Chao Zhang

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EXPERIENCE

- **Claude Bernard University Lyon 1, LIRIS** — Villeurbanne, France
  Postdoctoral researcher, conducting research in the area of graph query processing. — *Jan. 2021 - PRESENT*
  - **RLC Index**: RLC Index is a reachability index for processing graph queries with a concatenation of edge labels under the Kleene operator.

- **CNRS** — Aubière, France
  Researcher, conducting research in the area of stream processing. — *Feb. 2020 - Dec.2020*
  - **PBA**: PBA is a parallel algorithm to compute sliding window aggregations over a data stream.

EDUCATION

- **University of Clermont Auvergne** — Clermont Ferrand, France
  Ph.D., Computer Science — *Nov. 2015 – Nov. 2019*

- **Harbin Institute of Technology & L'ISIMA** — Harbin, China & Clermont Ferrand, France
  M.Sc., Software Engineering — *Sept. 2013 – Sept. 2015*

- **Shenyang University of Technology** — Shenyang, China
  B.Sc., Telecommunication Engineering — *Sept. 2009 – July. 2013*

RESEARCH AREAS

Graph Query Processing; Stream Processing; Query Rewriting.

PUBLICATIONS

- **Chao Zhang**, Reza Akbarinia and Farouk Toumani. Efficient Incremental Computation of Aggregations over Sliding Windows. In *Proceedings of the 27th ACM SIGKDD Conference on Knowledge Discovery & Data Mining*, pages 2136-2144, 2021.

- **Chao Zhang**, Farouk Toumani and Bastien Doreau. SUDAF: Sharing User-Defined Aggregate Functions. In *IEEE 36th International Conference on Data Engineering (ICDE)*, pages 1750-1753, 2020.

- **Chao Zhang** and Farouk Toumani. Sharing Computations for User-Defined Aggregate Functions. In *Proceedings of the 23rd International Conference on Extending Database Technology (EDBT)*, pages 241-252, 2020.

- **Chao Zhang**. Symmetric and Asymmetric Aggregate Functions in Massively Parallel Computing. In *PhD@VLDB*, 2017.

TECHNICAL REPORTS

- **Chao Zhang**, Angela Bonifati, Hugo Kapp, Vlad Ioan Haprian, and Jean-Pierre Lozi. A Reachability Index for Recursive Label-Concatenated Graph Queries. *Under review, 2022.*

- **Chao Zhang**, Reza Akbarinia and Farouk Toumani. Incremental Boundary Aggregators over Siding Windows. *Under review, 2022.*

- **Chao Zhang** and Farouk Toumani. Sharing Queries with Nonequivalent User-Defined Aggregate Functions. *Under submission, 2022.*

Research activities

- Conference: PVLDB 2023 Program Committee; SIGMOD 2022 Program Committee; BDA 2021 Demo Program Committee.

- Journal: I have reviewed papers for ACM TODS and VLDB Journal.

Teaching

- Instructor: Semantic Web at the University of Clermont Auvergne (labs, 14 hours, Fall 2021).

- Instructor: Big Data Processing at the University of Clermont Auvergne (lectures, 16 hours, Spring 2022).

Awards

- Prix du meilleur article BDA 2021.

- Prix de thèse (runner-up) BDA 2020.

- Full scholarship in the 1st BigSkyEarth training school in DLR, Germany, April 4th-9th, 2016.

Skills

- Programming Languages: SQL, Java/Scala, C, Python.

- Systems: Oracle PGX, Apache Spark, Apache Flink, PostgreSQL.

- Languages: English (proficient), French (intermediate), Chinese (mother tongue).