

NL4XAI 2020

**2nd Workshop on Interactive Natural Language Technology  
for Explainable Artificial Intelligence**

**Proceedings of NL4XAI**

18 December 2020  
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## Introduction

Welcome to the Proceedings of the 2nd Workshop on Interactive Natural Language Technology for Explainable Artificial Intelligence (NL4XAI 2020)!

This workshop takes place co-located with the International Conference on Natural Language Generation (INLG2020), which is supported by the Special Interest Group on NLG of the Association for Computational Linguistics. INLG 2020 was due to be held in Dublin (Ireland), 15 December - 18 December, 2020. However, due to covid-19 INLG2020 became a fully online event. The NL4XAI workshop is scheduled by December 18. This is the second of a series of workshops to be organized in the context of the European project NL4XAI (<https://nl4xai.eu/>).

NL4XAI is the first European Training Network on Natural Language (NL) and Explainable Artificial Intelligence (XAI). This network is funded by the Horizon 2020 research and innovation programme, through a Marie Skłodowska-Curie grant, in the framework of the European Union's bet for XAI. NL4XAI is a joint academic-industry research network, that brings together 18 beneficiaries and partners from 6 different countries (France, Malta, Netherlands, Poland, Spain, and United Kingdom). They work together with the aim of making AI self-explaining and contributing to translate knowledge into products and services for economic and social benefit. The goal is to produce intelligent machines able to explain their behavior and decisions through interactive explanations in NL, just as humans naturally do. NL technologies, both NL Generation (NLG) and NL Processing (NLP) techniques, are expected to enhance knowledge extraction and representation for XAI through human-machine interaction (HMI). Eleven Early Stage Researchers (ESRs) face different but complementary research challenges to accomplish this goal. The NL4XAI network offers a unique research environment providing ESRs with an excellent structured training programme.

This workshop provides attendants with a forum for: (1) disseminating and discussing recent advances on XAI; (2) identifying challenges and exploring potential transfer opportunities between related fields; (3) generating synergy and symbiotic collaborations in the context of XAI, HMI and NL technologies.

We received 17 submissions (16 regular papers and 1 demo). Twelve regular submissions were accepted to be included in the program after a double blind peer review. In addition, NL4XAI 2020 includes two outstanding invited speakers. The first invited speaker, in the morning, will be Prof. Dr. Emiel Khramer (*Tilburg center for Cognition and Communication (TiCC)*). He will talk about explaining health information automatically. The second invited speaker, in the afternoon, will be Dr. Eirini Ntoutsis (*Leibniz Universität Hannover & L3S Research Center*). She will talk about bias in AI-systems. In addition, the program includes a round table regarding open research challenges. We are glad to have Emiel Khramer, Eirini Ntoutsis and Albert Gatt as panelists.

We would like to thank to all authors for submitting their contributions to our workshop. We also express our profound thanks to the program committee members for their work at reviewing the papers and their support during the organization.

Jose M. Alonso and Alejandro Catala  
NL4XAI 2020 Organizers



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Alejandro Catala, CiTIUS, University of Santiago de Compostela

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Nava Tintarev, Technische University of Delft

**Invited Speakers:**

Emiel Krahmer, Tilburg center for Cognition and Communication (TiCC)  
Eirini Ntoutsis, Leibniz Universität Hannover & L3S Research Center

**Panelists:**

Emiel Krahmer, Tilburg center for Cognition and Communication (TiCC)  
Eirini Ntoutsis, Leibniz Universität Hannover & L3S Research Center  
Albert Gatt, Institute of Linguistics and Language Technology, University of Malta (UM)



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# Workshop Program

**Friday, December 18, 2020 (GMT)**

- 11:00–11:05** Welcome
- 11:05–12:00** Keynote Talk (Prof. Dr. Emiel Krahmer)
- 12:00–12:30** Oral Presentations I
- 12:30–12:50** Virtual Coffee/Tea Break
- 12:50–14:20** Oral Presentations II
- 14:20–15:00** Lunch break
- 15:00–16:00** Keynote Talk (Dr. Eirini Ntoutsis)
- 16:00–16:30** Oral Presentations III
- 16:30–16:50** Virtual Coffee/Tea break
- 16:50–17:20** Oral Presentations IV
- 17:20–18:10** Round table: “XAI Open Challenges”
- 18:10–18:20** Concluding remarks and farewell

