

EACL 2021

**The 16th Conference of the European Chapter of the
Association for Computational Linguistics**

Proceedings of the Conference

April 19 - 23, 2021

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Message from the General Chair

Welcome to EACL 2021, the 16th conference of the European Chapter of the Association for Computational Linguistics! This year's conference is held from the 21st to the 23rd of April, 2021. While we were planning to hold the conference in Kyiv, due to the current COVID situation the conference is held entirely online. EACL 2021 is also an anchor conference to several workshops and tutorials, that are held on April 19th and 20th, also online.

This year's conference continues the successful growing trend of the community, and further requires a large organisational effort due to the COVID restrictions. We are learning how to organise and run conferences online, how to attend them and interact, and how to weave them into this strange suspension of our ordinary physical lives, that is our common current experience.

I would like to take the opportunity here to thank all the people involved, who have managed to pull through despite lockdowns, lack of child care, and the many other daily disruptions.

- Scientific programme chairs Jorg Tiedemann, from University of Helsinki and Reut Tsarfaty, from Bar Ilan University chaired a large scientific programme committee and introduced several innovative topics in the submissions.
- Workshop chairs Jonathan Berant, from Tel-Aviv University and Angeliki Lazaridou, from DeepMind selected the workshops, fourteen of which are affiliated to EACL 2021. Tutorial chairs Isabelle Augenstein, from University of Copenhagen and Ivan Habernal, from Technische Universitaet Darmstadt selected the tutorials. Demonstration chairs Dimitra Gkatzia, from Edinburgh Napier University and Djamé Seddah, University Paris la Sorbonne selected the system demonstrations. They have generated very interesting programmes, which add variety of topics and serve focussed subcommunities.
- The work of the younger members of our community have been the object of attention of our Student Research Workshop chairs Ionut-Teodor Sorodoc, from Pompeu Fabra University, Madhumita Sushil, from University of Antwerp and Ece Takmaz, from University of Amsterdam, and of their faculty advisor, Eneko Agirre, from the University of the Basque Country.
- Special thanks go to the publication chairs Valerio Basile, from the University of Turin and Tommaso Caselli, from the University of Groningen, who had to deal with our self-produced proceedings.
- Thank you also to our publicity chair Julie Weeds, from University of Sussex for making our conference known online, before and during the meeting.
- We belong, we know, to a scientific community of extreme demographic uniformity and we are striving to become more aware of issues of inclusivity and diversity. Thanks to our diversity and inclusion chair, Aline Villavicencio, University of Sheffield and Federal University of Rio Grande do Sul.
- When we decided to move to a virtual conference, we contacted a knowledgeable crowd of colleagues to form a Virtual Infrastructure Committee: Amirhossein Kazemnejad, Bruno Guillaume, Cyril Weerasooriya, Gisela Vallejo, Jan-Christoph Klie, Oles Dobosevych, Viktoria Kolomiets. The virtual organisation all happens thanks to them. Thanks especially to Jan-Christoph for sharing all the accumulated knowledge from past conferences and his senior advisor role for this one, and to Bonnie Webber, for sharing past experiences.

- We are very grateful to the local chairs from Grammarly and Ukrainian Catholic University, Viktoria Kolomiets, Dmytro Lider, Iryna Kotkalova, Oleksii Molchanovskyi, Oles Dobosevych. Thank you for offering to host the conference, manage the web site and be remarkably supportive and cooperative even when we had to decide to put off the opportunity to visit beautiful Kyiv.
- A large number of volunteers is being recruited as I write: thank you for your availability and enthusiasm. And thanks to the volunteer chair, Carolina Scarton, from the University of Sheffield, for hitting the ground running.
- We thank EACL 2021's sponsors for their very welcome contributions, which were obtained by the efforts of Raffaella Bernardi, our ACL sponsorship committee members for Europe. Their names and logos can be seen in the proceedings and on the conference web site.
- Thanks also to David Yarowsky and Priscilla Rasmussen from ACL for their help and advice.

Finally, and foremost, thank to all the authors and conference attendees that have made and will make this conference a success and source of inspiration.

EACL 2021 General Chair

Paola Merlo, University of Geneva, Switzerland

Message from the Program Chairs

Welcome to EACL 2021 — the 16th meeting of the European Chapter of the Association for Computational Linguistics. It has now been almost 4 years since EACL was last held, in Valencia, Spain, 2017, and it is the first time that the EACL conference will be held entirely virtually. This edition of the EACL conference comes at a challenging time for many in our community, due to consequences of the covid19 pandemic, but also at an exciting time for NLP researchers, seeing unprecedented growth and interest in the progress in our field, from both within and outside of our community. We are grateful for all the contributions and support that we have received, which allowed us to hold a successful and memorable event, despite having to cope with the challenges of covid and despite EACL being held and attended from remote.

EACL 2021 had received a record number of submissions compared to all past EACL events — exactly 1,400 submissions, an increase of 35

Organising a conference at this scale is a huge undertaking and the process is demanding, but exciting at the same time. We have been able to recruit a large number of reviewers with expertise that is necessary for making appropriate decisions in the many research areas that this conference covers, and we are beyond thankful for the tremendous support we got from the dedicated senior area chairs, area chairs and all reviewers involved in the selection process. Altogether, we have been fortunate to have been able to recruit 1691 reviewers, 149 area chairs and 34 senior area chairs, all professional experts in their fields.

