ACL 2023

The 61st Annual Meeting of the Association for Computational Linguistics: Industry Track

Proceedings of the Industry Track

July 10-12, 2023

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

ISBN 978-1-959429-68-5

Program Committee

Chairs

Beata Beigman Klebanov, Educational Testing Service
Sunayana Sitaram, Microsoft Research India
Jason D Williams, Apple

Program Committee

Alex Acero, Apple
George Acquaah-mensah, Massachusetts College of Pharmacy and Health SCiences
Sachin Agarwal, Apple
Alan Akbik, Humboldt-Universität zu Berlin
Ai Ti Aw, Institute for Infocomm Research
Amar Prakash Azad, IBM AI Research
Srinivas Bangalore, Interactions Corp
Vinayshekhar Bannihatti Kumar, AWS AI
Kfir Bar, College of Management Academic Studies
Roy Bar-haim, IBM Research
Fazl Barez, The University of Edinburgh
Nikoletta Basiou, Amazon
Tilman Becker, DFKI
Lee Becker, Pearson
Steven Bedrick, Oregon Health
& Science University
Shruti Bhargava, Apple
Kasturi Bhattacharjee, AWS AI, Amazon
Dan Bikel, Meta
Yonatan Bisk, Carnegie Mellon University
Anupam Biswas, National Institute of Technology Silchar
Su Lin Blodgett, Microsoft Research
Danushka Bollegala, University of Liverpool/Amazon
Trung Bui, Adobe Research
Aoife Cahill, Dataminr
Sarah Campbell, Amazon Alexa AI
Thiago Castro Ferreira, Federal University of Minas Gerais
Srinivas Chappidi, Apple
Vishrav Chaudhary, Microsoft
Sourish Chaudhuri, Google Inc
Ciprian Chelba, Google
John Chen, Interactions LLC
Luoxin Chen, Amazon Alexa AI
Lei Chen, Rakuten
Jiangning Chen, Meta
Jianpeng Cheng, Apple
Justin Chiu, Rakuten USA
Eunah Cho, Amazon, Alexa AI
Jaegul Choo, KAIST
Monojit Choudhury, Microsoft

Poornima Chozhiyath Raman, Roku
Paul Crook, Meta
Heriberto Cuayahuitl, University of Lincoln
Deborah Dahl, Conversational Technologies
Robert Daland, Apple Inc
Sandipan Dandapat, Microsoft India
Marina Danilevsky, IBM Research
Aswarth Abhilash Dara, Amazon
Tirthankar Dasgupta, Tata Consultancy Services Ltd.
Budhaditya Deb, Microsoft Corporation
Tejas Dhamecha, IBM Research - India
Dan Dickinson, American Family Insurance
Rahul Divekar, Educational Testing Service
Li Dong, Amazon.com
Shuyan Dong, Meta
Pablo Duboue, Textualization Software Ltd.
Matthew Dunn, Cohere AI
Ritam Dutt, Carnegie Mellon University
Matthias Eck, Twitter
Lilach Eden, IBM Research
Wassim El-hajj, American University of Beirut
Aparna Elangovan, The University of Melbourne
David Elson, Google
Sugyeong Eo, Korea University
Keelan Evanini, Kasisto
Tarec Fares, Bloomberg LP
Oliver Ferschke, 3M
Michael Flor, Educational Testing Service
Lisheng Fu, Amazon
Christian Fuegen, Facebook AI
Ankur Gandhe, Amazon
Qin Gao, Apple Inc
Radhika Gaonkar, Microsoft Search, Assistant and Intelligence
Jose Garrido Ramas, Amazon
Judith Gaspers, Amazon
Anna Lisa Gentile, IBM Research Almaden
Ryan Georgi, KPMG
Kallirroi Georgila, University of Southern California Institute for Creative Technologies
Alborz Geramifard, Facebook AI
Diman Ghazi, IBM
Aniruddha Ghosh, Apple Uk
Anmol Goel, IIIT Hyderabad
Olga Golovneva, Meta
Kalpa Gunaratna, Samsung Research America
Tong Guo, Meituan
Honglei Guo, Tsinghua University
Ankush Gupta, IBM Research
Benjamin Han, Microsoft
Jie Hao, Amazon
Daniel Hardt, Copenhagen Business School
Peyman Heidari, Facebook

