

LTEDI 2022

**The Second Workshop on Language Technology for Equality,  
Diversity and Inclusion**

**Proceedings of the Workshop**

May 27, 2022

The LTEDI organizers gratefully acknowledge the support from the following sponsors.

**In cooperation with**



©2022 Association for Computational Linguistics

Order copies of this and other ACL proceedings from:

Association for Computational Linguistics (ACL)  
209 N. Eighth Street  
Stroudsburg, PA 18360  
USA  
Tel: +1-570-476-8006  
Fax: +1-570-476-0860  
[acl@aclweb.org](mailto:acl@aclweb.org)

ISBN 978-1-955917-43-8

## **Introduction**

Equality, Diversity and Inclusion (EDI) is an important agenda across every field throughout the world. Language as a major part of communication should be inclusive and treat everyone with equality. Today's large internet community uses language technology (LT) and has a direct impact on people across the globe. EDI is crucial to ensure everyone is valued and included, so it is necessary to build LT that serves this purpose. Recent results have shown that big data and deep learning are entrenching existing biases and that some algorithms are even naturally biased due to problems such as 'regression to the mode'. Our focus is on creating LT that will be more inclusive of gender, racial, sexual orientation, persons with disability. The workshop will focus on creating speech and language technology to address EDI not only in English, but also in less resourced languages.

# Organizing Committee

## General Chair

Bharathi Raja Chakravarthi, National University of Ireland Galway

B Bharathi, SSN College of Engineering, Tamil Nadu, India

John P McCrae, National University of Ireland Galway

Manel Zarrouk, Institut Galilee Universite, Paris

Kalika Bali, Microsoft Research, India

Paul Buitelaar, National University of Ireland Galway

## Program Committee

### Program Committee

Adeep Hande, Indian Institute of Information Technology Tiruchirappalli  
Akshat Gupta, Carnegie Mellon University  
Alberto Barrón-Cedeño, Università di Bologna  
Anna Pillar, Radboud University  
Anne Lauscher, Bocconi University  
António Câmara, Columbia University  
Arianna Muti, University of Bologna  
Blaž Škrlj, Jožef Stefan Institute  
Boshko Koloski, International Postgraduate School Jožef Stefan  
Courtney Mansfield, LivePerson Inc.  
Debora Nozza, Bocconi University  
Ewoenam Kwaku, University of Antwerp  
Fazlourrahman Balouchzahi, Instituto Politécnico Nacional  
Filip Nilsson, Department of Computer Science, Electrical and Space Engineering  
Frank Rudzicz, University of Toronto  
Harrison Santiago, University of Florida  
Ishan Sanjeev, International Institute of Information Technology Hyderabad  
Iñaki San, Elhuyar Fundazioa  
Jamell Dacon, Michigan State University  
Jetske Adams, Radboud University  
José Antonio, Universidad de Murcia  
KV Aditya, International Institute of Information Technology, Hyderabad  
Kangwook Lee, University of Wisconsin, Madison  
Katerina Korre, University of Bologna  
Kyle Swanson, Stanford University  
Kyrill Poelmans, Tilburg University  
Luke Melas-Kyriazi, University of Oxford, University of Oxford  
Manex Agirrezabal, University of Copenhagen  
Marion Bartl, University College Dublin  
Martha Larson, Radboud University  
Michael Gira, University of Wisconsin - Madison  
Nankai Lin, Guangdong University of Foreign Studies  
Nawshad Farruque, University of Alberta  
Nina Markl, Institute for Language, Cognition and Computation, University of Edinburgh  
Olga Zamaraeva, Universidad de La Coruña  
Oren Mishali, Computer Science Department, Technion-Israel Institute of Technology  
Pieter Delobelle, KU Leuven  
Poonam Goyal, BITS Pilani, Birla Institute of Technology and Science  
Pradeep Kumar, NIT Patna  
Rafael Valencia-García, Universidad de Murcia  
Rajalakshmi Sivanaiah, Sri Sivasubramaniya Nadar College of Engineering  
Sunil Saumya, IIIT Dharwad  
Senthil Kumar, Anna University  
Sharal Coelho, Mangalore University  
Suhasini S, SSN College of Engineering  
Suman Dowlagar, International Institute of Information Technology Hyderabad

