



## Goetz Graefe

HP Fellow

HP Labs

Hewlett-Packard Company

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Goetz Graefe leads an HP Labs research group focused on transactional indexing and file storage. His group is helping build the operating system that will run on new hardware being developed by HP Labs that is characterized by non-volatile memory and optical interconnects. Graefe's expertise covers compile-time query optimization, including extensible query optimization, run-time query execution, including parallel query execution, indexing, and transactions. He has also worked on techniques for software implementations of transactional memory.

Before joining Hewlett-Packard Laboratories, Graefe spent 12 years as a software architect in product development at Microsoft, mostly in database management. Both the query optimization and query execution of Microsoft's re-implementation of SQL Server are based on his designs.

Prior to Microsoft, Graefe taught and researched database implementation techniques in academic settings, where he supervised multiple Ph.D. candidates who later contributed to several products and companies in senior roles.

Graefe is the author of numerous papers and surveys published by ACM Computing Surveys and ACM Transactions on Database Systems. His publications cover query optimization, query execution, and indexing, the latter with particular focus on novel techniques for the ubiquitous data structure called B-trees. Graefe received the ACM SIGMOD 2000 "test of time" award for work on parallel query execution, the IEEE ICDE 2005 "influential paper" award for work on extensible query execution, and the 2009 ACM "software systems" award for participation in the Gamma database machine research project. He has authored and co-authored numerous patent applications.

After pursuing undergraduate studies in business and computer science at multiple German universities, Graefe received his M.S. and Ph.D. in computer science from the University of Wisconsin – Madison.