Michael Schröder

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Education

PhD, Computer Science, TU Wien   2019–present
Working on automatic inference of formal grammars from *ad hoc* parsing code.
Advisor: Jürgen Cito

MSc, Software Engineering & Internet Computing, TU Wien   2012–2015
Thesis: *Durability and Contention in Software Transactional Memory*
Conducted partly at the University of New South Wales, Sydney
Advisor: Jens Knoop, Co-Advisor: Gabrielle Keller (UNSW)
Graduated with distinction

BSc, Software & Information Engineering, TU Wien   2007–2012
Thesis: *Optimizing Lua using run-time type specialization*
Advisor: M. Anton Ertl
Graduated with distinction

Experience

Research Assistant   2019–present
TU Wien, Business Informatics Group
Best Distance Learning Award 2020 for commitment in teaching

Research Internship   Aug–Nov 2021
Microsoft Research, Cambridge, UK
Mentors: Katja Kevic and Brendan Murphy
Finding feature flag interdependencies in the Office codebase. Developed an unsupervised
learning algorithm based on probabilistic analysis of telemetry data.

Research Visit   Oct–Nov 2019
Massachusetts Institute of Technology (MIT CSAIL)
Hosts: Jürgen Cito and Martin Rinard
Large-scale analysis of personal configuration scripts on GitHub. Wrote Python utility *github-searcher* to deal with sample limitations of the public GitHub API.
Funded by the Christiana Hörbiger award for the mobility of young scientists

Co-Founder & CTO   2016–2017
Auctionist, an online auction house for fine art and collectibles
Business development, interaction design, full-stack web engineering. Managed scalable deployments of Haskell backend using Docker on AWS.

Mobile App Developer / AR Consultant   2015–present
Primary client: Refrakt, a Berlin-based artist collective and design studio.
Notable collaborations include:
— the *Refrakt* app, a virtual museum in augmented reality
— *SwellAR*, a prototype visualising real-time oceanic current data for the Humboldt Forum
— *TAMAM*, a companion app for Berlin's Museum of Islamic Art

Research Internship — Mar–Jun 2014
University of New South Wales (UNSW), Programming Languages & Systems Group
Host: Gabriele Keller
Development of *Transactional Memory with Finalizers*, an extension to Software Transactional Memory (STM) allowing programmers to safely execute arbitrary I/O during the commit-phase of a transaction. Implemented in a fork of the Glasgow Haskell Compiler (GHC).
Funded by a stipend from TU Wien

University Assistant — 2015–2017
TU Wien, Institute of Computer Languages
Facilitating the teaching process for *Program Construction*, the introductory programming course for about 800 first year computer science students. Primarily responsible for weekly recitations in smaller student groups and devising and grading of exams.

Publications

"An Empirical Investigation of Command-Line Customization", *M. Schröder*, J. Cito
to be published in an upcoming issue of Empirical Software Engineering (EMSE)

"Transactional Tries", *M. Schröder* in: 18th Biennial Workshop on Programmiersprachen und Grundlagen der Programmierung (KPS 2015), Pörtschach am Wörthersee, Austria, October 2015

Talks

Transactional Memory with Finalizers
32nd Workshop of GI SIG Programmiersprachen und Rechenkonzepte. Bad Honnef, Germany.	May 2015
Lambdaheads, Functional Programming User Group Vienna	August 2014
Oracle Labs Brisbane (invited talk)	June 2014

Volunteer Experience

Beginner's Mentor
ZuriHac 2015. Zurich, Switzerland. — May 2015

Student Volunteer
Vienna Summer of Logic. Vienna, Austria	July 2014
HiPEAC'14. Vienna, Austria	January 2014

Other Notable Projects

Queerbot — 2015
A cocktail robot that aims to get people drunk and challenge popular misconceptions about genotype and phenotypic expression, especially as it relates to gender and sexuality. Exhibited at Roboexotica 2015.

Landjäger Kürzestfilmfestspiele — 2015–present
A yearly short film festival presented by Landjäger Magazin and emceed by me.