

# Dr. Matthias Rost

LEADER · MANAGER · SOFTWARE ENGINEER



[in matthias-rost](#) [M MatthiasRost](#) [matthias-rost.de](#) [scholar](#)

## Qualifications Summary

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I am a fast-growing software engineering leader. Before I was an award-winning researcher.

- 5+ years of successfully managing teams, across continents and in a fast paced startup environment.
- 15+ years of software development experience (Golang, Python, Java, C/C++, SQL)
- 10+ years of cloud optimization research experience with 20+ peer-reviewed publications

## Professional Experience

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**Managing Director** OBSERVE SWITZERLAND *05/2025 - present*  
Managing the 20 FTE R&D center in Zurich: mentoring, marketing, networking, and ensuring smooth operations.

**Engineering Manager Runtime** OBSERVE SWITZERLAND *03/2025 - present*  
We own the ETL processing pipeline (>5 PB/day) and user query execution. My team is continuing to refactor core services to drive reliability and delivers novel features such as query caching to reduce costs and latency.

**Tech Lead Manager Streaming Platform** OBSERVE, INC. *08/2024 - 03/2025*  
My team owned the ETL execution and the scheduling on Snowflake. I drove significant improvements in cost savings, refactorings of core services to increase reliability, and deliver product features.

**Tech Lead Manager Resource Optimization** OBSERVE, INC. *12/2023 - 07/2024*  
I managed a team of 3 and personally contributed to several key projects. We drove the company's margin up by 30% in one year, reduced our query tail latency vastly, and launched product features such as our new pricing model.

**Staff / Principal Software Engineer** OBSERVE, INC. *09/2021 - 11/2023*

- Rewrote scheduling service to reduce Snowflake costs (up to 50%) and tail queueing latency (up to 100x).
- Architected and delivered a complex cost control feature for background transformation costs within 6 months. This feature encompasses online usage predictions, novel graph algorithms, and a custom control logic.

**Senior Cloud Optimization Developer** GLOBAL CLOUD SERVICES, SAP SE *01/2020 - 08/2021*

- As founding member of the Innovation Office I researched scalable cloud optimization algorithms to reduce TCO.
- Within 9 months, I developed an end-to-end prototype comprising data gathering and cleaning, optimization, and result analysis. Given my results, SAP's board accepted our business case and staffed the team with 30 FTEs.

**Postdoctoral Researcher** TECHNISCHE UNIVERSITÄT BERLIN (FG IMA) *04/2019 - 01/2020*  
Supervised student working on online strategies for wide-area analytics by replicating data to minimize traffic.

**Research and Teaching Assistant** TECHNISCHE UNIVERSITÄT BERLIN (FG INET) *01/2014 - 03/2019*  
Successful completion of 10+ research projects with 20+ publications on various cloud resource problems.

**Student Research Assistant** TECHNISCHE UNIVERSITÄT BERLIN (FG INET) *11/2011 - 12/2013*  
Design and analysis of algorithms for multicast and aggregation trees and the offline scheduling of networks.

**Student Tutor / Teaching Assignments** FREIE UNIVERSITÄT BERLIN *04/2009 - 09/2010*  
Computer Architecture ('09, '10, '11), OSes and Computer Networks ('09), and Non-sequential Programming ('10).

**Student Software Developer** IVU TRAFFIC TECHNOLOGIES AG, BERLIN *08/2007 - 02/2009*  
Implemented features for IVU.fleet.data using C/C++ and PL/SQL for the management of core data.

## Education

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<b>Ph.D. in Computer Science (Dr. rer. nat.)</b>	TECHNISCHE UNIVERSITÄT BERLIN	01/2014 - 03/2019
Thesis:	Virtual Network Embeddings: Theoretical Foundations and Provably Good Algorithms <a href="#">↗</a>	
Committee:	Rolf Niedermeier · Thomas Zinner · Stefan Schmid · Anja Feldmann · Harald Räcke	
Defense:	March 25, 2019	
Grade:	SUMMA CUM LAUDE (WITH DISTINCTION)	
<b>Master of Science in Computer Science</b>	TECHNISCHE UNIVERSITÄT BERLIN	04/2011 - 01/2014
Thesis:	Optimal Virtualized In-Network Processing with Applications to Aggregation and Multicast <a href="#">↗</a>	
Advisors:	Anja Feldmann · Andreas Bley · Stefan Schmid	
Final mark:	1.3 (VERY GOOD)	
<b>Study of Mathematics (undergraduate level)</b>	FREIE UNIVERSITÄT BERLIN	10/2010 - 09/2013
<b>Study of Computer Science (graduate level)</b>	FREIE UNIVERSITÄT BERLIN	10/2009 - 09/2010
<b>Bachelor of Science in Computer Science</b>	FREIE UNIVERSITÄT BERLIN	10/2006 - 09/2009
Thesis:	Modeling and Solving Evacuation Problems using Network Flows (translated)	
Advisors:	Günther Rote · Martin Skutella	
Final mark:	1.2 (VERY GOOD)	

## Awards and Grants

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<b>2x Quarterly Values Award</b>	OBSERVE, INC.	Q4/2022, Q3/2024
<b>Best PhD Thesis Prize</b>	COMMUNICATION AND DISTRIBUTED SYSTEMS GROUP (KuVS)	05/2020
<b>Best Paper Award</b>	IFIP NETWORKING CONFERENCE 2018	05/2018
<b>Hackathon Winner</b>	GTM <sup>3</sup> HACKATHON @ OPERATIONS RESEARCH 2017	09/2017
<b>Software Campus Grant</b>	GERMAN FEDERAL MINISTRY OF EDUCATION AND RESEARCH	03/2016
<b>Best Master Thesis Prize</b>	COMMUNICATION AND DISTRIBUTED SYSTEMS GROUP (KuVS)	03/2015
<b>Scholarship</b>	GERMAN ACADEMIC SCHOLARSHIP FOUNDATION	10/2009 - 3/2013

## Management Trainings by the Software Campus

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<b>Conflicts in Leadership Positions</b>	DEUTSCHE POST AG	11/2016
<b>Moderation for Professionals: Mastering Complex and Tough Situations</b>	DATEV eG	11/2016
<b>New as Executive - Basics for Tomorrow's Executive</b>	HOLTZBRINCK PUBLISHING	09/2016
<b>Projectmanagement Basics using the PMI-Standard</b>	SCHEER HOLDING	04/2016
<b>Intercultural Awareness</b>	SAP SE	04/2016
<b>Business meets Technology: Business Understanding for Engineers and Non-Economists</b>	SIEMENS AG	03/2016

## Extracurricular Activities

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<b>Amnesty International Deutschland e.V.</b>	10/2007 - present
I was particularly active from 2007 to 2011 and mainly volunteered at Freie Universität Berlin's group and was the group's spokesperson, led the organization of lecture series and of the first Jugend@Amnesty event in Germany.	
<b>German Academic Scholarship Foundation</b>	10/2009 - 03/2013
I participated in excursions and a two-week course on field-programmable integrated circuits (FPGAs).	