



# Atelier : Le traitement du langage naturel (NLP) à l'ère de l'IA générative, des sciences cognitives et de la transformation sociétale

## Jour 1 : NLP à l'ère de l'IA générative

- 8 h 30 Séance d'ouverture
- 9 h 00 **Session 1 : Traitement du langage naturel**
- Claire Gardent, CNRS/LORIA, Nancy - Verbalising Graphs into High-, Medium- and Low-Resource Languages
  - Philippe Langlais, Université de Montréal - But (good) evaluation is informative too
  - Golnoosh Farnadi, McGill University/Mila - Algorithmic Fairness: From Traditional ML to Foundation Models
- 11 h 00 Pause café
- 11 h 30 **Session 2 : Multilinguisme**
- François Yvon, CNRS, Paris - Towards Example Based Neural Machine Translation
  - David Adelani, McGill University/Mila - How good are LLMs on under-resourced languages?
- 13 h 00 Pause diner
- 14 h 15 **Session 3 : Traitement du langage naturel**
- Siva Reddy, McGill University/Mila - Inductive Biases
  - Benoît Sagot, INRIA, Almanach, Paris: Why do small language models underperform Studying Language Model Saturation via the Softmax Bottleneck
  - Lili Mou - University of Alberta: Large language models are secretly your reward function
- 16 h 15 Présentation de posters
- 17 h 30 Fin de la première journée

## Jour 2 : Explorer l'intersection des sciences cognitives et de l'IA dans l'apprentissage des langues

- 9 h 00 **Session 1 : Sciences cognitives**
- Yang Xu, University of Toronto: Reconstruction of the dynamic lexicon
  - Abdellah Fourtassi, LIS, Marseille: NLP for the Ecological Study of Language Development
- 10 h 20 Pause café
- 10 h 50 **Session 2 : Neuroscience**
- Guillaume Dumas, Université de Montréal/Mila: Mind the Gap: Mechanistic Bridges Between Large Language Models and the Brain
  - Benjamin Morillon - INSERM, INS, Marseille: Encoding the predictions of multidimensional sequences of natural speech and music in human auditory cortex
- 12 h 10 Pause diner
- 13 h 30 **Session 3 : Causal Model for NLP**
- Maxime Peyrard, CNRS, LIG Grenoble: Interpretability of AI Systems: Overview and Future Directions
  - Dhanya Sridhar, Université de Montréal/Mila: Can we find better in-context learning solutions with causal inductive biases?
- 14 h 50 Panel : Un dialogue entre l'apprentissage automatique, le langage naturel et les sciences cognitives avec Aaron Courville, Université de Montréal/Mila
- 16 h 00 Présentation de posters
- 17 h 30 Fin de la deuxième journée





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## Jour 3 : Explorer l'intersection des sciences cognitives et de l'IA dans l'apprentissage des langues

- 9 h 00      **Session 1 : Conversational AI**
- Dilek Hakkani-Tür, University of Illinois, Urbana-Champaign: AI over-reliance and dialogue systems accountability
  - Mirco Ravanelli, Concordia University/Mila: Discrete Audio Tokens for Multimodal LLMs
  - Roland Memisevic, Qualcomm, Toronto: End-to-end learning of camera-based, situated interactions
- 11 h 00      Pause café
- 11 h 30      **Session 2 : Information Retrieval and Argument Mining**
- Serena Villata, CNRS, I3S, Nice: The Long Road to Trustworthy Natural Language Argumentation
  - Jimmy Lin, University of Waterloo: The Future of Information Retrieval and the Role of Evaluation
- 12 h 50      Pause diner
- 14 h 00      **Session 3 : Application Domain**
- Saif Mohammad, Research NRC, Ottawa: NLP for Affective Science: What are the big questions? And, how do we get there?
  - Frank Rudzicz, Dalhousie University, Halifax: NLPri-mum Non Nocere
  - Geraldine Damnati, Orange Innovation, Lannion: From benchmark assessments to In-Use evaluations: an even wider gap to bridge at the era of generative AI.
- 16 h 00      Mot de clôture
- 16 h 30      Fin de la troisième journée

