

Zhiliang (Leon) Xiang

PHD STUDENT · SCHOOL OF COMPUTER SCIENCE AND INFORMATICS

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Education

Cardiff University

Cardiff, Wales, United Kingdom

PHD PROJECT: LOGIC-BASED SYSTEM TO COLLECTIVE ENTITY RESOLUTION

Jan 2023 - Present

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

Cardiff University

Cardiff, Wales, United Kingdom

M.Sc. ADVANCED COMPUTER SCIENCE WITH HIGH 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/Research Visit

RATIO Group, LaBRI, Université de Bordeaux

Bordeaux, France

TOPIC: (PROVISIONAL) CERTAIN/BRAVE SOLUTIONS FOR LOGIC-BASED ENTITY RESOLUTION

Mar. 2026 - June 2026

- Supervisor: Meghyn Bienvenu

Inoue Laboratory, NII

Tokyo, Japan

TOPIC: LEARNING RULES FOR ENTITY RESOLUTION

Sept. 2024 - Mar. 2025

- Supervisor: Katsumi Inoue

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

Cardiff, United Kingdom

TOPIC: ENTITY RESOLUTION VIA ANSWER SET PROGRAMMING

Sept. 2021 - Dec. 2022

- Supervisor: Víctor Gutiérrez-Basulto

Projects

2023-
Current

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

2021-2025

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

Selected Publications

Zhiliang Xiang, Meghyn Bienvenu, Gianluca Cima, Víctor Gutiérrez-Basulto, Yasmín Ibáñez-García: *Advances in Logic-Based Entity Resolution: Enhancing ASPEN with Local Merges and Optimality Criteria*. KR 2025

Meghyn Bienvenu, Gianluca Cima, Víctor Gutiérrez-Basulto, Yasmín Ibáñez-García, **Zhiliang Xiang**: *Recent Advances in Logic-Based Entity Resolution*. ACM SIGMOD Record, Database Principles Column, Vol. 54, No. 3

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

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**, Ru Li, Jeff Z. Pan: *Transformer-based Entity Typing in Knowledge Graphs*. EMNLP 2022: 5988-6001

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

Presentations

Mar. 2026. **ASP-Based System for Collective Entity Resolution**. Invited Talk, KRR Seminar at Uni. of Potsdam

Nov. 2025. **Advances in Logic-Based Entity Resolution: Enhancing ASPEN with Local Merges and Optimality Criteria**. Presented at KR 2025, Melbourne, Australia.

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 Uni., 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 Meeting, Nagoya Uni., 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

Teaching Assistant 2023, 2025 **Knowledge Representation (MSc), Contents:** *Propositional/First-order/Description Logic, Nonmonotonic Reasoning, Belief Revision.* *Cardiff Uni.*

Teaching Assistant 2023 **Principle of Machine Learning (MSc), Contents:** *PAC Learning Theory, Machine Learning Algorithms.* *Cardiff Uni.*

Service

KR2026 Learning and Explanation Track, Reviewer

Joint Workshop on XLoKR & ExCoS (Co-located with FLOC2026), PC Member

Machine Learning Journal (MLJ) 2024, Reviewer

ACM Transactions on Knowledge Discovery from Data 2023, Reviewer