

Preface to the Seventh Workshop on Natural Language for Artificial Intelligence (NL4AI 2023)

Elisa Bassignana¹, Dominique Brunato², Marco Polignano³ and Alan Ramponi⁴

¹*IT University of Copenhagen, Denmark*

²*Institute for Computational Linguistics “A. Zampolli” (CNR-ILC), Italy*

³*University of Bari Aldo Moro, Italy*

⁴*Fondazione Bruno Kessler (FBK), Italy*

The Natural Language for Artificial Intelligence (NL4AI) workshop, supported by the Special Interest Group on NLP of the Italian Association for Artificial Intelligence (AIXIA)¹ and by the Italian Association of Computational Linguistics (AILC)², aims at providing a broad overview of recent activities in the field of Human Language Technologies (HLT) in Italy. Since its first edition in 2017, the workshop has served as a platform for researchers to exchange experiences and insights on research and applications at the intersection of Natural Language Processing (NLP) and Artificial Intelligence (AI). Like previous years, the current edition of the workshop was co-located within the International Conference of the Italian Association for Artificial Intelligence (AIXIA 2023)³, which took place on November 6–7th in Rome, Italy. The program of the meeting is available on the official workshop website⁴.

The workshop focused on various relevant topics that explore the role of Computational Linguistics and Natural Language Processing in Artificial Intelligence applications, including:


- NLP and AI Applications (health, legal domain, social media and journalism, etc.)
- Natural Language Interfaces for Human Robot Interaction
- Resources and Evaluation
- Discourse and Pragmatics
- Natural Language Generation
- Information Extraction in AI Applications
- Machine Learning for NLP
- Sentiment Analysis and Opinion Mining
- Natural Language Inference
- NLP and Industrial Challenges
- Semantics

NL4AI 2023: Seventh Workshop on Natural Language for Artificial Intelligence, November 6–7, 2023, Rome, Italy

✉ elba@itu.dk (E. Bassignana); dominique.brunato@ilc.cnr.it (D. Brunato); marco.polignano@uniba.it (M. Polignano); alramponi@fbk.eu (A. Ramponi)



© 2023 Copyright for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).

 CEUR Workshop Proceedings (CEUR-WS.org)

¹Group on NLP of AIXIA website: <https://aixia.it/en/gruppi/elaborazione-del-linguaggio-naturale/>

²AILC website: <https://www.ai-lc.it/en/>

³AIXIA 2023 website: <http://www.aixia2023.cnr.it/>

⁴NL4AI workshop website: <http://sag.art.uniroma2.it/NL4AI/>

- Conversational Agents in Human-Computer Interaction
- Cognitive Modeling and Psycholinguistics
- Language and Other Multimodality
- Speech and Spoken Language Processing
- Ethics and NLP
- Interpretability, Explainability and Analysis of Models for NLP
- Abusive Language Detection and Analysis
- Machine Translation and Multilinguality
- Question Answering
- Summarization
- NLP for Fact Checking, Fake News Detection and Analysis
- LLMs and Applications
- Multimodal (Text-image) Data Sources

The program co-chairs would like to warmly thank all the authors of the submitted papers, the two invited speakers and all the participants to this edition. Special thanks go to the Roma Tre University (Italy) for hosting the event and to the organizers of the AIXIA 2023 conference. Moreover, we acknowledge the AILC Board members for their trust and support.

1. Accepted Papers

This year edition featured 18 presentations of high-quality papers, which we believe provide a good balance between the different topics related to the workshop. The list of accepted papers (all included in this volume) are listed below:

1. Amaury Fierens and Sébastien Jodogne - *BERTinchamps: Cost-effective Training of Large Language Models for Medical Tasks in French*
2. Jia Cheng Hu, Roberto Cavicchioli, Giulia Berardinelli and Alessandro Capotondi - *Heterogeneous Encoders Scaling in the Transformer for Neural Machine Translation*
3. Helene F. L. Eriksen, Christopher M. J. André, Emil J. Jakobsen, Luca C. B. Mingolla and Nicolai B. Thomsen - *Detecting AI Authorship: Analyzing Descriptive Features for AI Detection*
4. Nicola Arici, Luca Putelli, Alfonso Emilio Gerevini, Luca Sigalini and Ivan Serina - *LLM-based Approaches for Automatic Ticket Assignment: A Real-world Italian Application*
5. Franco Demarco, Juan Manuel Ortiz de Zarate and Esteban Feuerstein - *Measuring Ideological Spectrum Through NLP*
6. Kabir Manandhar Shrestha, Katie Wood, David Goodman and Meladel Mistica - *Do We Need Subject Matter Experts? A Case Study of Measuring Up GPT-4 Against Scholars in Topic Evaluation*
7. Soumick Chatterjee, Sowmya Prakash and Andreas Nürnberger - *Flavours of Convolution for Unsupervised Aspect Extraction and Aspect-based Sentiment Analysis*
8. Simona Mazzarino, Andrea Minieri and Luca Gilli - *NERPII: A Python Library to Perform Named Entity Recognition and Generate Personal Identifiable Information*

