

# Andreas Haas

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## RESEARCH INTERESTS

Concurrent Data Structures, Memory Management, Virtual Execution Environments, Program Verification, Model Checking, Embedded and Real-time Systems, Compiler Construction

## EDUCATION

<b>Ph.D. Candidate in Computer Science</b> <i>University of Salzburg, Austria</i> Ph.D. student of Prof. Christoph Kirsch in the field of real-time and embedded systems	<b>2009 - present</b>
<b>Dipl.-Ing. (M.Sc.)</b> <i>University of Salzburg, Austria</i> Computer Science	<b>2007 - 2009</b>
<b>Bakk.techn. (B.S.)</b> <i>University of Salzburg, Austria</i> Computer Science	<b>2004 - 2007</b>

## WORK EXPERIENCE

<b>Research Assistant</b> <i>Prof. Christoph Kirsch, University of Salzburg, Austria</i> [ <a href="http://www.cs.uni-salzburg.at/~ck">http://www.cs.uni-salzburg.at/~ck</a> ] Projects: Short-term Memory: a new model for heap management; [ <a href="http://tiptoe.cs.uni-salzburg.at/short-term-memory">http://tiptoe.cs.uni-salzburg.at/short-term-memory</a> ] Scal: analysis of various FIFO queue implementations; [ <a href="http://scal.cs.uni-salzburg.at">http://scal.cs.uni-salzburg.at</a> ]	<b>November 2009 - present</b>
<b>Intern</b> <i>Google Inc., London, UK</i> [ <a href="http://www.google.com">http://www.google.com</a> ] Implementation of advanced user interactions in the browser automation framework WebDriver;	<b>June 2011 - September 2011</b>
<b>Software Engineer</b> <i>Tecan Austria GmbH, Grödig, Austria</i> [ <a href="http://www.tecan.com">http://www.tecan.com</a> ] Main activities: Software development: Design and implementation of control and service software for laboratory devices;	<b>2002 - 2009</b>

## PUBLICATIONS

- [1] **Andreas Haas**, Christoph M. Kirsch, Michael Lippautz, Hannes Payer - *How FIFO is your Concurrent FIFO Queue?*, In Proc. Workshop on Relaxing Synchronization for Multicore and Manycore Scalability (RACES), 2012.
- [2] Martin Aigner, **Andreas Haas**, Christoph M. Kirsch, Michael Lippautz, Ana Sokolova, Stephanie Stroka, Andreas Unterweger - *Short-term Memory for Self-collecting Mutators*, In Proc. International Symposium on Memory Management, 2011.
- [3] Martin Aigner, **Andreas Haas**, Christoph M. Kirsch, Ana Sokolova - *Short-term Memory for Self-collecting Mutators - Revised Version*, Technical Report, 2010-06, October 2010, 34pp, University of Salzburg, Austria.
- [4] Silviu S. Craciunas, **Andreas Haas**, Christoph M. Kirsch, Hannes Payer, Harald Röck, Andreas Rottmann, Ana Sokolova, Rainer Trummer, Joshua Love, Raja Sengupta - *Information-Acquisition-as-a-Service for Cyber-Physical Cloud Computing*, In Proc. Workshop on Hot Topics in Cloud Computing (HotCloud), 2010.
- [5] Martin Aigner, **Andreas Haas**, Christoph M. Kirsch, Hannes Payer, Andreas Schönegger, Ana Sokolova - *Short-term Memory for Self-collecting Mutators*, Technical Report, 2010-03, April 2010, 29pp, University of Salzburg, Austria.
- [6] **Andreas Haas** - *Expiration Classes for Implicit Memory Management*, Master Thesis, 2009, University of Salzburg, Austria.

## TALKS

- [1] *How FIFO is Your Concurrent FIFO Queue?*, RACES Workshop 2012, Tucson, Arizona, 21th of October 2012. (20 min talk)
- [2] *How FIFO is Your Concurrent FIFO Queue?*, PUMA Workshop 2012, Goldegg, Austria, 24th of September 2012. (30 min talk)
- [3] *Short-term Memory for Self-collecting Mutators*, University of Kent, UK, 29th of September 2011. (45 min talk)
- [4] *Short-term Memory for Self-collecting Mutators*, Google Tech Talk, London, UK, 26th of September 2011. (45 min talk)
- [5] *Short-term Memory for Self-collecting Mutators*, ISMM 2011, San Jose, California, 5th of June 2011. (25 min talk)
- [6] *Automating Heap Management through Short-term Memory*, WRISE 2011, EuroSys 2011, Salzburg, Austria, 10th of April 2011. (30 min talk)
- [7] *Short-term Memory for Self-collecting Mutators*, PUMA Workshop 2010, Szentendre, Hungary, 12th of October 2010. (45 min talk)
- [8] *Short-term Memory for Self-collecting Mutators: Towards Time- and Space-predictable Virtualization*, RISE Workshop, Graz, Austria, 23rd of February 2010. (30 min talk, together with Ana Sokolova)

## CONFERENCE REFEREE

- Design, Automation and Test in Europe (DATE) - **2011, 2013**;
- International Conference on Formal Modeling and Analysis of Timed Systems (FORMATS) - **2012**;
- International Conference on Computer-Aided Design (ICCAD) - **2009, 2011, 2012**;
- International Workshop on Component-Based Design of Resource-Constrained Systems (CORCS) - **2011, 2012**;

- International Conference on Formal Methods and Models for Codesign (MEMOCODE) - **2010, 2012**;
- IEEE Real-Time Systems Symposium (RTSS) - **2011**;
- International Conference on Embedded Systems (EMSOFT) - **2010, 2011**;
- Workshop on Adaptive and Reconfigurable Embedded Systems (APRES) - **2009, 2011**;
- Design Automation Conference (DAC) - **2011**;
- IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS) - **2011**;
- International Conference on Embedded and Ubiquitous Computing (EUC) - **2010**;
- International Conference on Object-oriented Programming, Systems, Languages, and Applications (OOPSLA) - **2010**;
- European Conference on Computer Systems (EuroSys) - **2010**;
- International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS) - **2010**;

#### TEACHING EXPERIENCE

- **Winter 2012/2013**: Proseminar (Practical) Logic and Sets (Lecturer), University of Salzburg, Austria (undergraduate level)
- **Winter 2011/2012**: Proseminar (Practical) Logic and Sets (Lecturer), University of Salzburg, Austria (undergraduate level)
- **Summer 2010**: Compiler Construction (Teaching Assistant), University of Salzburg, Austria (undergraduate level)

#### COMMUNITY

- Local arrangement co-chair for EuroSys 2011

#### OTHER EDUCATION

- **March 2010**: *Quantitative Model Checking Ph.D. School*, organized by the European Network of Excellence ARTIST Design and the Danish VKR Center of Excellence MT-LAB, IT University Copenhagen, Denmark.

#### PERSONAL SKILLS AND COMPETENCES

- **Languages**  
German (native); English (excellent)
- **Technical Skills**  
Java, C#, JavaScript, C/C++, Algorithm and Data Structure Design, Complexity Theory

#### REFERENCES

- Christoph Kirsch, Professor at the *University of Salzburg*, Austria, Department of Computer Sciences, ck@cs.uni-salzburg.at
- Eran Messeri, Software Engineer, *Google Inc.*, London, UK, eranm@google.com
- Dietmar Winkler, Project Leader, *Tecan Austria GmbH*, Austria, dietmar.winkler@tecان.com