

Borui Zhang

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Education

University of Minnesota, Twin Cities Minneapolis, MN

Ph.D. Candidate September 2016 – November 2021

Major in Linguistics, Minor in Computer Science

Advisor: Dr. Claire Halpert

University of Minnesota

Minneapolis, MN

M.A. in Linguistics

September 2014 – June 2016

Advisor: Dr. Tim Hunter

Tianjin Foreign Studies University

Tianjin, China

B.S. in Educational Technology

August 2007 – July 2011

Mentor: Dr. Lizhi Huang

Academic experience

Teaching Assistant

Institute of Linguistics (University of Minnesota)

LING 3001: Introduction to Linguistics

Spring2021 Fall2020 Spring2020 Spring2019 Spring2018 Fall2018 Fall2017

Leading weekly discussion sections; design section materials and activities; report students' performance to lecturer; classroom assisting; grading; mentoring; giving guest lectures

Grader role in:

LING 4202: Syntax I

Spring 2016 Fall 2016

LING 4205: Semantics

Fall 2017

LING 4302w: Phonology I

Spring 2018

MnDRIVE Graduate Scholar

Summer 2019

College of Science and Engineering (University of Minnesota)

Taught basic Robotic courses to K-12 students (particularly from under-represented groups to STEM disciplines) courses including programming Ozobots, Inkscape graphic editor, and Intro to virtual reality

Chinese Language Tutor, Chinese Flagship program (University of Minnesota)

Spring 2015

Chinese Writing and Speaking

Provided outside-of-classroom help to undergraduate students improve their oral Chinese skills in pronunciations, tones, vocabulary, and pragmatics in real life conversations, and writing skills in grammar checking and word choices in essay writings

Publications

The Multiple Mechanisms for Mandarin Sluices

Co-authored with Jason Overfelt

Proceedings of GLOW-in-Asia, 2019

Sluicing-like Constructions in Kathmandu Newari (Nepal Bhasa)

Proceedings of CLS 54th 2018

The Multiple Mechanisms for Mandarin Sluices

Co-authored with Jason Overfelt

Proceedings of GLOW-in-Asia, 2019

Embedding, Covert Movement, and Intervention in Newari

Co-authored with Dustin Chacón

Proceedings of LSA 2018

Entropy Reduction Prediction on Mandarin Chinese Relative Clauses

Proceedings of 2016 Buckeye East Asian Linguistics Forum 2

Presentations

A corpus-based approach to exploring embedding verbs in Nepal Bhasa

November 2020

(Oral) Linguistics Colloquium (University of Minnesota)

Complementation in Nepal Bhasa

September 2019

(Oral) Linguistics Colloquium Student Summer Research (University of Minnesota)

Research work in computational linguistics

February 2019

(Lightning talk) The ACM-W Celebration of Women in Computing in the Upper Midwest (MinneWIC)

Complementation in Newari

March 2017

(Oral) The seventh Formal Approaches to South Asian Languages (FASAL) workshop, MIT, Boston

Entropy Reduction Prediction on Mandarin Relative Clauses

Oct 2016

(Oral) Semantics and Syntax Workshop of the American Midwest and Prairies, Northwestern University, Evanston, Illinois

	Embedding Structures in Mandarin Chinese April 2015 (Oral) Semantics Workshop of the American Midwest and Prairies (SWAMP) Spring Research Day, Center for Cognitive Sciences, University of Minnesota
Industry experience	Natural Language Understanding Specialist January - April 2021 Cerence Inc. Cantonese language Team (remote) Burlington, MA Created weighted context-free grammar and dictionaries (canonical/surface style); generate utterances for training automotive conversational AI model; train models using grid computing; validated final annotated data with by running stat coverage test, direct-correction, and regex-filters Computational Linguist Research Intern January - August 2017 United Language Group R&D Minneapolis, MN Built parallel corpora for machine translations in Chinese, Japanese, and Korean; segmented the data and evaluated the models (rule-and-NN based), using Moses, NLTK, NLPiR Language consultant 2017 Fallon Worldwide Advertising Team Minneapolis, MN Provided semantic knowledge to the design team, and created a semantic entertainment program; used Twitter API and Python and implemented a program that captures keywords in customers' tweets
Skills	Programming Python (lib:TensorFlow, PyTorch) R, Matlab, Haskell, Bash, JavaScript, Git, HTML, CSS, Linux Machine Learning Certification (verified on LinkedIn) Sequence Models / NLP in TensorFlow / TensorFlow for AI / Structuring ML project Languages Mandarin (fluent), Cantonese (advanced), Korean (phonology & morphology) Japanese (project), Nepal Bhasa (research focus), Somali (class experience)
Honors and scholarships	Summer Research scholarship (University of Minnesota) 2019 NASSLLI 2016 Travel Grant (Rutgers University) 2016 ESSLLI Travel Grant (European Association for Computer Science Logic) 2015
Volunteer Service	Computational Linguistics Reading Group Leader 2019-present International Latin Dance Club Officer 2019-present Linguistics Colloquium Student Organizer 2015-2018 Journal of Healthcare Informatics Research Review 2018

Memberships

Linguistics Society of America

Use of Computational Methods in the Study of Endangered Languages

Women in Computer Science