# Michail Georgoulakis Misegiannis

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## Summary

Ph.D. student in Computer Science at the Technical University of Munich, advised by Prof. Jana Giceva. My research focuses on designing cost-efficient cloud-based systems, with particular emphasis on caching, scheduling, and serverless computing.

## Education

**Technical University of Munich, Munich, Germany** Oct 2022 – Present

*Ph.D. in Computer Science*

- Chair of Database Systems, Department of Informatics
- Supervisor: Prof. Jana Giceva

**National Technical University of Athens, Athens, Greece** Sep 2016 – Nov 2021

*Master in Engineering (M. Eng), Electrical and Computer Engineering*

- Orientation: Computer Science
- Grade: 8.14/10
- Thesis: *Multi-objective Query Optimization for Massively Parallel Processing in Cloud Computing*
- Thesis Grade: 10/10

## Publications

- **Making Unified Virtual Memory Practical for Oversubscribed GPUs**. Senad-Leandro Lemes Galera*, Michail Georgoulakis Misegiannis*, Ferdinand Gruber, Jana Giceva, Dimitrios Stavrakakis. *arXiv preprint 2610.13408*, 2026 (*equal contribution)
- **Rethinking Database Architectures for Memory-Centric Computing**. Michail Georgoulakis Misegiannis, Abdelrahman Adel, Mateusz Gienieczko, Jana Giceva. *Datenbank-Spektrum*, 2026
- **Cloud Analytics Benchmarking: Where We Are, What Is Missing, and Where We Should Go**. Michail Georgoulakis Misegiannis, Till Steinert, Viktor Leis, Muhammad El-Hindi. *DBTest Workshop @ SIGMOD*, 2026
- **CloudGlide: Deconstructing the Landscape of Cloud-Based Analytics**. Michail Georgoulakis Misegiannis, Daniel Ritter, Viktor Leis, Jana Giceva. *PVLDB*, 18(13): 5638–5651,2025
- **Demonstrating CloudGlide: Interactive Exploration of Cloud Analytics Architectures**. Michail Georgoulakis Misegiannis, Daniel Ritter, Jana Giceva. *SIGMOD Demonstration Track*, 2026
- **Towards Next-Generation Resource Optimization in the Cloud**. Michail Georgoulakis Misegiannis. *EuroSys Doctoral Workshop*, 2023
- **Multi-objective Query Optimization in Spark SQL**. Michail Georgoulakis Misegiannis, Verena Kantere, Laurent d'Orazio. *IDEAS*, 2022
- **From Cloud to Serverless: MOO in the New Cloud Epoch**. Michail Georgoulakis Misegiannis, Verena Kantere, Laurent d'Orazio. *EDBT Tutorial Track*, 2022

## Professional Experience

**Firebolt Analytics** Jul 2024 – Oct 2024

*Software Developer*

- Worked on database system components and query execution infrastructure for cloud analytics workloads.
- Implemented and optimized scheduling mechanisms for distributed query processing.

**Qubit Systems, Athens, Greece** Feb 2022 – Jul 2022

*Software Engineer*

- Backend web development and analytics tasks.

## Academic Service

- **Shadow PC Member**, VLDB 2027

## Teaching Experience

**Teaching Assistant** 2022 – Present

*Technical University of Munich*

- **Seminar: Next-Generation Data Systems** — Winter 2026/2027 (co-organizer)
- **Practical Course: Cloud-Based Data Processing** — Summer 2026 (lead organizer)
- **Advanced Algorithms in Competitive Programming** — Winter 2025/2026
- **Data Processing on Modern Hardware** — Summer 2023, 2024, 2025
- **Cloud-Based Data Processing** — Winter 2022/2023, 2023/2024, 2024/2025
- **Seminar – Modern Database Systems** — Summer 2023

**Lectures Delivered**

*Technical University of Munich*

- **Cloud-Based Data Processing**: Data Centers (2023), Cloud-Based OLAP Systems (2025)
- **Foundations of Data Engineering**: Distributed Query Processing (2025)

## Student Supervision

- **World Wide Wait: Exploring the Design Space of Geo-Distributed OLTP Database Systems** (Master Thesis, ongoing)
- **A Hardware-Based Prefetcher for Stabilizing GPU Unified Memory Performance under Oversubscription** (Master Thesis, ongoing)
- **Shared Caching for Cloud OLAP Systems: When Is It Worth It?** (Bachelor Thesis, ongoing)
- **Cost-Performance Optimization in Serverless Query Engines** (Guided Research, 2026)
- **Stabilizing Discrete GPU Unified Memory Performance under Oversubscription** (Guided Research, 2026)
- **Designing an Interactive Visualization Tool for Cloud-Based Analytics Simulations** (Bachelor Thesis, 2026)
- **Kernel-Based Hypervisor for Lightweight VMs** (Bachelor Thesis, 2026)
- **Designing a Unified In-Memory Caching Layer for Cloud OLAP Workloads** (Master Thesis, 2025)
- **Workload-Driven Optimization of Autoscaling Systems Using Heterogeneous Nodes** (Master Thesis, 2024)
- **Syslog Collection and Analysis of Network Devices in Microsoft Azure** (Master Thesis, 2024)
- **Quantifying the Noisy Neighbor Problem in the Cloud** (Guided Research, 2023)
- **A GUIde for Tuning and Troubleshooting Parallel Query Processing** (Bachelor Thesis, 2023)

## Language Skills

**Greek**: Native
**English**: Full professional proficiency (C2 Certificate and IELTS 8.0/9.0)
**French**: Professional working proficiency (C1 Certificate)
**German**: Professional working proficiency (B2)

## Technical Skills

**Programming Languages**: C/C++, Python, Java, Scala
**Databases**: DuckDB, PostgreSQL, MySQL, ClickHouse
**Data Processing Frameworks**: Firebolt, Apache Spark, Hadoop, Hive
**Cloud Platforms**: AWS, Microsoft Azure, Google Cloud
**Systems & Infrastructure**: Docker, Kubernetes, minio
**Tools**: Git, LaTeX