Enrique Henestroza Anguiano, Ask Media Group
Sanjika Hewavitharana, eBay
Derrick Higgins, Illinois Institute of Technology
Lynette Hirschman, MITRE
Andrew Hoang, Education Testing Service
Bjorn Hoffmeister, Apple
Dirk Hovy, Bocconi University
Kristen Howell, LivePerson Inc.
Ziming Huang, Tencent
Wonseok Hwang, LBox
Alankar Jain, Google LLC
Hongxia Jin, Samsung Research America
Shailza Jolly, Amazon Alexa AI
Rosie Jones, Spotify
Mohammad Kachuee, Amazon Alexa AI
Anup Kalia, Dataminr
Hidetaka Kamigaito, Nara Institute of Science and Technology
Jun Seok Kang, Blink Health
Omid Kashefi, ETS
Denys Katerenchuk, Kasisto, CUNY Graduate Center
Yannis Katsis, IBM Research - Almaden
Yoav Katz, IBM Research AI
Saurabh Khanwalkar, Course Hero
Sopan Khosla, Amazon Web Services, Amazon Inc
Byung-hak Kim, AKASA, Inc.
Yu-seop Kim, Hallym University
Sun Kim, Naver; NCBI/NIH
Seokhwan Kim, Amazon Alexa AI
Geewook Kim, NAVER
Kunho Kim, Microsoft Corporation
Jin-dong Kim, Database Center for Life Science
Sanjeev Kumar, Quark.ai
Anjishnu Kumar, Amazon Alexa
Chee Wee Leong, Educational Testing Service
Brian Lester, Google
Volker Leutnant, Amazon Alexa ASR
Yitong Li, Huawei Technology Co. ltd
Yunyao Li, Apple
Tzu-hsiang Lin, Apple
Xiaohu Liu, Amazon
Xuye Liu, University of Waterloo
Pengfei Liu, Centre for Perceptual and Interactive Intelligence
Jaime Lorenzo-trueba, Amazon
Anastassia Loukina, Grammarly Inc
Stephanie M. Lukin, U.S. Army Research Laboratory
Liang Ma, Dataminr
Nitin Madnani, Educational Testing Service
Frederic Mailhot, Dialpad, Inc
Lorenzo Malandri, University of Milan - Bicocca
Alex Marin, Microsoft Corporation
Yuval Marton, University of Washington

Sandeep Mathias, Presidency University
Spyros Matsoukas, Amazon.com
Yuji Matsumoto, Riken Center for Advanced Intelligence Project
Chandresh Maurya, IIT Indore
David Mcdonald, Smart Information Flow Technologies (dba SIFT, LLC)
Mahnoosh Mehrabani, Interactions LLC
Kartik Mehta, Amazon
Helen Meng, The Chinese University of Hong Kong
Fabio Mercorio, University of Milano-Bicocca
Margot Mieskes, University of Applied Sciences, Darmstadt
Shachar Mirkin, Lawgeex
Hemant Misra, Swiggy (BundlTechnologies)
Isabelle Moulinier, Thomson Reuters
Sidharth Mudgal, Google, Inc.
Matthew Mulholland, Educational Testing Service
Vitobha Munigala, Research Engineer, IBM Research
Deepak Muralidharan, Apple
Prasanna Kumar Muthukumar, BBN Technologies
Varun Nagaraj Rao, Princeton University
Udhyakumar Nallasamy, Apple Inc
Jinseok Nam, Amazon
Nobal B. Niraula, Boeing Research
& Technology
Navid Nobani, University of Milano-Bicocca
Elnaz Nouri, Microsoft Research
Mari Olsen, TELUS International AI Data Services
Laurel Orr, Stanford
Aishwarya Padmakumar, Amazon
Lin Pan, Amazon
Alexandros Papangelis, Amazon Alexa AI
Aasish Pappu, Meta AI
Cheoneum Park, Hyundai Motor Group
Youngja Park, IBM T. J. Watson Research Center
Chanjun Park, Upstage
Dookun Park, Amazon Alexa
Patrick Paroubek, University Paris-Saclay - CNRS - LISN
Ioannis Partalas, Expedia Group
Sangameshwar Patil, TRDDC, TCS Research and Innovation
Siddharth Patwardhan, Apple
Matthias Paulik, Apple
Sachin Pawar, Tata Consultancy Services Ltd.
Stephan Peitz, Apple
Vassilis Plachouras, Facebook
Saloni Potdar, IBM Watson, Carnegie Mellon University
Sumanth Prabhu, NA
Shrimai Prabhumoye, Nvidia
Pradyot Prakash, Meta
Radityo Eko Prasojo, Pitik.id
Stephen Pulman, Apple Inc.
Long Qin, Alibaba
Elio Querze, Fidelity

