



InterPARES Trust AI

2021-2027

ISO/TC 46/SC 11 Liaison Report

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InterPARES Trust AI Report (2022-2023)

The InterPARES (International research on Permanent Authentic Records in Electronic System) project, funded by the Social Sciences and Humanities Research Council of Canada, has addressed digital records issues since 1998, focusing on current and emerging technologies as they evolve, and developing theory, methods, and frameworks that allow for the ongoing trusted preservation of the records resulting from the use of such technologies.

Its 5th and latest iteration, *I Trust AI*, differs from the previous ones as it is not concerned with the records produced by a specific technology, but has the purpose of using AI to carry out archival functions for the control in the long term of all records, on any medium, and from any age, and to do so in such a way that the trustworthiness of the records remains protected and verifiable, and that the tools and processes are transparent, unbiased, equitable, inclusive, responsible, and sustainable.

The overall goal of the latest phase of the InterPARES research project, *I Trust AI*, is to design, develop, and leverage Artificial Intelligence to support the ongoing availability and accessibility of trustworthy public records by forming a sustainable, ongoing partnership producing original research, training students and other highly qualified personnel (HQP), and generating a virtuous circle between academia, archival institutions, government records professionals, and industry, a feedback loop reinforcing the knowledge and capabilities of each party. The objectives of the project are to

- Identify specific AI technologies that can address critical records challenges;
- Determine the benefits and risks of using AI technologies on records;
- Ensure that records concepts and principles inform the development of responsible AI; and
- Validate outcomes from Objective 3 through case studies and demonstrations.

The more than 40 case studies and general studies in course relate to several aspects of records creation and retention and disposition, preservation and access. They are carried out by about 200 researchers (30 countries and 90 organizations) organised in international and multidisciplinary teams (including experts from AI, records and archives management, forensics and law, data science, engineering, etc.).

Through case studies, we have been developing Deep Learning tools that could be used in a wide range of applications:

- Recognize the peculiar system of writing of individual authors.
- Analyze archival annotations on the back of the documents and retrace previous archival arrangements or uses of groups of documents.
- Recognize recurring images or other features in huge series of documents.
- Identify common patterns in manuscript maps or drawings.
- Make publicly available original & relevant AI datasets.
- And many others...

We also conduct general studies, among which notable is that on Paradata, which is developing “an approach for documenting the AI process, which draws on multiple fields, including empirical social sciences, explainable AI, and archival studies. The term provides a framework

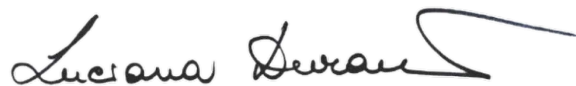
for thinking about the needs of records and record-keepers in relation to specific technical and organizational needs.”

Among lectures, colloquia, workshops, conferences and symposia, the I Trust AI researchers have spoken at more than 100 events.

Among the publications, several are in press, while the following are in print:

- Cameron, S., Franks, P., Hamidzadeh, B., “Positioning Paradata: A conceptual frame for AI processual documentation in archives and recordkeeping contexts.” *Journal on Computing and Cultural Heritage*. April 2023.
- Casellas, Lluís, “Inteligencia artificial y archivos”, *Archivamos*, 122, 3. Asociación de Archiveros de Castilla y León (ACAL), p. 27-29.
- Luciana Duranti, Emanuele Frontoni, Tracey Lauriault, Michael Steiber, and Muhammad Abdul-Mageed, “Trusted Data Forever.” In *Proceedings of DARLI-AP 2022, the 6th International Workshop on Data Analytics Solutions for Real-Life Applications*. Politecnico di Torino, Torino, 2022. Published online at CEUR (<http://ceur-ws.org/>).
- Luciana Duranti, “I Trust Artificial Intelligence: The Issues, the Project, the Impact,” *Journal of Information Science* [Morocco] 21-2/2022: 8-17
- Luciana Duranti, "Why a World Gone Digital Needs Archival Theory More Than Before," *Archeion* [Poland], n. 123 (Nov. 2022): 10-31.
- Luciana Duranti, Muhammad Abdul-Mageed, Darra Hofman and Peter Sullivan, “I Trust AI, the latest InterPARES Research Project,” *Anuario Escuela de Archivología*, the Journal of the University of Cordoba [Argentina], n. 13 (2022): 36-55.
- Franks, P., Davet, J., Hamidzadeh, B., "Archivist in the machine: paradata for AI-based automation in the archives." Published online 20 January 2023. *Archival Science*. <https://doi.org/10.1007/s10502-023-09408-8>

Submitted on May 13, 2023 by the project Principal Investigator, Luciana Duranti.

A handwritten signature in black ink, appearing to read 'Luciana Duranti', with a long, sweeping horizontal stroke extending to the right.