Susan Leavy, University College Dublin  
Thenmozhi Durairaj, Sri Sivasubramaniya Nadar College Of Engineering  
Toon Calders, Universiteit Antwerpen  
Usman Naseem, University of Sydney  
Vishesh Gupta, IIT(ISM) Dhanbad  
Vitthal Bhandari, BITS Pilani, Birla Institute of Technology and Science  
Wei-Wei Du, National Yang Ming Chiao Tung University  
Wei-Yao Wang, National Yang Ming Chiao Tung University  
Yingwen Fu, Guangdong University of Foreign Studies  
Zining Zhu, University of Toronto  
Shaina Raza, University of Toronto

# Keynote Talk: Towards Equitable Language Technologies

Su Lin

Microsoft Research, Montreal

**Abstract:** Language technologies are now ubiquitous. Yet the benefits of these technologies do not accrue evenly to all people, and they can be harmful; they can reproduce stereotypes, prevent speakers of “non-standard” language varieties from participating fully in public discourse, and reinscribe historical patterns of linguistic discrimination. In this talk, I will take a tour through the rapidly emerging body of research examining bias and harm in language technologies. I will offer some perspective on the many challenges of this work, ranging from how we conceptualize and measure language-related harms to how we grapple with the complexities of where and how language technologies are encountered. I will conclude by discussing some future directions towards more equitable technologies.

**Bio:** She is a postdoctoral researcher in the Fairness, Accountability, Transparency, and Ethics (FATE) group at Microsoft Research Montréal. She is interested in examining the social and ethical implications of natural language processing technologies; She develop approaches for anticipating, measuring, and mitigating harms arising from language technologies, focusing on the complexities of language and language technologies in their social contexts, and on supporting NLP practitioners in their ethical work. She has also worked on using NLP approaches to examine language variation and change (computational sociolinguistics), for example developing models to identify language variation on social media.



## Table of Contents

<i>Mind the data gap(s): Investigating power in speech and language datasets</i>	
Nina Markl .....	1
<i>Regex in a Time of Deep Learning: The Role of an Old Technology in Age Discrimination Detection in Job Advertisements</i>	
Anna Pillar, Kyrill Poelmans and Martha Larson .....	13
<i>Doing not Being: Concrete Language as a Bridge from Language Technology to Ethnically Inclusive Job Ads</i>	
Jetske Adams, Kyrill Poelmans, Iris Hendrickx and Martha Larson .....	19
<i>Measuring Harmful Sentence Completion in Language Models for LGBTQIA+ Individuals</i>	
Debora Nozza, Federico Bianchi, Anne Lauscher and Dirk Hovy .....	26
<i>Using BERT Embeddings to Model Word Importance in Conversational Transcripts for Deaf and Hard of Hearing Users</i>	
Akhter Al Amin, Saad Hassan, Cecilia Alm and Matt Huenerfauth .....	35
<i>Detoxifying Language Models with a Toxic Corpus</i>	
Yoon Park and Frank Rudzicz .....	41
<i>Inferring Gender: A Scalable Methodology for Gender Detection with Online Lexical Databases</i>	
Marion Bartl and Susan Leavy .....	47
<i>Debiasing Pre-Trained Language Models via Efficient Fine-Tuning</i>	
Michael Gira, Ruisu Zhang and Kangwook Lee .....	59
<i>Disambiguation of morpho-syntactic features of African American English – the case of habitual be</i>	
Harrison Santiago, Joshua Martin, Sarah Moeller and Kevin Tang .....	70
<i>Behind the Mask: Demographic bias in name detection for PII masking</i>	
Courtney Mansfield, Amandalynne Paullada and Kristen Howell .....	76
<i>Mapping the Multilingual Margins: Intersectional Biases of Sentiment Analysis Systems in English, Spanish, and Arabic</i>	
António Câmara, Nina Taneja, Tamjeed Azad, Emily Allaway and Richard Zemel .....	90
<i>Monte Carlo Tree Search for Interpreting Stress in Natural Language</i>	
Kyle Swanson, Joy Hsu and Mirac Suzgun .....	107
<i>IITSurat@LT-EDI-ACL2022: Hope Speech Detection using Machine Learning</i>	
Pradeep Kumar Roy, Snehaan Bhawal, Abhinav Kumar and Bharathi Raja Chakravarthi .....	120
<i>The Best of both Worlds: Dual Channel Language modeling for Hope Speech Detection in low-resourced Kannada</i>	
Adeep Hande, Siddhanth U Hegde, Sangeetha S, Ruba Priyadharshini and Bharathi Raja Chakravarthi .....	127
<i>NYCU_TWD@LT-EDI-ACL2022: Ensemble Models with VADER and Contrastive Learning for Detecting Signs of Depression from Social Media</i>	
Wei-Yao Wang, Yu-Chien Tang, Wei-Wei Du and Wen-Chih Peng .....	136
<i>UMUTeam@LT-EDI-ACL2022: Detecting homophobic and transphobic comments in Tamil</i>	
José Antonio García-Díaz, Camilo Caparros-Laiz and Rafael Valencia-García .....	140

