Diego Gomes Tomé

Ph.D. candidate at Centrum Wiskunde Informatica (CWI) - Amsterdam NL

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EDUCATION

- 2018 - 2022 **Ph.D. in Database Architectures -** Centrum Wiskunde Informatica- CWI NL
- Supervisor: Peter Boncz Co-supervisor: Stefan Manegold.
- 2016 - 2017 **M.Sc. in Computer Science -** Federal University of Paraná - UFPR Brazil
- Supervisor: Eduardo C. de Almeida Co-supervisor: Marco A. Z. Alves
- 2010 - 2015 **B.Sc. in Computer Science** State University of Ceará – UECE Brazil
  Supervisor: Paulo H. M. Maia

PROFESSIONAL EMPLOYMENT

- 2015 - 2016 **Software Engineer,** HSBC Bank - Brazil - **JAVA - Sybase / SQL Server**
- 2014 - 2015 **Software Engineer,** CPQi IT Offshore - Brazil - **JAVA / SQL Server**

RESEARCH INTERESTS

- Analytical Database Systems
- Data Compression
- Hardware-conscious Database Technology
- Emergent Hardware Technology

TECHNICAL/RESEARCH PROJECTS

- **White-box Compression - C++ -** Compression model that represents logical columns as composite functions of physical columns learned automatically from the data.
- **Fluid Co-processing: GPU Bloom-filters for CPU Joins - C++ / CUDA** - Accelerating large selective join pipelines, by pushing down a Bloom filter test for early pruning on GPU.
- **DuckDB an Embeddable Analytical Database - C++ -** Implementation of SQL Statements (Parser, Planner, Execution), design for storage engine, and compression.
- **TPC-H Query 01 Optimized for GPU Execution - C++ / CUDA** - In-depth study of the grouping and aggregation operators co-processed with CPU and GPU.

MAIN PUBLICATIONS

- **Diego Tomé**, Peter Boncz. *Redesigning Query Engines for White-box Compression.* **Ph.D. Workshop VLDB 2020**.
- Bogdan Ghiță, **Diego Tomé**, Peter Boncz. *White-box Compression: Learning And Exploiting Compact Table Representations.* **CIDR 2020**.
- Tim Gubner, **Diego Tomé**, Harald Lang, Peter Boncz. *Fluid Co-Processing: GPU Bloom-Filters For CPU Joins.* **DaMoN@SIGMOD 2019**.
- **Diego Tomé**, Tim Gubner, Mark Raasveldt, Eyal Rozenberg, Peter Boncz. *Optimizing Group-By And Aggregation Using GPU-CPU Co-Processing.* **ADMS@VLDB 2018**.