

4th Workshop on Natural Language Processing for Requirements Engineering (NLP4RE'21)

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1. Preface

Natural language processing (NLP) plays an important role in several areas of software engineering, and requirements engineering (RE) is not an exception. Requirements are generally authored and communicated in textual form and in different levels of formality, from structured (e.g., user stories) to unstructured natural language. In the last few years, the advent of massive and heterogeneous sources, such as tweets and app reviews, has attracted even more interest from the RE community, as demonstrated by the increasing number of scientific papers on this topic in conferences like ICSE, RE, and REFSQ. Furthermore, the possibility to integrate textual data with other sources of information, as voice, biofeedback, and graphical languages that is made possible by novel technologies, further increases the potential impact of NLP4RE research.

The Natural Language Processing for Requirements Engineering Workshop (NLP4RE) was established in 2018 as a venue to foster communication between researchers and practitioners interested in the field. The 2021 edition was held virtually in Essen, due to the COVID-19 pandemic, and saw the presentation of 10 papers covering different aspects of NLP4RE, including information extraction (e.g., rationale, causality), requirements classification and chat-bots. The workshop saw a lively participation, with over 25 participants during the keynote and about 20 participants during the paper presentation sessions.

The special theme of the workshop was *All Languages are Natural Languages*, as the organisers wanted to extend the scope of NLP4RE to account also for works on low-resource languages, but also graphical languages, and multi-modal data that can be used as sources of information in RE.


NLP4RE also included a keynote from Sarah C. Gregory, from Intel, titled *Codeswitching, Identity and Propelling RE Practice*. The keynote highlighted the need for NLP4RE researchers to

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change language and viewpoint when speaking with practitioners. Sarah suggested researchers to simplify their communication—do Power Point slides, not papers!—to achieve impact and support cross-fertilization, and recommended to create Webinars or other forms of meetings where academia and industry can meet on a regular basis without the barrier of the scientific conference.

2. Program Committee

We warmly thank all the reviewers of our Program Committee (PC), who helped in the selection of the papers by providing timely and accurate reviews. The PC members of NLP4RE'21 are:

- Chetan Arora, Deakin University, Australia
- Dan Berry, University of Waterloo, Canada
- Andrea Cimi no, Istituto di Linguistica Computazionale, Italy
- Fabiano Dalpiaz, Utrecht University, Netherlands
- Henning Femmer, Qualicen GmbH, Germany
- Xavier Franch, Universitat Politècnica de Catalunya, Spain
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