<i>UMUTeam@LT-EDI-ACL2022: Detecting Signs of Depression from text</i> José Antonio García-Díaz and Rafael Valencia-García .....	145
<i>bitsa_nlp@LT-EDI-ACL2022: Leveraging Pretrained Language Models for Detecting Homophobia and Transphobia in Social Media Comments</i> Vitthal Bhandari and Poonam Goyal .....	149
<i>ABLIMET @LT-EDI-ACL2022: A Roberta based Approach for Homophobia/Transphobia Detection in Social Media</i> Abulimiti Maimaitituoheti .....	155
<i>MUCIC@LT-EDI-ACL2022: Hope Speech Detection using Data Re-Sampling and 1D Conv-LSTM</i> Anusha M D Gowda, Fazlourrahman Balouchzahi, Hosahalli Lakshmaiah Shashirekha and Grigori Sidorov .....	161
<i>DeepBlues@LT-EDI-ACL2022: Depression level detection modelling through domain specific BERT and short text Depression classifiers</i> Nawshad Farruque, Osmar Zaiane, Randy Goebel and Sudhakar Sivapalan .....	167
<i>SSN_ARMM@ LT-EDI -ACL2022: Hope Speech Detection for Equality, Diversity, and Inclusion Using ALBERT model</i> Praveenkumar Vijayakumar, Prathyush S, Aravind P, Angel Deborah S, Rajalakshmi Sivanaiah, Sakaya Milton Rajendram and Mirnalinee T T .....	172
<i>SUH_ASR@LT-EDI-ACL2022: Transformer based Approach for Speech Recognition for Vulnerable Individuals in Tamil</i> Suhasini S and Bharathi B .....	177
<i>LPS@LT-EDI-ACL2022:An Ensemble Approach about Hope Speech Detection</i> Yue Ying Zhu .....	183
<i>CURAJ_IITDWD@LT-EDI-ACL 2022: Hope Speech Detection in English YouTube Comments using Deep Learning Techniques</i> Vanshita Jha, Ankit Kumar Mishra and Sunil Saumya .....	190
<i>SSN_MLRG3 @LT-EDI-ACL2022-Depression Detection System from Social Media Text using Transformer Models</i> Sarika Esackimuthu, Shruthi Hariprasad, Rajalakshmi Sivanaiah, Angel Deborah S, Sakaya Milton Rajendram and Mirnalinee T T .....	196
<i>BERT 4EVER@LT-EDI-ACL2022-Detecting signs of Depression from Social Media Detecting Depression in Social Media using Prompt-Learning and Word-Emotion Cluster</i> Xiaotian Lin, Yingwen Fu, Ziyu Yang, Nankai Lin and Shengyi Jiang .....	200
<i>CIC@LT-EDI-ACL2022: Are transformers the only hope? Hope speech detection for Spanish and English comments</i> Fazlourrahman Balouchzahi, Sabur Butt, Grigori Sidorov and Alexander Gelbukh .....	206
<i>scubeMSEC@LT-EDI-ACL2022: Detection of Depression using Transformer Models</i> Sivamanikandan S, Santhosh V, Sanjaykumar N, Jerin Mahibha C and Thenmozhi Durairaj ..	212
<i>SSNCSE_NLP@LT-EDI-ACL2022:Hope Speech Detection for Equality, Diversity and Inclusion using sentence transformers</i> Bharathi B, Dhanya Srinivasan, Josephine Varsha, Thenmozhi Durairaj and Senthil Kumar B	218

