

Zhiliang (Leon) Xiang

PHD STUDENT · SCHOOL OF COMPUTER SCIENCE AND INFORMATICS

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Education

Cardiff University

Cardiff, Wales, United Kingdom

PHD THESIS: LOGIC-BASED AND NEURAL APPROACHES TO STRUCTURED DATA CLEANING

Jan 2023 - Present

- Supervisor: Dr Yasmín Ibáñez-García, Dr Víctor Gutiérrez-Basulto
- Advised by: Prof Meghyn Bienvenu, Dr Gianluca Cima, Prof Katsumi Inoue

Cardiff University

Cardiff, Wales, United Kingdom

M.Sc. ADVANCED COMPUTER SCIENCE WITH DISTINCTION

Oct 2020 - Oct 2022

- Dissertation: Neuro-symbolic approaches for Abstract and Relational Visual Reasoning Tasks
- Supervisor: Dr Víctor Gutiérrez-Basulto

Guangxi University of Science and Technology

Guangxi, China

B.Sc. IN INFORMATION AND COMPUTATION SCIENCE

Sept 2011 - Sept 2015

Internship/Placement

National Institute of Informatics (NII)

Tokyo, Japan

LEARNING RULES FOR ENTITY RESOLUTION

Sept. 2024 - Mar. 2025

- Supervisor: Prof Katsumi Inoue

Centre for Artificial Intelligence, Robotics and Human-Machine Systems (IROHMS)

Cardiff, United Kingdom

ENTITY RESOLUTION VIA ANSWER SET PROGRAMMING

Sept. 2021 - Dec. 2022

- Supervisor: Dr Víctor Gutiérrez-Basulto

Projects

2023-

Current

Intelligent Handling of Imperfect Data (ANR Chair in AI), with the LaBRI, Université de Bordeaux (Participant).

2021-

Current

Embedding Methods to Complex Logical Query Answering on Knowledge Graph, with Uni. of Edinburgh and Shanxi Uni. (Participant).

2021-2022

The OECD's Artificial Intelligence and the Future of Skills (AIFS), with Uni. of Leeds & VRAIN, UPV (Participant).

Grants

2023

COMSC PhD Scholarship 2023 with Oversea Student Fee Waiver (£22,700*3) + Stipend, COMSC, Cardiff University

2022

EDBT-INTENDED School on Data and Knowledge Student Grant, CNRS & University of Bordeaux

Publications

Zhiliang Xiang, Meghyn Bienvenu, Gianluca Cima, Víctor Gutiérrez-Basulto, Yasmín Ibáñez-García: **ASPEN: ASP-Based System for Collective Entity Resolution**. KR 2024

Zhiwei Hu, Víctor Gutiérrez-Basulto, **Zhiliang Xiang**, Ru Li, Jeff Z. Pan: **Multi-view Contrastive Learning for Entity Typing over Knowledge Graphs**. EMNLP 2023, 12950–12963

Zhiwei Hu, Víctor Gutiérrez-Basulto, **Zhiliang Xiang**, Ru Li, Jeff Z. Pan: **HyperFormer: Enhancing Entity and Relation Interaction for Hyper-Relational Knowledge Graph Completion**. **CIKM 2023**: abs/2308.06512

Zhiwei Hu, Víctor Gutiérrez-Basulto, **Zhiliang Xiang**, Xiaoli Li, Ru Li, Jeff Z. Pan: **Type-aware Embeddings for Multi-Hop Reasoning over Knowledge Graphs**. **IJCAI 2022**: 3078-3084

Zhiwei Hu, Víctor Gutiérrez-Basulto, **Zhiliang Xiang**, Ru Li, Jeff Z. Pan: **Transformer-based Entity Typing in Knowledge Graphs**. **EMNLP 2022**: 5988-6001

Anthony G. Cohn, José Hernández-Orallo, Julius Sechang Mboli, Yael Moros-Daval, **Zhiliang Xiang**, Lexin Zhou: **A Framework for Categorising AI Evaluation Instruments**. **EBEM@IJCAI 2022**

Presentations

Mar. 2025. **Learning Rules for Entity Resolution: A Refinement Operator-based Approach**. Presented at the 第6回杉山CRESTミーティング, Kyoto, Japan.

Dec. 2024. **ASP-based Entity Resolution: Alternative Optimality and Local Semantics**. Presented at the 3rd NII Collaborative Workshop, Takamatsu, Japan.

Nov. 2024. **ASPEN: ASP-Based System for Collective Entity Resolution**. Presented at KR 2024, Hanoi, Vietnam.

Oct. 2024. **ASPEN: ASP-Based System for Collective Entity Resolution**. Presented at the 2nd NII Collaborative Workshop, Nagoya, Japan.

Mar. 2023. **On the Implementation of LACE Framework**. Presented at the INTENDED Plenary Meeting, the LaBRI at Uni. of Bordeaux.

Autumn 2022. **Artificial Intelligence Approaches Towards Structured Data Cleaning**. Guest Tutorial, Data Science, Escuela Superior Politécnica del Litoral.

July 2022. **Type-aware Embeddings for Multi-Hop Reasoning over Knowledge Graphs**. Presentation at IJCAI-ECAI-2022, Vienna, Austria.

Teaching Experience

Autumn 2023	Knowledge Representation (MSc), Teaching Assistant	Cardiff Uni.
Autumn 2023	Principle of Machine Learning (MSc), Teaching Assistant	Cardiff Uni.

Service

ACM Transactions on Knowledge Discovery from Data 2023, Reviewer

Machine Learning Journal 2024, Reviewer

Professional Experience

2018-2020 **Web GIS Development Engineer**, Nanning Information Centre of Natural Resources

2017-2018 **BIM System Product Manager**, Shanghai Tongzhu Inc. with Tongji University