

Christopher Schuster

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Software engineer at Google, interested in software development tools and programming languages, particularly for program verification and security.

Education

[University of California, Santa Cruz, CA](#) *Sep 2013 - Dec 2018*

- PhD, Computer Science *Dec 2018*
 - PhD Thesis: Towards Live Programming Environments for Statically Verified JavaScript

[University of Potsdam, Hasso Plattner Institute, Germany](#) *Oct 2006 - Apr 2012*

- Master of Science, IT Systems Engineering *Apr 2012*
 - Master Thesis: Reification of Execution State in JavaScript: Implementing the Lively Debugger
- Bachelor of Science, IT Systems Engineering *Sep 2009*
 - Bachelor Thesis: RESTful Object-oriented Middleware for Distributed Squeak Applications

[University of California, Davis, CA](#) *Sep 2010 - June 2011*

- Study Abroad Program

Employment

[Google, Mountain View, CA](#)

- Software engineer (GSuite/Gmail Security) *Dec 2018 - now*
- Software engineering intern (Gmail and Android security and software development) *Jun 2017 - Sep 2017*

[Y Combinator Research, San Francisco, CA](#) *Jun 2016 - Sep 2016*

- Research intern (development of end-user programming environments)

[Innervision Computers, Scotts Valley, CA](#)

- Full-stack developer (development and deployment of scalable web applications) *Jun 2015 - Sep 2015*
- Software development intern (React, NodeJS, etc.) *Jun 2014 - Sep 2014*

SAP Labs LLC, Palo Alto, CA

May 2012 - May 2013

- Research intern (development and applied research in tool support for remote teamwork, data exploration and JavaScript development)

tripunkt GmbH, Berlin

Apr 2007 - Apr 2012

- Software developer (development of enterprise software with focus on web and mobile)

Teaching

Instructor

- CMPS5P Introduction to Programming in Python (UCSC) Summer 2018
- CMPS5P Introduction to Programming in Python (UCSC) Fall 2017
- CMPS5P Introduction to Programming in Python (UCSC) Winter 2017

Teaching assistant

- CMPS130 Computational Models (UCSC) Winter 2018
- CMPS104A Fundamentals of Compiler Design I (UCSC) Spring 2017
- CMPS104A Fundamentals of Compiler Design I (UCSC) Fall 2016
- CMPS 112 Comparative Programming Languages (UCSC) Winter 2016
- CMPS130 Computational Models (UCSC) Fall 2015
- CMPS112 Comparative Programming Languages (UCSC) Winter 2015
- CMPS104A Fundamentals of Compiler Design I (UCSC) Fall 2014
- CMPS112 Comparative Programming Languages (UCSC) Winter 2014
- CMPS104A Fundamentals of Compiler Design I (UCSC) Fall 2013
- SWT1 - Software Engineering (HPI) Summer semester 2009
- SWA - Software Architecture (HPI) Winter semester 2008

Publications

- Robin Graichen, Eric Linhart, Christopher Schuster, Udo Heller, Andreas Müller. *Coalizer: A Coalition Tool Combining Office and Policy Motivations of Political Parties* Journal of Information Technology and Politics (JITP). January 2021. London, UK.
- Christopher Schuster, Cormac Flanagan. *IDVE: an Integrated Development and Verification Environment for JavaScript* 5th Edition of the Programming Experience Workshop (PX 2019). April 2019. Genoa, Italy.
- Christopher Schuster. *Towards Live Programming Environments for Statically Verified JavaScript* PhD thesis. University of California, Santa Cruz December 2018. Santa Cruz, CA, USA.
- Christopher Schuster, Sohum Banerjee, Cormac Flanagan. *esverify: Verifying Dynamically-Typed Higher-Order Functional Programs by SMT Solving* Proceedings of the 30th Symposium on Implementation and Application of Functional Languages (IFL 2018). August 2018. Lowell, MA, USA.
- Robin Graichen, Udo Heller, Eric Linhart, Andreas Müller, Christopher Schuster. *Coalizer: A Coalition Tool Combining Office and Policy Motivations of Political Parties* European Consortium for Political Research General Conference (ECPR 2018). August 2018. Hamburg, Germany.
- Christopher Schuster, Cormac Flanagan. *Live Programming by Example: Using Direct Manipulation for Live Program Synthesis* LIVE workshop on live programming systems (LIVE 2016). July 2016. Rome, Italy.

- Christopher Schuster, Tim Disney, Cormac Flanagan. *Macrofication: Refactoring by Reverse Macro Expansion* Programming Languages and Systems: 25th European Symposium on Programming (ESOP 2016). April 2016. Eindhoven, NL.
- Christopher Schuster, Cormac Flanagan. *Reactive Programming with Reactive Variables* Constrained and Reactive Objects Workshop, MODULARITY Companion 2016 (CROW 2016). March 2016. Malaga, Spain.
- Christopher Schuster, Cormac Flanagan. *Live Programming for Event-Based Languages* Proceedings of the 2015 Reactive and Event-based Languages and Systems Workshop (REBLS '15). October 2015. Pittsburgh, PA.
- Christopher Schuster, Cormac Flanagan. *A Light-Weight Effect System for JavaScript* Proceedings of the 2015 Scripts to Programs Workshop (STOP '15). July 2015. Prague, CZ.
- Christopher Schuster, Cormac Flanagan. *Traveling through Time and Code: Omniscient Debugging and Beyond* Presented at the Future Programming Workshop (FPW '14). October 2014. Portland, OR.
- Christopher Schuster, Bipeng Zhang, Rajan Vaish, Paulo Gomes, Jacob Thomas, James Davis. *RTI Compression for Mobile Devices* Proceedings of the Sixth International Conference on Information Technology and Multimedia at UNITEN (ICIMu 2014). November 2014. Kuala Lumpur, Malaysia.
- Christopher Schuster. *Reification of Execution State in JavaScript: Implementing the Lively Debugger* Master thesis. University of Potsdam April 2012. Potsdam, Germany.
- Christopher Schuster, Malte Appeltauer, Robert Hirschfeld. *Context-oriented Programming for Mobile Devices: JCop on Android* Proceedings of the Workshop on Context-oriented Programming (COP '11). July 2011. Lancaster, UK.

Technical Skills

[Linux Professional Institute Certificate LPIC-1](#) and [Novell Certified Linux Administrator](#)

College and work experience with C, C++, C#, Haskell, Java, JavaScript, Python, Smalltalk and SQL.

Volunteer Activities

Assisted the conference organization as a student volunteer at [ECOOP 2011](#), [SPLASH 14](#) and [SPLASH 15](#).

Contributes to open source projects, (see e.g. [Github profile](#)).

Former organizer for [SlugLUG](#), the official UC Santa Cruz Linux User Group.

Trivia

Fluent in both German and English; likes to makes music and travel around the world; [hobby photographer](#).