<i>SOA_NLP@LT-EDI-ACL2022: An Ensemble Model for Hope Speech Detection from YouTube Comments</i>	
Abhinav Kumar, Sunil Saumya and Pradeep Kumar Roy .....	223
<i>IIT Dhanbad @LT-EDI-ACL2022- Hope Speech Detection for Equality, Diversity, and Inclusion</i>	
Vishesh Gupta, Ritesh Kumar and Rajendra Pamula .....	229
<i>IISERB@LT-EDI-ACL2022: A Bag of Words and Document Embeddings Based Framework to Identify Severity of Depression Over Social Media</i>	
Tanmay Basu .....	234
<i>SSNCSE_NLP@LT-EDI-ACL2022: Homophobia/Transphobia Detection in Multiple Languages using SVM Classifiers and BERT-based Transformers</i>	
Krithika Swaminathan, Bharathi B, Gayathri G L and Hrishik Sampath .....	239
<i>KUCST@LT-EDI-ACL2022: Detecting Signs of Depression from Social Media Text</i>	
Manex Agirrezabal and Janek Amann .....	245
<i>E8-IJS@LT-EDI-ACL2022 - BERT, AutoML and Knowledge-graph backed Detection of Depression</i>	
Ilija Tavchioski, Boshko Koloski, Blaž Škrlj and Senja Pollak .....	251
<i>Nozza@LT-EDI-ACL2022: Ensemble Modeling for Homophobia and Transphobia Detection</i>	
Debora Nozza .....	258
<i>KADO@LT-EDI-ACL2022: BERT-based Ensembles for Detecting Signs of Depression from Social Media Text</i>	
Morteza Janatdoust, Fatemeh Ehsani-Besheli and Hossein Zeinali .....	265
<i>Sammaan@LT-EDI-ACL2022: Ensembled Transformers Against Homophobia and Transphobia</i>	
Ishan Sanjeev Upadhyay, Kv Aditya Srivatsa and Radhika Mamidi .....	270
<i>OPI@LT-EDI-ACL2022: Detecting Signs of Depression from Social Media Text using RoBERTa Pre-trained Language Models</i>	
Rafał Poświata and Michał Wiktor Perełkiewicz .....	276
<i>FilipN@LT-EDI-ACL2022-Detecting signs of Depression from Social Media: Examining the use of summarization methods as data augmentation for text classification</i>	
Filip Nilsson and György Kovács .....	283
<i>NAYEL @LT-EDI-ACL2022: Homophobia/Transphobia Detection for Equality, Diversity, and Inclusion using SVM</i>	
Nsrin Ashraf, Mohamed Taha, Ahmed Taha Abd Elfattah and Hamada Nayel .....	287
<i>giniUs @LT-EDI-ACL2022: Aasha: Transformers based Hope-EDI</i>	
Harshul Raj Surana and Basavraj Chinagundi .....	291
<i>SSN_MLRG1@LT-EDI-ACL2022: Multi-Class Classification using BERT models for Detecting Depression Signs from Social Media Text</i>	
Karun Anantharaman, Angel Deborah S, Rajalakshmi Sivanaiah, Saritha Madhavan and Sakaya Milton Rajendram .....	296
<i>DepressionOne@LT-EDI-ACL2022: Using Machine Learning with SMOTE and Random UnderSampling to Detect Signs of Depression on Social Media Text.</i>	
Suman Dowlagar and Radhika Mamidi .....	301
<i>LeaningTower@LT-EDI-ACL2022: When Hope and Hate Collide</i>	
Arianna Muti, Marta Marchiori Manerba, Katerina Korre and Alberto Barrón-Cedeño .....	306

