MAXIMILIAN-JOËL SCHLEICH

EMPLOYMENT

University of Washington   **Seattle, WA, United States**
Postdoctoral Scholar, starting Feb. 2020
- Under supervision of Prof. Dan Suciu, generously funded for one year by relationalAI.

relationalAI   **Berkeley, CA, United States**
Research Intern, Analytics, Jun. - Sep. 2018
- Collaborated with two relationalAI scientists and several researchers from the faculty network to design and implement the integrated database and analytics engine that is built to support relational machine learning.
- Investigated and designed possible use cases to evaluate and benchmark the engine.

Global eProcure Limited (GEP)   **London, United Kingdom**
Associate Consultant, Feb. - Aug. 2014
- Full-time management consultant in the procurement industry.
- Carried out extensive collection and analysis of client spend data to identify saving opportunities. Achieved savings through eSourcing processes and competitive tenders.
- Conducted market research for reports and client presentations.

EDUCATION

University of Oxford   **Oxford, United Kingdom**
DPhil (PhD) candidate in Computer Science, Oct. 2015 - Jan. 2020 (thesis submitted Oct. 2019)
- Under supervision of Prof. Dan Olteanu.
- Thesis: Structure-Aware Machine Learning over Multi-Relational Databases

University of Oxford   **Oxford, United Kingdom**
Master of Science (Distinction) in Computer Science, Oct. 2014 – Sept. 2015.
- Master Thesis: Learning Regression Models over Factorized Joins (Distinction, Grade: 94%)
- Average for Courses: 84%, Requirement for Distinction: 70%

The American University of Paris   **Paris, France**
Bachelor of Arts (Honors) in International Economics and Bachelor of Science (Honors) in Computational Mathematics, Jan. 2011 – Dec. 2013, summa cum laude (GPA: 3.9/4)
- Final Thesis: Population Decline and Family Policy in the OECD: A Panel Data Analysis with Application to Germany

PUBLICATIONS

(For theory papers, the list of authors is in alphabetical order.)

Rk-means: Fast Clustering for Relational Data.

Ryan Curtin, Ben Moseley, Hung Q. Ngo, XuanLong Nguyen, Dan Olteanu, Maximilian Schleich.

To appear in Artificial Intelligence and Statistics (AISTATS), Palermo, Italy, June, 2020.

arXiv report 1910.04939, October 2019.

Multi-Layer Optimizations for End-to-End Data Analytics.

Amir Shaikhha, Maximilian Schleich, Alexandru Ghita, and Dan Olteanu.

To appear in Code Generation and Optimization (CGO), Feb 2020.

In-Database Learning with Sparse Tensors.

Mahmoud Abo Khamis, Hung Ngo, XuanLong Nguyen, Dan Olteanu, and Maximilian Schleich.

To appear in ACM Transactions on Database Systems (TODS), 2020 (accepted Dec 2019).

arXiv report 1703.04780.

Learning Models over Relational Data: A Brief Tutorial.

Maximilian Schleich, Dan Olteanu, Mahmoud Abo-Khamis, Hung Q. Ngo, and XuanLong Nguyen.

To appear in Scalable Uncertainty Management (SUM), December 2019.

A Layered Aggregate Engine for Analytics Workloads.

Maximilian Schleich, Dan Olteanu, Mahmoud Abo Khamis, Hung Ngo, and XuanLong Nguyen.
ACM SIGMOD, 2019.

On Functional Aggregate Queries with Additive Inequalities.

Mahmoud Abo Khamis, Ryan Curtin, Ben Moseley, Hung Ngo, XuanLong Nguyen, Dan Olteanu, and Maximilian Schleich. ACM PODS, 2019. (Best of PODS 2019, Invited to ACM TODS).

AC/DC: In-Database Learning Thunderstruck.

Mahmoud Abo Khamis, Hung Ngo, XuanLong Nguyen, Dan Olteanu, and Maximilian Schleich.
ACM SIGMOD DEEM Workshop, 2018.

In-Database Learning with Sparse Tensors.

Mahmoud Abo Khamis, Hung Ngo, XuanLong Nguyen, Dan Olteanu, and Maximilian Schleich.
ACM PODS, 2018. (Best of PODS 2018). Extended version: arXiv report 1703.04780.

In-Database Factorized Learning.

Hung Ngo, XuanLong Nguyen, Dan Olteanu, and Maximilian Schleich. Alberto Mendelzon Workshop 2017.

Factorized Databases.

Dan Olteanu and Maximilian Schleich. SIGMOD Record (Database Principles Column), 45(2), 2016

F: Regression Models over Factorized Views.
Dan Olteanu and Maximilian Schleich. VLDB Demo Track 9(13), 2016.

Learning Linear Regression Models over Factorized Joins.
Maximilian Schleich, Dan Olteanu, and Radu Ciucanu. ACM SIGMOD, 2016.

INVITED TALKS

Learning Models over Relational Data - A Brief Tutorial: Invited Tutorial at SUM, France, (December 2019)

A Layered Aggregate Engine for Analytics Workloads: Presented at the UW Affiliates Workshop 2019, University of Washington (July 2019)

Experiences with Implementing In-Database Machine Learning: Presented at relationalAI Iceland Conference (July 2018)

In-Database Factorized Learning: Presented at Machine Learning Seminar, TU Darmstadt (November 2018)

Learning Linear Regression Models over Factorized Joins: Presented at the Information Systems Seminar, Oxford University (December 2015), and VCLA, TU Vienna (April 2016)

PROFESSIONAL SERVICE

- VLDB, Program Committee, 2019/2020
- IEEE TKDE, Invited Reviewer, 2019
- ACM SIGMOD, External Reviewer, 2018
- ACM TKDD, Invited Reviewer, 2017

AWARDS AND HONORS

- Invited to ACM TODS special issue of best papers at PODS 2019.
- Invited to ACM TODS special issue of best papers at PODS 2018.
- Recipient: ACM SIGMOD DEEM 2018 Student Travel Awards to attend SIGMOD and the DEEM workshop in Houston, June 2018
- Recipient: ACM SIGMOD travel grant to attend SIGMOD in San Francisco, June 2016
- Winner: **The Hoare Prize for the best MSc Project in Computer Science** at Oxford 2015
- Honorable Mention: **International Student Awards for Outstanding Master Thesis** from the Vienna Centre of Logic and Algorithms (VCLA), March 2016
- Winner: Outstanding Performance and Outstanding Service Awards in the Economics Department at AUP

TEACHING EXPERIENCE

University of Oxford:
Class Tutor for Database System Implementation, Spring 2016, Spring 2017, and Spring 2018.
- Teaching and Marking ca. 30 students for weekly homework exercises.

Tutorial Demonstrator for Computer Security, Fall 2015.
- Assisting 30+ students with their cryptography lab exercises.

The American University of Paris:
Teaching Assistant for Microeconomics, Macroeconomics, Econometrics, Calculus, and Statistics, Sept. 2011 - Dec. 2013.