

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**. Presentation at Presentations 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**. Presentation at the 3rd NII Collaborative Workshop, Takamatsu, Japan.

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

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

Mar. 2023. **On the Implementation of LACE Framework**. 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	<i>Cardiff Uni.</i>
Autumn 2023	Principle of Machine Learning (MSc) , Teaching Assistant	<i>Cardiff Uni.</i>

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