<i>MUCS@Text-LT-EDI@ACL 2022: Detecting Sign of Depression from Social Media Text using Supervised Learning Approach</i>	
Asha Hegde, Sharal Coelho, Ahmad Elyas Dashti and Hosahalli Lakshmaiah Shashirekha . . .	312
<i>SSNCSE_NLP@LT-EDI-ACL2022: Speech Recognition for Vulnerable Individuals in Tamil using pre-trained XLSR models</i>	
Dhanya Srinivasan, Bharathi B, Thenmozhi Durairaj and Senthil Kumar B . . . . .	317
<i>IDIAP_TIET@LT-EDI-ACL2022 : Hope Speech Detection in Social Media using Contextualized BERT with Attention Mechanism</i>	
Deepanshu Khanna, Muskaan Singh and Petr Motlicek . . . . .	321
<i>SSN@LT-EDI-ACL2022: Transfer Learning using BERT for Detecting Signs of Depression from Social Media Texts</i>	
Adarsh S and Betina Antony . . . . .	326
<i>Findings of the Shared Task on Detecting Signs of Depression from Social Media</i>	
Kayalvizhi S, Thenmozhi Durairaj, Bharathi Raja Chakravarthi and Jerin Mahibha C . . . . .	331
<i>Findings of the Shared Task on Speech Recognition for Vulnerable Individuals in Tamil</i>	
Bharathi B, Bharathi Raja Chakravarthi, Subalalitha CN, Sripriya N, Arunaggiri Pandian and Swetha Valli . . . . .	339
<i>DLRG@LT-EDI-ACL2022: Detecting signs of Depression from Social Media using XGBoost Method</i>	
Herbert Goldwin Sharen and Ratnavel Rajalakshmi . . . . .	346
<i>IDIAP Submission@LT-EDI-ACL2022 : Hope Speech Detection for Equality, Diversity and Inclusion</i>	
Muskaan Singh and Petr Motlicek . . . . .	350
<i>IDIAP Submission@LT-EDI-ACL2022: Homophobia/Transphobia Detection in social media comments</i>	
Muskaan Singh and Petr Motlicek . . . . .	356
<i>IDIAP Submission@LT-EDI-ACL2022: Detecting Signs of Depression from Social Media Text</i>	
Muskaan Singh and Petr Motlicek . . . . .	362
<i>Overview of The Shared Task on Homophobia and Transphobia Detection in Social Media Comments</i>	
Bharathi Raja Chakravarthi, Ruba Priyadharshini, Thenmozhi Durairaj, John Philip McCrae, Paul Buitelaar, Prasanna Kumar Kumaresan and Rahul Ponnusamy . . . . .	369
<i>Overview of the Shared Task on Hope Speech Detection for Equality, Diversity, and Inclusion</i>	
Bharathi Raja Chakravarthi, Vigneshwaran Muralidaran, Ruba Priyadharshini, Subalalitha CN, John Philip McCrae, Miguel Ángel García, Salud María Jiménez-Zafra, Rafael Valencia-García, Prasanna Kumar Kumaresan, Rahul Ponnusamy, Daniel García-Baena and José Antonio García-Díaz .	378