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Introduction

SIGTYP 2023 is the fifth edition of the workshop for typology-related research and its integration into multilingual Natural Language Processing (NLP). The workshop is co-located with the 17th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2023), which takes place in Dubrovnik, Croatia. This year our workshop features a shared task on cognate and derivative detection for low-resourced languages.

Encouraged by the 2019 – 2022 workshops, the aim of the fifth edition of SIGTYP workshop is to act as a platform and a forum for the exchange of information between typology-related research, multilingual NLP, and other research areas that can lead to the development of truly multilingual NLP methods. The workshop is specifically aimed at raising awareness of linguistic typology and its potential in supporting and widening the global reach of multilingual NLP, as well as at introducing computational approaches to linguistic typology. It fosters research and discussion on open problems, not only within the active community working on cross- and multilingual NLP but also inviting input from leading researchers in linguistic typology.

The workshop provides focused discussions on a range of topics, including the following:

1. Integration of typological features in language transfer and joint multilingual learning. In addition to established techniques such as “selective sharing”, are there alternative ways to encode heterogeneous external knowledge in machine learning algorithms?

2. Development of unified taxonomy and resources. Building universal databases and models to facilitate understanding and processing of diverse languages.

3. Automatic inference of typological features. The pros and cons of existing techniques (e.g. heuristics derived from morphosyntactic annotation, propagation from features of other languages, supervised Bayesian and neural models) and discussion on emerging ones.


5. Improvement and completion of typological databases. Combining linguistic knowledge and automatic data-driven methods towards the joint goal of improving the knowledge on cross-linguistic variation and universals.

6. Linguistic diversity and universals. Challenges of cross-lingual annotation. Which linguistic phenomena or categories should be considered (near-)universal? How should they be annotated?

7. Bringing technology to document and revitalize endangered languages. Improving model performance and documentation of under-resourced and endangered languages using typological databases, multilingual models and data from high-resource languages.

The final program of SIGTYP contains 2 keynote talks, 3 shared task papers, 12 archival papers, and 5 extended abstracts. This workshop would not have been possible without the contribution of its program committee, to whom we would like to express our gratitude. We should also thank Ella Rabinovich and Natalia Levshina for kindly accepting our invitation as invited speakers. The workshop is sponsored by Google. Please find more details on the SIGTYP 2023 website: https://sigtyp.github.io/ws2023-sigtyp.html
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On the Nature of Discrete Speech Representations in Multilingual Self-supervised Models
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Saturday, May 6, 2023

08:50 - 09:00  Opening Remarks

09:00 - 09:50  Keynote by Ella Rabinovich

09:50 - 10:20  Cross-lingual Transfer

Identifying the Correlation Between Language Distance and Cross-Lingual Transfer in a Multilingual Representation Space
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Cross-lingual Transfer Learning with Persian
Sepideh Mollanorozy, Marc Tanti and Malvina Nissim

10:20 - 10:35  Cross-Lingual Transfer of Cognitive Complexity (Findings)

10:35 - 11:15  Break

11:15 - 11:30  Does Transliteration Help Multilingual Language Modeling Long (Findings)

11:30 - 12:30  Multilinguality

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You Can Have Your Data and Balance It Too: Towards Balanced and Efficient Multilingual Models
Tomasz Limisiewicz, Dan Malkin and Gabriel Stanovsky

12:30 - 12:45 Evaluating the Diversity, Equity and Inclusion of NLP Technology: A Case Study for Indian Languages (Findings)

12:45 - 13:00 A Large-Scale Multilingual Study of Visual Constraints on Linguistic Selection of Descriptions (Findings)

13:00 - 14:15 Lunch (with Linguistic Trivia at 13:45–14:15)

14:15 - 15:05 Keynote by Natalia Levshina

15:05 - 15:50 Linguistic Complexity

Information-Theoretic Characterization of Vowel Harmony: A Cross-Linguistic Study on Word Lists
Julius Steuer, Johann-Mattis List, Badr M. Abdullah and Dietrich Klakow

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Revisiting Dependency Length and Intervener Complexity Minimisation on a Parallel Corpus in 35 Languages
Andrew Thomas Dyer

15:50 - 16:10 Break

16:10 - 16:40 Shared task on Cognate and Derivative Detection For Low-Resourced Languages

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16:40 - 16:45  Break
16:45 - 18:05  Syntax and Morphology

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18:05 - 18:10  Best Paper Awards, Closing