Archives, and Preservation Management in Archival Repositories. Prior to joining SJSU, Bushey worked with municipal archives, university museums and archives, and international organizations to develop policies and procedures for managing and preserving digital images and audiovisual collections.



Scott Cameron, Bank of Canada, Canada

Scott Cameron is an Archivist and Librarian. He has contributed to the InterPARES research group on paradata since 2022, and presently works in research data management at the Bank of Canada. Responsibility for the views expressed should not be attributed to his employer.



**Luciana Duranti – University of British Columbia, Canada
InterPARES Trust AI Principal Investigator and Co-Director**

Dr. Luciana Duranti is since 1987 a Professor of archival theory, diplomatics, and digital records in the master's and doctoral archival programs of the School of Information of the University of British Columbia (UBC), in Vancouver, Canada, and, since 2011, Affiliate Professor at the University of Washington at Seattle, United States. Since 1998, she is the Principal Investigator of the InterPARES research project. She has published extensively on archival and diplomatics theory and on the use of their concepts for understanding the products of new technologies. Since 2015, she is the Chair of the Canadian Government Standards Board committee for Electronic Records as Documentary Evidence.



Pierluigi Feliciati – University of Macerata, Italy

Dr. Feliciati was an Archivist in the Italian National Archives from 1986 to 2007. He coordinated the Information Systems of the Italian State Archives network and their first Web portal. He is Associate Professor of Archival and Information Science at the University of Macerata, where is the pro-rector for digital archives. In 2019 he was a visiting Professor at the Information School of the University of British Columbia (Canada). He leads the UniMC research group of InterPARES Trust AI. He is the co-editor of the JLLS.it journal.



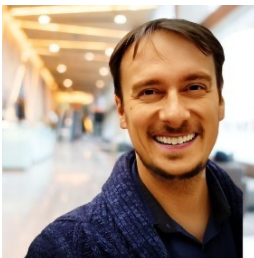
Emanuele Frontoni – University of Macerata, Italy

Dr. Emanuele Frontoni is Full Professor of computer science at the University of Macerata and the Co-Director of the VRAI Vision Robotics & Artificial Intelligence Lab. His research interests include computer vision and artificial intelligence, with applications in robotics, video analysis, human behavior analysis, extended reality and digital humanities. He is the author of over 250 international articles and collaborates with numerous national and international companies in technology transfer and innovation activities. He is also involved in several projects in the fields of AI, Deep Learning, data interoperability, cloud-based technologies, and big multimedia data analysis, extended reality and digital humanities.



Tracey P. Lauriault – Carleton University, Canada

Dr Tracey P. Lauriault is Associate Professor, Critical Media and Big Data, [School of Journalism and Communications](#), also with [Digital Humanities](#), and the [Institute for Data Science](#) at [Carleton University](#) in Ottawa, Canada. She is one of the founders of critical data studies; open data in Canada, and Open Smart Cities. Her research involves data preservation, digital twins, smart cities, data brokers and indigenous data governance. She mobilizes her research into data and technology policy and aims to make data and technological systems more just, inclusive, equitable and sustainable.



Moises Rockembach, University of Coimbra, Portugal

Dr. Moisés Rockembach is a Professor of Information Science and Researcher at the Center for Interdisciplinary Studies (CEIS20) at the University of Coimbra, Portugal. He is a researcher in InterPARES Trust AI, and leads the study on AI literacy requirements for records managers and archivists.



Corinne Rogers - University of British Columbia, Canada

Dr. Corinne Rogers is the InterPARES Project Coordinator since 2012. She is an adjunct professor in the Information School at the University of British Columbia (diplomats, digital records forensics, and digital preservation). She is Co-Convenor of the Working Group on Electronic Records as Documentary Evidence, Canadian General Standards Board. From 2018-2021 she was a Systems Archivist at Artefactual Systems, lead developers and organizational home to open source projects for digital preservation, AccessToMemory (AtoM) and Archivematica.



Eng Sengsavang – UNESCO, Paris

Eng Sengsavang is the Reference Archivist at the United Nations Educational, Scientific and Cultural Organization (UNESCO) in Paris, France. She holds dual master’s degrees in Archival and Library Studies from the University of British Columbia, Canada. Her research as part of InterPARES Trust AI is focused on archives, digitization, and artificial intelligence. She is co-editor with Jens Boel of *Recordkeeping in International Organizations: Archives in Transition in Digital, Networked Environments* (Routledge, 2021).



Hrvoje Stančić – University of Zagreb, Croatia

Dr. Hrvoje Stančić is Vice-dean for business, and Full Professor at the Faculty of Humanities and Social Sciences, University of Zagreb, where he teaches in the Department of Information and Communication Sciences. He has been Chair of archival and documentation sciences at the same Department since 2008. In the context of the 4th InterPARES project (2013-2019) he was Director of the European research team and led a blockchain-related research study. At the Croatian Standards Institute, he is President of the mirror technical committee for development of ISO/TC 307 Blockchain and Distributed Ledger Technologies standard



Jim Suderman - City of Toronto, Canada

Jim Suderman recently retired from the position of Director of Information Access at the City of Toronto, where he oversaw the operations of the City's records management, archives, and information and privacy protection programs. Prior to that he was a Senior Archivist and the Coordinator of the Electronic Records Program at the Archives of Ontario. He has been a researcher in InterPARES 2 and 4, and is currently a co-investigator in InterPARES Trust AI.



Peter Sullivan - University of British Columbia, Canada

Peter Sullivan is a doctoral student in the PhD program of the University of British Columbia School of Information. He has contributed in a substantial way to the writing of the research proposal for InyerPARES Trust AI, and to the delivery of tutorials and workshops on AI for records. He provides support to various studies as needed. His doctoral research is on AI for archives.



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Joseph T. Tennis - University of Washington, USA

Dr. Joseph Tennis is a Professor of Information Science, Adjunct Professor in Linguistics, and a member of the Textual Studies, Computational Linguistics, and Museology faculty advisory groups at the University of Washington. He was Chair of the Governing Board for the Dublin Core Metadata Initiative, where he also serves on the Usage Board since 2006. His research is on classification theory, information provenance, metadata versioning, ethics of knowledge organization work, descriptive informatics, and authenticity. He teaches classification, metadata, and intellectual foundations of information science.



Željko Trbušić – University of Zagreb, Croatia

Dr. Željko Trbušić holds a PhD in Archival Science from the Faculty of Humanities and Social Sciences, University of Zagreb. He is currently a Teaching Assistant at the Department of Information and Communication Sciences. With over 30 published professional and scientific papers, he is actively involved in international projects. His research focuses on archival information systems, digitalization, computer vision, blockchain, and artificial intelligence.