Ronny Brendel

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Work Experience

2017–today **Oak Ridge National Laboratory**
Research Associate

Research in advanced software performance analysis to enable leadership-class applications on Titan, the most powerful open-science supercomputer in the western world, and its successor Summit (POWER9+NVIDIA Volta)

2015–2016 **TU Dresden**, Center for Information Services and High Performance Computing
Research Associate

Advancing software performance analysis for highly parallel applications. Goals:

- Replacing post-mortem analysis with online analysis
- Furthering comparative analysis

Author of the publications *Structural Clustering: A New Approach to Support Performance Analysis at Scale* and *Edge Bundling for Visualizing Communication Behavior*

2012–2013 **TU Dresden**, Chair for Algebraic and Logical Foundations of Computer Science
Student Assistant

Instructor for two exercises: *Theoretische Informatik und Logik*, and *Advanced Logic*

Development of novel synchronization algorithms

2007–2012 **TU Dresden**, Center for Information Services and High Performance Computing
Computer Scientist

Development of an architecture for analysing highly parallel programs – *Vampir* – vampir.eu

Assistance in organizing and coordinating the development process

Contributions to *Open Trace Format*, *VampirTrace*, and multiple small projects

Co-author of the publications *Introducing the Open Trace Format (OTF)*, *Memory Allocation Tracing with VampirTrace*, and *Trace File Comparison with a Hierarchical Sequence Alignment Algorithm*

Education

2015 Diplom-Informatiker (equivalent to Master's degree in Computer Science), TU Dresden

- Minor subject: Discrete Mathematics, Algebra & Geometry

2013 Semester abroad, Vienna UT

2007 Computer Scientist Specialized in Application Development (formal training), TU Dresden

2004 Abitur (equivalent to A-level), Franziskaneum grammar school, Meißen

Technical Skills

Languages:	C, C++, C++11/14, Bash, Go, Python, Java, Haskell, Lisp, and many more
Libraries:	Qt, STL, OpenMP, Message Passing Interface, Django
Tools:	Vim, Git, numerous ∗nix tools, Valgrind, LaTeX, TikZ, Visual Studio
Topics:	High Performance Computing, Formal Methods, Algorithms, API-, UI design

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Interests & Activities

C++11/14, discrete mathematics, software performance analysis, becoming a better developer

Personal programming projects: github.com/hydroo

I solved 150 mathematical programming problems: projecteuler.net/profile/hydro.png

Recreation: running, reading, gaming, IT- and business news

Languages

German (native), English (fluent)