We adopted the recent strategy of automatic COI detection and paper assignments to reviewers, according to their scholarly profiles and affiliations. This process is fairly new and has its own learning curve, but it comes with great advantages, in particular the ability to scale for the increasing number of submissions and reviewers in the *ACL conferences. At the same time, this process also demonstrated the importance of humans in the loop to make proper adjustments and (re)assignments of papers where the automatic decisions may be suboptimal. With the enormous help of the senior area chairs we could successfully run a detailed review process with at least three reviewers per paper, an author rebuttal period, and reviewer discussions. Thank you all for your efforts to ensure the scientific quality of the reviewing process and the resulting conference programme!

After the reviewing process, we could include a total of 326 excellent papers, referring to an acceptance rate of 24.7

The event will be organised in a similar fashion to other recent on-line conferences, emphasising pre-recorded talks with dedicated live question/answering sessions and interactive poster sessions in a virtual environment. Setting up the virtual event is yet another challenge, especially considering the various time zones around the world our keynotes, authors and participants come from. We opted for a morning session and a late-afternoon session according to the Central European calendar, to emphasise the European focus of the event . At the same time, in this EACL we introduce a certain novelty: all papers get assigned a slot at an interactive poster session that takes place at a time-slot that can reasonably be attended across all different time zones. We hope that this setup will provide the opportunity to truly immerse in the event, scientifically and socially, to increase both the impact of the different works and the opportunity of participants to network.

One of the important highlights in the conference is the lineup of renowned keynote speakers who we could attract to join EACL 2021. We are excited to have the following three speakers who have graciously accepted to provide lectures at the conference: Melanie Mitchell from the Santa Fe Institute, Fernanda Ferreira from the University of California, Davis and Marco Baroni from Facebook AI Research and the University of Trento. We are also delighted to announce a panel discussion on information accessibility and language technology in situations of emergency and ongoing crises, with international experts

and representatives from the non-profit organization of Translators without Borders (Alp Öktem), the Masakhane NLP community, the University of Oxford (Scott Hale), the Bay Area NLP community (Robert Monarch) moderated by the language enthusiast and internet linguist Gretchen McCulloch.

Needless to say, an event like EACL would have not been possible without the efforts and contributions of a large number of people, to whom we are indebted:

- Our great 34 Senior area chairs, who meticulously managed the reviewing process in individual tracks, and led the discussion and selection process.
- and 149 area chairs, who carefully checked the papers, led reviewers' discussions, wrote meta-reviews and provided indispensable inputs for the selection process.
- Our 1691 reviewers, who wrote dedicated reviews and provided valuable feedback to the authors. Special thanks to reviewers who stepped in at the last minute to serve as emergency reviewers.
- Our Excellent Best Paper Committee for selecting the best EACL papers under a very tight schedule.
- The ACL Executive Review Committee. In particular, Amanda Stent, Arya McCarthy and Graham Neubig for making the COI detection and reviewer-paper assignment software available to us — these tools were instrumental in streamlining the paper assignment process. Special thanks for Graham Neubig and Trevor Cohn for technical advice in using these tools throughout the process.
- The 3343 authors who submitted their work to EACL 2021. While not being able to accept all submissions, it is their work that eventually makes up the exciting contributions and advances in our community.
- TACL editors-in-chief Ani Nenkova and Brian Roark, TACL Editorial Assistant Cindy Robinson, and CL Editor-in-Chief Hwee Tou Ng for coordinating the TACL and CL paper presentations with us.
- The Program co-Chairs of ACL 2020: Joel Tetreault, Natalie Schluter and Joyce Chai; and the Program co-Chairs of of EMNLP 2020: Trevor Cohn, Yulan He and Yang Liu, for sharing their experience and providing invaluable advice for the conference organization and the PC-chairing activities.
- Our Publication Chairs, Valerio Basile and Tommaso Caselli, for the efficient and streamlined production of the EACL conference proceedings.
- Our Publicity Chair, Julie Weeds and our Web Infrastructure Chair, Viktoria Kolomiets, for effectively and efficiently taking care of all event communication and PR aspects of the conference.
- Jarda Fikr from SlidesLive, for coordinating the presentations and recordings by the authors with the SlideLive team.
- Rich Gerber at SoftConf, for extremely quick responses on any email inquiry or emerging difficulties encountered with the START system.
- Our students, interns, postdocs, colleagues, and families. Sorry for not being available to you as much as we hoped to, especially in these crazy times of global pandemic. We promise to make up for it!
- Last but not least, we wish to express our deepest thanks to our General Chair Paola Merlo. She has been extremely professional and supportive from the start, providing us with solid advice while completely trusting us and providing flexibility and room to innovate. From the initial plan to have

EACL as a physical conference all the way to its realization as a virtual event, Paola has led and coordinated all efforts through the thick and thin of covid-related uncertainties, confidently leading to this successful event.

Our deepest gratitude to all of you. We hope you will enjoy this conference experience.

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DISK-CSV: Distilling Interpretable Semantic Knowledge with a Class Semantic Vector
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Mega-COV: A Billion-Scale Dataset of 100+ Languages for COVID-19

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Lifelong Knowledge-Enriched Social Event Representation Learning

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GLaRA: Graph-based Labeling Rule Augmentation for Weakly Supervised Named Entity Recognition

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An End-to-end Model for Entity-level Relation Extraction using Multi-instance Learning

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WER-BERT: Automatic WER Estimation with BERT in a Balanced Ordinal Classification Paradigm

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Adaptation of Back-translation to Automatic Post-Editing for Synthetic Data Generation

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