

Mario **Preishuber** master student

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Interests

- Research** Concurrent data structures, distributed systems, in-memory databases, memory analysis, performance analysis
- Personal** Beach volley ball, traveling, motor sports

Education

- Jan 2016 **Visiting student** *Ecole Polytechnique Federale de Lausanne (EPFL)*, Switzerland
Aug 2015 School of Computer and Communication Sciences
Major: Computer Science
- Since **Master's program in Computer Science** *University of Salzburg*, Austria
Oct 2014 Department of Computer Science
Expected graduation: Feb 2017
- Sep 2014 **B.Eng.** *University of Salzburg*, Austria
Oct 2011 Department of Computer Science
- Jun 2009 *HTL (technical high school)*, Braunau am Inn, Austria
Sep 2004 Major: Design and communication technologies

Employment

- Sep 2012 **SIGMATEK GmbH & Co KG** Austria
Aug 2012 *Summer Intern*
I developed a Wireshark plugin for the Nested Varan Frames protocol. I extended an existing NSIS installer. Used programming languages were C and C++.
- Sep 2011 **DVT-Daten-Verarbeitung-Tirol GmbH** Austria
May 2010 *Software Engineer*
I designed and implemented web applications based on a J2EE architecture and the Apache Struts 2.0 framework.
- Aug 2008 **ppedv AG** Germany
Jul 2008 *Summer Intern*
I implemented new features and a new design for the homepage, blog-engine and forum of the company using .Net technologies.

Theses

- Mar 2014 **Bachelor thesis, JavaScript Heap Analysis Using Real-World Web Applications** *University of Salzburg, Austria*
Jun 2014 Advisor: Prof. Christoph Kirsch My bachelor thesis was done in course of ACDC4JS. The aim of my thesis to aid the development of more realistic workloads for benchmarking the memory management of JavaScript virtual machines. I have analyzed the heap models of real-world web application for this purpose.
- Jun 2009 **Diploma thesis, SEER HTL** (*technical high school*), Austria
Sep 2004 My diploma thesis was done in cooperation with Sony (DADC) Austria. The topic of my thesis is developing software for analyzing and filtering large volume of email traffic sent to customer support. I have developed the so-called SEER (Sophisticated Embedded Email Responder) for this purpose with another student.

Projects

- Jan 2015 **pseudOS, Advanced Operating Systems Class** *University of Salzburg, Austria*
Oct 2014 *Student*
The aim is to develop the major components of an operating system based on Pintos. I have developed a more efficient scheduling algorithm, user-programs, virtual memory, and a UNIX like filesystem. My operating system is called pseudOS.
- Aug 2014 **ACDC4JS[1], Computational Systems Group** *University of Salzburg, Austria*
Aug 2013 *Project Staff*
The project was done in cooperation with Google Munich. The purpose of ACDC4JS is to analyze the efficiency of the garbage collector in JavaScript virtual machines, especially Google's V8. I have worked on research and development of measurement tools. The analyses of heap models, using automated user interactions was also part of my work.
- Jun 2013 **PCCC, Compiler Construction Class** *University of Salzburg, Austria*
Mar 2013 *Student*
The goal is to develop a self-compiling compiler. I have developed a full functionally compiler in a non-trivial subset of C together with another student. Target is a DLX-based emulator. My self-compiling compiler is called PCCC and was the best project of the class.

Awards

- Jun 2009 **Innovation & Wirtschaft in OÖ** OÖ. Technologie- und Marketinggesellschaft m.b.H
With the SEER project I won the first price in the category IT with my college. A competition for innovative high school students, supported by the government of Upper Austria.

Others

- Mar 2010 **Mandatory military service** Austria
Oct 2009

Publications

- [1] M. Aigner, T. Hütter, C.M. Kirsch, A. Miller, H. Payer, and **M. Preishuber**. “ACDC-JS: Explorative Benchmarking of JavaScript Memory Management”. In: *Proc. Dynamic Languages Symposium (DLS)*. ACM, 2014. [Click here for PDF file](#).
- [2] A. Haas, T. Hütter, C.M. Kirsch, M. Lippautz, **M. Preishuber**, and A. Sokolova. “Scal: A Benchmarking Suite for Concurrent Data Structures”. In: *Proc. International Conference on Networked Systems (NETYS)*. LNCS. Springer, 2015. [Click here for PDF file](#).