YUCAO

UP TO JANUARY 2020

Rutgers Department of Linguistics 18 Seminary Place New Brunswick, New Jersey 08901-1184 https://pterosdiacos.github.io/ yc825@linguistics.rutgers.edu

PROFESSIONAL SUMMARY

Linguistics PhD student in linguistics specialized in computational semantics, syntax-semantics interface, and discourse analysis. Strong critical-thinking and problem-solving skills.

Computation Experiences in algorithm design and data structure from engaging in Olympiad in Informatics since high school. The First Prize in the 13th National Olympiad in Informatics in Provinces, China.

NLP/NLU Enthusiastic about how machine learning models and formal theories inform each other. Relevant coursework: Natural Language Understanding and Computational Semantics (LING-GA 1012), Team Project Seminar: Linguistic Knowledge in Reusable Sentence Encoders (LING-GA 3340) at New York University. Graph formalisms for meaning representations at NASSLLI 2018, Carnegie Mellon University. Statistical Natural Language Processing at Coursera.

SKILLS

Statistical and neural modeling in NLP Linguistic Analysis Programming in Python, C, Pascal Teamwork

LANGUAGES

Fluent Mandarin (native), English (fluent), Japanese (working fluency; certified Level N1, Japanese Language Proficiency Test 2013), Cantonese (limited fluency).

Basic French (beginner), Hong Kong Sign Language (beginner).

PROJECTS

Ongoing Graph Representation of Meaning. Revised Abstract Meaning Representation to model scope and quantification in natural semantics. Developed a model-theoretical interpreter for graphs and a construction mechanism based on CCG and hyperedge replacement algebra.

05/2019 Investigating BERT's Knowledge of Language: Five Analysis Methods with NPIs. *Proceedings of EMNLP 2019*. Team project role: constructed and ran experiments.

O6/2018 Automated Fact-Value Distinction in Court Opinions. Open access at SSRN. Accepted at *European Journal of Law and Economics*. In collaboration with Daniel L. Chen and Elliot Ash.

• Shown in application that value segments of court opinions are more informative than fact segments of the ideological direction of the U.S. Circuit Court.

12/2017 Incremental topological sorting.

• Modified Kahn's algorithm to handle topological sorting with disjunctive precedence conditions. Experimented with different incremental updating strategies.

Work

08/2019–10/2019 Ontology Linguist on Assistant XFN Group, Facebook (via PRO Unlimited).

Model prototyping in semantic parsing and ontology reasoning.

09/2018–present Teaching Assistant/Course Instructor at Rutgers University. Course taught: Introduction

to Linguistic Theory (LING 201), Invented Languages (LING 190).

12/2014-07/2015 Research Assistant at the Center for Sign Linguistics and Deaf Studies, The Chinese Uni-

versity of Hong Kong.

Provided linguistic expertise and assisted in developing a tablet-based Chinese grammatical

knowledge assessment tool for deaf/hard of hearing children.

EDUCATION

2016–present Rutgers, The State University of New Jersey,

Doctor of Philosophy in Linguistics.

2013–2014 The Chinese University of Hong Kong,

Master of Arts in Chinese Linguistics and Language Acquisition,

On Dean's List 2013-2014,

Won the Best M.A. Thesis Award 2014 with The syntax and semantics of gapping-like ellipsis

in Chinese.

2009–2013 Sichuan Normal University, China,

Bachelor of Arts in Teaching Chinese as a Foreign Language,

Won the Distinguished Thesis Award 2013 with *The semantics of the mix-object construction*.

OTHER ACADEMIC EXPERIENCE

06/2018 North American Summer School on Logic, Language, and Information.

07/2015 LSA Linguistic Summer Institute, University of Chicago.