9. Mostafa Rahgouy, Hamed Babaei Giglou, Dongji Feng, Taher Rahgooy, Gerry Dozier and Cheryl D. Seals - *Navigating the Fermi Multiverse: Assessing LLMs for Complex Multi-hop Queries*
10. Stefano Scotta and Alberto Messina - *Experimenting Task-specific LLMs*
11. Roberto Zamparelli - *One Picture and a Thousand Words. Generative Language+images Models and How to Train Them*
12. Luca Bacco, Felice Dell'Orletta and Mario Merone - *Natural Language Processing in Healthcare: A Bird's Eye View*
13. Loris Di Quilio and Fabio Fioravanti - *Evaluating the Aspect-Category-Opinion-Sentiment Analysis Task on a Custom Dataset*
14. Claudiu Daniel Hromei, Daniele Margiotta, Danilo Croce and Roberto Basili - *An End-to-end Transformer-based Model for Interactive Grounded Language Understanding*
15. Irene Siragusa and Roberto Pirrone - *Conditioning Chat-GPT for Information Retrieval: The Unipa-GPT Case Study*
16. Andrea Gatti, Viviana Mascardi and Domenico Pellegrini - *Mining Information From Legal Sentences in Klondike*
17. Shivatmica Murgai - *From Looks to Essence: A Shift in Perspective with Physical Appearance Debiasing*
18. Monica Consolandi, Simone Magnolini and Mauro Dragoni - *Misunderstanding and Risk Communication in Healthcare*

2. Keynote Speakers

The workshop also benefited from two keynote speakers whose talks addressed latest research themes with huge impact in AI and NLP research. The two invited talks were:

- *The Interplay Between Language Generation and Reasoning: Information Seeking Games*, by Raffaella Bernardi (University of Trento, Italy)
- *Responsible AI in the Era of Large Language Models*, by Christos Christodoulopoulos (Amazon, UK)

3. Programme Committee

As a final remark, the program co-chairs would like to thank all the members of the Program Committee (listed below).

- Giuseppe Attanasio, *Bocconi University (Italy)*
- Giuseppe Attardi, *University of Pisa (Italy)*
- Pierpaolo Basile, *University of Bari Aldo Moro (Italy)*
- Valerio Basile, *University of Turin (Italy)*
- Alessandro Bondielli, *University of Pisa (Italy)*
- Elena Cabrio, *Université Côte d'Azur, Inria, CNRS, I3S (France)*

- Franco Alberto Cardillo, *Institute for Computational Linguistics “A. Zampolli” (Italy)*
- Pierluigi Cassotti, *University of Bari Aldo Moro (Italy)*
- Camilla Casula, *University of Trento, Fondazione Bruno Kessler (Italy)*
- Danilo Croce, *University of Rome Tor Vergata (Italy)*
- Pietro Dell’Oglio, *University of Florence (Italy)*
- Alessandro Lenci, *University of Pisa (Italy)*
- Elisa Leonardelli, *Fondazione Bruno Kessler (Italy)*
- Stefano Menini, *Fondazione Bruno Kessler (Italy)*
- Alessio Miaschi, *Institute for Computational Linguistics “A. Zampolli” (Italy)*
- Benjamin Molinet, *Université Côte d’Azur, Inria, CNRS, I3S (France)*
- Teresa Paccosi, *University of Trento, Fondazione Bruno Kessler (Italy)*
- Alessio Palmero Aprosio, *Fondazione Bruno Kessler (Italy)*
- Nicolò Penzo, *University of Trento, Fondazione Bruno Kessler (Italy)*
- Roberto Pirrone, *University of Palermo (Italy)*
- Marco Rovera, *Fondazione Bruno Kessler (Italy)*
- Daniel Russo, *University of Trento, Fondazione Bruno Kessler (Italy)*
- Lucia Siciliani, *University of Bari Aldo Moro (Italy)*
- Rachele Sprugnoli, *University of Parma (Italy)*
- Sara Tonelli, *Fondazione Bruno Kessler (Italy)*
- Mike Zhang, *IT University of Copenhagen (Denmark)*