UM-IoS 2022

Unimodal and Multimodal Induction of Linguistic Structures

Proceedings of the Workshop

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Keynote Talk: Learning Grounded Task Structures from Language and Vision

Joyce Chai
University of Michigan

Abstract: See https://induction-of-structure.github.io/emnlp2022/ for more details.

Bio: Joyce Chai is a Professor in the Department of Electrical Engineering and Computer Science at the University of Michigan. Prior to joining UM in 2019, she was a Professor of Computer Science and Engineering at Michigan State University. She also spent a couple years at the IBM T. J. Watson Research Center as a research staff member before joining MSU in 2003. Her research interests include natural language processing, situated dialogue, human-robot communication, and artificial intelligence. Her recent work explores the intersection of language, vision, and robotics, particularly focusing on grounded language processing to facilitate situated communication with robots and other artificial agents. She has served on the executive board of North America Chapter of Association for Computational Linguistics (NAACL), as a Program Co-chair for multiple conferences - most recently the 2020 Annual Meeting of Association for Computational Linguistics (ACL), and as an associate editor for several journals including Computational Linguistics, Journal of Artificial Intelligence Research (JAIR), and ACM Transaction on Interactive Intelligent Systems (TiiS). She is a recipient of the National Science Foundation Career Award (2004), the William Beal Distinguished Scholar Award from MSU (2018), and a number of paper awards including the Best Long Paper Award from ACL (2010) and an Outstanding Paper Award from EMNLP (2021). She holds a Ph.D. in Computer Science from Duke University.

Keynote Talk: Evaluating a statistical learning hypothesis for human grammar acquisition

William Schuler
The Ohio State University

Abstract: See https://induction-of-structure.github.io/emnlp2022/ for more details.

Bio: William Schuler is a Professor at Department of Linguistics of the Ohio State University. His interests are in building and evaluating computational models of cognitive processes involved in parsing and interpreting speech and text. He is the director of Computational Cognitive Modeling Lab and Center for Cognitive Sciences.

Keynote Talk: Scaling Up Probabilistic Grammar Induction with Tensor Decomposition

Kewei Tu
ShanghaiTech University

Abstract: See https://induction-of-structure.github.io/emnlp2022/ for more details.

Bio: Kewei Tu received BS and MS degrees in Computer Science and Technology from Shanghai Jiaotong University, China in 2002 and 2005 respectively and received a PhD degree in Computer Science from Iowa State University, USA in 2012. During 2012-2014, he worked as a postdoctoral researcher at Departments of Statistics and Computer Science of the University of California, Los Angeles, USA. Since 2014, he has been an assistant professor and then an associate professor with the School of Information Science and Technology at ShanghaiTech University, Shanghai, China. He has around 80 publications in major conferences and journals including ACL, EMNLP, NAACL, AAAI, IJCAI, NeurIPS and ICCV. He served as a PC member at many NLP and AI conferences, as an area chair at several conferences such as EMNLP and AAAI, and as an action editor of ACL Rolling Review.

Keynote Talk: Towards a More General AI: From Big Data to Big Task from the Perspective of Multimodal Joint Parsing

Song-Chun Zhu
University of California, Los Angeles; Beijing Institute for General Artificial Intelligence; Peking University

Abstract: See https://induction-of-structure.github.io/emnlp2022/ for more details.

Bio: Song-Chun Zhu received Ph.D. degree from Harvard University in 1996, and is Chair Professor jointly with Tsinghua University and Peking University, director of Institute for Artificial Intelligence, Peking University. He worked at Brown, Stanford, Ohio State, and UCLA before returning to China in 2020 to launch a non-profit organization – Beijing Institute for General Artificial Intelligence. He has published over 300 papers in computer vision, statistical modeling and learning, cognition, Language, robotics, and AI. He received the Marr Prize in 2003, the Aggarwal prize from the Intl Association of Pattern Recognition in 2008, the Helmholtz Test-of-Time prize in 2013, twice Marr Prize honorary nominations in 1999 and 2007, a Sloan Fellowship, the US NSF Career Award, and ONR Young Investigator Award in 2001. He is a Fellow of IEEE since 2011. He serves as General co-Chair for CVPR 2012 and CVPR 2019.

Keynote Talk: Learning a Grammar Inducer from Videos

Songyang Zhang
University of Rochester

Abstract: See https://induction-of-structure.github.io/emnlp2022/ for more details.

Bio: Songyang Zhang has joined OpenMMLab, Shanghai AI Laboratory. He leads a team working on foundation model, includes the research and open-source platform. His team develops and maintains the OpenMMLab projects MMClassification and MMSelfSup. He obtained his Ph.D. in Computer Science at the University of Chinese Academy of Science, in the joint program at PLUS Lab, ShanghaiTech University, supervised Prof. Xuming He in 2022. He got his B.Sc. degree in 2017, and worked at MC^2 Lab, Beihang University, under the supervision of Prof. Mai Xu. He also worked as the research intern in TuSimple, Tencent Youtu Lab, and Megvii Research.

Keynote Talk: Constraint Mining and Constrained Decoding in NLP

Kai-Wei Chang
University of California, Los Angeles

Abstract: See https://induction-of-structure.github.io/emnlp2022/ for more details.

Bio: Kai-Wei Chang is an associate Professor at UCLA-CS. His research interests include computational approaches to natural language processing; tractable machine learning methods for complex and big data and FATE (Fairness, Accountability, Transparency, and Ethics) in AI.

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Named Entity Recognition as Structured Span Prediction
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Global Span Selection for Named Entity Recognition
Urchade Zaratiana, Niama Elkhbir, Pierre Holat, Nadi Tomeh and Thierry Charnois

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