Alexander van Renen

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WORK EXPERIENCE

10/2015 – present

PhD Candidate at TUM
supervisor: Alfons Kemper
adviser: Viktor Leis, Thomas Neumann
in: Munich, Germany
As a member of Prof. Kemper's and Prof. Neumann's group, my field of research are database systems. I am focussing on the architectural implications of persistent memory (PMem) on today's database systems. However, my interests span almost all parts of high-performance systems software.

7/2018 – 10/2018

Research Intern at MSR
in: Redmond, WA, USA
supervisor: Arvind Arasu
My second internship with Microsoft. I worked on generic verification methods for concurrency protocols.

7/2017 – 10/2017

Research Intern at MSR
in: Redmond, WA, USA
supervisor: Donald Kossmann
My first internship with Microsoft. I worked on techniques for verifying transaction processing in database system.

5/2014 – 10/2014

Research Intern at Oracle Labs
in: Redwood City, CA, USA
supervisor: Hagen Peters
During my second internship, I worked on RAPID. My work was focused on highly parallel algorithms for large-scale distributed data analysis.

9/2013 – 12/2013

Research Intern at Oracle Labs
in: Redwood City, CA, USA
supervisor: Gregory Bollella
During my first internship at Oracle, I worked on the KEYBRIDGE project. My work included the design and implementation of a logging solution for a high throughput scenario.

4/2011 – 4/2013

Research Assistant
at: Technical University of Munich
in: Munich, Germany
supervisor: Henrik Mühe
Two years of database research next to my studies. I worked with HYPER and gathered experience on efficient algorithms and data structures.

PUBLICATIONS

2021 VLDB	**Benchmarking Learned Indexes** Ryan Marcus, Andreas Kipf, Alexander van Renen, Mihail Stoian Sanchit Misra, Alfons Kemper, Thomas Neumann, Tim Kraska
2020 VLDBJ	**Building Blocks for Persistent Memory** Alexander van Renen, Lukas Vogel, Viktor Leis Thomas Neumann, Alfons Kemper
2020 DASFAA	**An Evaluation of Modern Spatial Libraries** Varun Pandey, Alexander van Renen, Andreas Kipf, Alfons Kemper note: **Invited to Special Issue of DASFAA 2020**
2020 ICDE	**Low-Latency Communication for Fast DBMS Using RDMA and Shared Memory** Philipp Fent, Alexander van Renen, Andreas Kipf, Viktor Leis Alfons Kemper, Thomas Neumann
2019 ML4S	**SOSD: A Benchmark for Learned Indexes** Andreas Kipf*, Ryan Marcus*, Alexander van Renen*, Mihail Stoian, Alfons Kemper, Tim Kraska, Thomas Neumann in: NeurIPS Workshop: ML for Systems 2019 note: *equally contributed
2019 DaMoN	**Persistent Memory I/O Primitives** Alexander van Renen, Lukas Vogel, Viktor Leis, Thomas Neumann, Alfons Kemper note: **Invited to Best of DaMoN Journal in VLDB 2020**
2019 CIDR	**Veritas: Shared Verifiable Databases and Tables in the Cloud** Lindsey Allen, Panagiotis Antonopoulos, Arvind Arasu, Johannes Gehrke, Joachim Hammer, James Hunter, Raghav Kaushik, Donald Kossmann, Jonathan Lee, Ravi Ramamurthy, Srinath Setty, Jakub Szymaszek, Alexander van Renen, Ramarathnam Venkatesan
2018 DBSPEK	**Data Management on Non-Volatile Memory: A Perspective** Philipp Götze*, Alexander van Renen*, Lucas Lersch*, Viktor Leis, Ismail Oukid in: Datenbank-Spektrum November 2018, Volume 18, Issue 3 note: *equally contributed
2018 SIGMOD	**Managing Non-Volatile Memory in Database Systems** Alexander van Renen, Viktor Leis, Alfons Kemper, Thomas Neumann, Takushi Hashida, Kazuichi Oe, Yoshiyasu Doi, Lilian Harada, Sato Mitsuru

Education

10/2012 – 10/2015	**Master of Science with Honours** in: Software Engineering at: University of Augsburg & Technical University of Munich & Ludwig Maximilian University of Munich thesis: Specification-based and Concolic Testing for Games
10/2009 – 10/2013	**Bachelor of Science** in: Computer Science at: Technical University of Munich thesis: Distributed Join Processing on Modern Hardware

Teaching

Any	**Thesis Advisor** for: Web Databases at: Technical University Munich I advised seven theses on various topics in database systems.
Winter 2017/18	**Lecturer** for: Database systems for Non-Computer Scientists at: Technical University Munich I taught an introductory lecture on database systems for around 60 students.
Winter 2017/18	**Course Co-Leader** for: Web Databases at: Technical University Munich A course of roughly 15 of the elite software engineering's program about traditional three tiered web server architectures.
Summer 16/17/20	**Teaching Assistant** for: Introduction to Computer Science II for Engineers at: Technical University Munich A lecture teaching Java, UML and database systems with about 150 students.

Languages

German:	Native tongue
English:	Fluent
Latin:	Bene non est

Munich, May 23, 2021   Alexander van Renen