

Zhiliang (Leon) Xiang

PHD STUDENT · SCHOOL OF COMPUTER SCIENCE AND INFORMATICS

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Education

Cardiff University

PHD PROJECT: LOGIC-BASED SYSTEM TO COLLECTIVE ENTITY RESOLUTION

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

Cardiff, Wales, United Kingdom

Jan 2023 - Present

Cardiff University

M.Sc. ADVANCED COMPUTER SCIENCE WITH DISTINCTION

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

Cardiff, Wales, United Kingdom

Oct 2020 - Oct 2022

Guangxi University of Science and Technology

B.Sc. IN INFORMATION AND COMPUTATION SCIENCE

Guangxi, China

Sept 2011 - Sept 2015

Internship/Research Visit

RATIO Group, LaBRI, Université de Bordeaux

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

- Supervisor: Meghyn Bienvenu

Bordeaux, France

Mar. 2026 - June 2026

Inoue Laboratory, NII

TOPIC: LEARNING RULES FOR ENTITY RESOLUTION

- Supervisor: Katsumi Inoue

Tokyo, Japan

Sept. 2024 - Mar. 2025

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

TOPIC: ENTITY RESOLUTION VIA ANSWER SET PROGRAMMING

- Supervisor: Víctor Gutiérrez-Basulto

Cardiff, United Kingdom

Sept. 2021 - Dec. 2022

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, Yazmín 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, Yazmín 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**, Xiaoli Li, Ru Li, Jeff Z. Pan: *Type-aware Embeddings for Multi-Hop Reasoning over Knowledge Graphs*. IJCAI 2022: 3078-3084

Presentations

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, 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, 2025	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

2015-2017 **Web Service Engineer**, ePaylinks Co., Ltd.