Invited Talk

KEMAI Research Training Group GRK 3012/1

KEMAI

Dr. Janna Hastings,
Human-Centered Health AI Group,
Idiap Research Institute, Martigny, Switzerland

Using LLMs for Structured Clinical Annotations: The New Reproducibility Crisis and Its Mitigation

Abstract. Large language models (LLMs) are increasingly used to automate structured annotations of clinical data grounded in biomedical ontologies. However, such models perform stochastically, are sensitive to context and prompt formulation, and may evolve without accessible version archives. As a result, they are rapidly introducing a reproducibility crisis. This presentation will examine how this problem can be at least partially mitigated, with concrete examples taken from biochemistry, clinical notes, and evidence synthesis in mental health, concluding with highlighting some persistently open research challenges in this area.

Speaker Bio. Janna Hastings was born in Cape Town, South Africa where she completed her undergraduate studies in Mathematics and Computer Science. Thereafter, she moved to Cambridge, UK to join the Cheminformatics and Metabolism group at the European Bioinformatics Institute (2006-2015) where she led the development of the ChEBI molecular ontology and metabolism knowledgebase. She completed part-time Master's degrees in Computer Science (University of South Africa, 2011) and Philosophy (Open University, 2012) before obtaining her PhD in Computational Biology from the University of Cambridge (2015-2019), where she studied the role of metabolism in healthy aging using multi-omics data and a time-series modelling approach. She completed postdoctoral studies at the Otto-von-Guericke University Magdeburg (2019-2022), at the EPFL (2020-2022), and with the Human Behaviour-Change Project at University College London (2017-2022). Between 2022 and 2025 she was an Assistant Professor in the Medical Faculty of the University of Zurich, and since January 2026 she has taken up the position of Senior Research Scientist at the Idiap Research Institute where she leads the Human-Centered Health AI group focused on advancing AI methods for health-related applications, particularly hybrid approaches that combine knowledge with large-scale data.

Place & Time.

Schloss Reisensburg, Roter Saal
Wednesday, July 15, 2026
9:00 – 10:00

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