Chris Quirk, Microsoft Research
Zeynab Raeesy, Amazon
Sai Krishna Rallabandi, Fidelity Investments
Vikram Ramanarayanan, University of California, San Francisco
Nitin Ramrakhiyani, TCS Research
Shihao Ran, Dataminr
Vivek Kumar Rangarajan Sridhar, Apple Inc.
Sudha Rao, Microsoft Research, Redmond
Nikhil Rasiwasia, Amazon.com
Hadas Raviv, Princeton University
Sagnik Ray Choudhury, University of Michigan
Brian Riordan, unaffiliated
Kay Rottmann, Amazon Alexa AI
Nicholas Ruiz, Interactions, LLC
Alicia Sagae, Research Scientist
Avneesh Saluja, Netflix
Mark Sammons, Elemental Cognition
Ruhi Sarikaya, Amazon
Hassan Sawaf, aixplain, inc.
Thomas Schaaf, 3M | M*Modal
Frank Schilder, Thomson Reuters
Jonathan Schler, HIT
Alexandra Schofield, Harvey Mudd College
Ethan Selfridge, LivePerson
Shubhashis Sengupta, Accenture Technology Labs
Igor Shalyminov, Amazon AWS
Eshwar Shamanna Girishekar, Amazon
Mingyue Shang, Amazon
Ashish Shenoy, Meta
Weiyan Shi, Columbia University
Michal Shmueli-scheuer, IBM Research
Lei Shu, Google Research
Stavroula Skylaki, Thomson Reuters Labs
Saleh Soltan, Amazon Alexa
Shuangyong Song, JD AI Research
Mukund Sridhar, Google
Evgeny Stepanov, VUI, Inc.
Kevin Stowe, Educational Testing Services (ETS)
Grant Strimel, Amazon.com
Ming Sun, Meta AI
Marek Suppa, Comenius University in Bratislava
Sandesh Swamy, Amazon
Narges Tabari, AWS AI Labs, Amazon
Jacopo Tagliabue, NYU
Zeerak Talat, Simon Fraser University
Joel Tetreault, Dataminr
Khushboo Thaker, University of Pittsburgh
Sudarshan R. Thitte, IBM
John Torr, University of Edinburgh
Giuliano Tortoreto, VUI Inc.
Isabel Trancoso, INESC-ID / IST Univ. Lisbon

Keith Trnka, None
Ling Tsou, Inworld AI
Brian Ulicny, Raytheon BBN Technologies
Morgan Ulinski, WordsEye, Inc.
David Uthus, Google Research
Gisela Vallejo, The University of Melbourne
Carel Van Niekerk, Heinrich Heine University
Martin Villalba, None
Ngoc Phuoc An Vo, IBM Research
Tong Wang, Amazon
Xiaohui Wang, Bytedance AI Lab
Han Wang, Amazon
Yu Wang, Samsung Research America
Yi-chia Wang, Facebook AI
Kyle Williams, Alkymi
Genta Winata, Bloomberg
Kristian Woodsend, University of Edinburgh
Kristian Woodsend, Apple
Lingfei Wu, Pinterest
He Xie, Amazon Alexa AI
Deyi Xiong, Tianjin University
Xiao Yang, Meta Platforms
Dian Yu, Google
Keunwoo Yu, University Of Michigan
Kai Yu, Shanghai Jiao Tong University
Qingkai Zeng, University of Notre Dame
Ke Zhang, Dataminr, inc
Xiliang Zhu, Dialpad
Wei Zhu, East China Normal University
Imed Zitouni, Google

Table of Contents