

# Revisiting Frames for Event Extraction in the Digital Humanities

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## Abstract

Frame Semantics as a cognitive linguistic theory was first formalised by Charles Fillmore around 50 years ago. Since then, it has been adapted to different application scenarios as a framework to support event-based information extraction. But what is the role of frames in the era of generative AI? In this talk I will present some recent research works in which frame semantics has been tailored to support digital humanities research. In particular, we explored the use of frames to extract sensory information from historical archives and capture shifts in perception over time. Frame-based event extraction has also been investigated as a way to navigate news collections, build narratives from event chains and present the same event from different points of view.

## Short Bio

Sara Tonelli is the head of the Digital Humanities research group at Fondazione Bruno Kessler, Trento (Italy) and holds a Phd in Language Sciences from Università Ca' Foscari, Venice. Between 2021 and 2024 she served as Liaison Representative of the ACL Special Interest Group on Language Technologies for the Socio-Economic Sciences and Humanities (SIGHUM) and she is currently part of the board of the Italian Association for Computational Linguistics (AILC). In the last years, she has served as area chair and senior area chair for major \*ACL conferences in tracks related to cultural analytics, social media analysis, digital humanities and offensive language detection. She has also participated in different EU-funded projects around disinformation, computational social science and cultural heritage and was scientific coordinator of the KID ACTIONS European project (2021-2022), aimed at addressing cyberbullying among children and adolescents through interactive education and gamification. Her research interests focus on understanding how people communicate on social media and what dynamics are involved in online attacks, as well as what kind of biases can affect this analysis. She is also interested in using NLP to extract information from digital archives to address historical and cultural heritage research questions.

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