



LREC 2022 Workshop  
Language Resources and Evaluation Conference  
20-25 June 2022

**Towards Digital Language Equality Workshop  
(TDLE)**

**PROCEEDINGS**

Editors:

Itziar Aldabe, Begoña Altuna, Aritz Farwell, German Rigau

# Proceedings of the LREC 2022 workshop Towards Digital Language Equality (TDLE 2022)

Edited by:

Itziar Aldabe, Begoña Altuna, Aritz Farwell, German Rigau

**ISBN: 978-2-493814-03-6**

**EAN: 9782493814036**

**For more information:**

European Language Resources Association (ELRA)

9 rue des Cordelières

75013, Paris

France

<http://www.elra.info>

Email: [lrec@elda.org](mailto:lrec@elda.org)



© European Language Resources Association (ELRA)

These workshop proceedings are licensed under a Creative Commons  
Attribution-NonCommercial 4.0 International License

## Preface

This volume documents the Proceedings of the Workshop Towards Digital Language Equality (TDLE), held on 20 June, 2022 as part of the LREC 2022 conference (International Conference on Language Resources and Evaluation).

Language Technology (LT), one of the most important applications of Artificial Intelligence, is revolutionizing many language-related tasks while engendering a rapidly growing and substantial economic impact. Although cross-language communication forms a significant part of this development, LT resources are not equally available to all languages and domains. To make use of Language Technology's full potential, progress towards a multilingual, efficient, accurate, explainable, ethical, fair and unbiased language understanding is necessary – in short: Digital Language Equality (DLE).

The workshop at LREC brought together researchers and scholars working on policies, initiatives, projects, and research that target DLE at every administrative level. These include models and tools that monitor, measure, catalogue or visualize the evolution and dynamics of DLE through technological factors, (e.g., the available language resources, tools and technologies) and contextual factors (e.g., societal, economic, educational, industrial).

We are thankful to the authors who submitted their work to this workshop. In the end, six papers were accepted. We are also grateful to our Program Committee members and reviewers for their contributions, to Antonios Anastasopoulos who kindly accepted to be our invited speaker and gave a talk on "Measuring Cultural Representativeness and Rethinking LT4All", and to the LREC committee for accepting this workshop as part of LREC 2022.



## **Organizers**

Itziar Aldabe (HiTZ, UPV-EHU)  
Begoña Altuna (HiTZ, UPV-EHU)  
Aritz Farwell (HiTZ, UPV-EHU)  
Federico Gaspari (ADAPT, DCU)  
Maria Giagkou (Athena RC/ILSP)  
Jan Hajic (Charles University)  
Stelios Piperidis (Athena RC/ILSP)  
Georg Rehm (DFKI)  
German Rigau (HiTZ, UPV-EHU)  
Andy Way (ADAPT, DCU)

## **Program Committee:**

Xabier Arregi (HiTZ, UPV/EHU)  
Dimitra Anastasiou (Luxembourg Institute of Science and Technology)  
Albina Auksoariute (LIETUVIU KALBOS INSTITUTAS)  
Jeremy Barnes (HiTZ, UPV/EHU)  
Khalid Choukri (ELDA)  
Bessie Dendrinis (ECSPM)  
Itziar Gonzalez-Dios (HiTZ, UPV/EHU)  
Kristine Eide (Language Council of Norway)  
Ainara Estarrona (HiTZ, UPV/EHU)  
Inma Hernández (HiTZ, UPV/EHU)  
Jaroslava Hlaváčová (CUNI)  
Mikel Iruskieta (HiTZ, UPV/EHU)  
Sabine Kirchmeier (EFNIL)  
Svetla Koeva (INSTITUTE FOR BULGARIAN LANGUAGE)  
Krister Linden (UH)  
Teresa Lynn (DCU)  
Maite Melero (BSC)  
Eva Navas (HiTZ, UPV/EHU)  
Delyth Prys (BU)  
Kepa Sarasola (HiTZ, UPV/EHU)  
Claudia Soria (ELEN)  
Frieda Steurs (Instituut voor de Nederlandse Taal)  
Jana Straková (CUNI)  
Tamás Váradi (Nyelvtudományi Kutatóközpont)  
Francois Yvon (CNRS)



## Table of Contents

### *Introducing the Digital Language Equality Metric: Technological Factors*

Federico Gaspari, Owen Gallagher, Georg Rehm, Maria Giagkou, Stelios Piperidis, Jane Dunne and Andy Way ..... 1

### *Introducing the Digital Language Equality Metric: Contextual Factors*

Annika Grützner-Zahn and Georg Rehm ..... 13

### *Collaborative Metadata Aggregation and Curation in Support of Digital Language Equality Monitoring*

Maria Giagkou, Stelios Piperidis, Penny Labropoulou, Miltos Deligiannis, Athanasia Kolovou and Leon Voukoutis ..... 27

### *Measuring HLT Research Equality of European Languages*

Gorka Artola and German Rigau ..... 36

### *National Language Technology Platform for Public Administration*

Marko Tadić, Daša Farkaš, Matea Filko, Artūrs Vasiļevskis, Andrejs Vasiljevs, Jānis Ziediņš, Željka Motika, Mark Fishel, Hrafn Loftsson, Jón Guðnason, Claudia Borg, Keith Cortis, Judie Attard and Donatienne Spiteri ..... 46

### *The Nós Project: Opening routes for the Galician language in the field of language technologies*

Iria de-Dios-Flores, Carmen Magariños, Adina Ioana Vladu, John E. Ortega, José Ramon Pichel, Marcos García, Pablo Gamallo, Elisa Fernández Rei, Alberto Bugarín-Diz, Manuel González González, Senén Barro and Xosé Luis Regueira ..... 52

## Conference Program

- 14:00–14:45 *Measuring Cultural Representativeness and Rethinking LT4All*  
Antonios Anastasopoulos
- 14:50–15:20 *Developing an agenda and a roadmap for achieving full digital language equality in Europe by 2030*
- 15:20–15:40 *Introducing the Digital Language Equality Metric: Technological Factors*  
Federico Gaspari, Owen Gallagher, Georg Rehm, Maria Giagkou, Stelios Piperidis, Jane Dunne and Andy Way
- 15:40–16:00 *Introducing the Digital Language Equality Metric: Contextual Factors*  
Annika Grützner-Zahn and Georg Rehm
- 16:30–16:50 *Collaborative Metadata Aggregation and Curation in Support of Digital Language Equality Monitoring*  
Maria Giagkou, Stelios Piperidis, Penny Labropoulou, Miltos Deligiannis, Athanasia Kolovou and Leon Voukoutis
- 16:50–17:10 *Measuring HLT Research Equality of European Languages*  
Gorka Artola and German Rigau
- 17:10–17:30 *National Language Technology Platform for Public Administration*  
Marko Tadić, Daša Farkaš, Matea Filko, Artūrs Vasiļevskis, Andrejs Vasiljevs, Jānis Ziedīņš, Željka Motika, Mark Fishel, Hrafn Loftsson, Jón Guðnason, Claudia Borg, Keith Cortis, Judie Attard and Donatienne Spiteri
- 17:30–17:50 *The Nós Project: Opening routes for the Galician language in the field of language technologies*  
Iria de-Dios-Flores, Carmen Magariños, Adina Ioana Vladu, John E. Ortega, José Ramom Pichel, Marcos García, Pablo Gamallo, Elisa Fernández Rei, Alberto Bugarín-Diz, Manuel González González, Senén Barro and Xosé Luis Regueira