Michael Schröder

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Experience

2019–present — **Research Assistant**, *TU Wien*, Vienna, Austria.
Graduate research in programming languages and software engineering.
Currently working on refinement type systems for ad hoc grammar inference.

Aug–Nov 2021 — **Research Internship**, *Microsoft Research*, Cambridge, UK.
Worked with Katja Kevic and Brendan Murphy to find feature flag interdependencies in the Microsoft Office codebase. Developed causal inference method based on patterns in telemetry data. A paper based on this work is in preparation.

Oct–Nov 2019 — **Research Visit**, *MIT CSAIL*, Cambridge, MA.
Hosted by Jürgen Cito and Martin Rinard. Worked on large-scale analysis of personal configuration scripts on GitHub. Resulted in publication of paper in EMSE.
Funded by the Christiana Hörbiger award for the mobility of young scientists.

2016–2017 — **Co-Founder & CTO**, *Auctionist*, Vienna, Austria.
An online auction house for fine art and collectibles. Business development, interaction design, full-stack web engineering. Managed scalable deployments of Haskell backend.

2015–2021 — **Mobile App Developer / AR Consultant**, *Refrakt*, Berlin, Germany.
Developed artistic, educational, and commercial mixed reality experiences, including:
— the *Refrakt* app, a virtual museum in augmented reality,
— *SwellAR*, a prototype visualising real-time oceanic currents for the Humboldt Forum,
— *TAMAM*, a companion app for Berlin's Museum of Islamic Art.

2015–2017 — **University Assistant**, *TU Wien*, Vienna, Austria.
Taught programming to ~800 undergraduate computer science students per year.
Responsible for weekly recitations in smaller groups and devising and grading of exams.

Mar–Jun 2014 — **Research Practicum**, *University of New South Wales (UNSW)*, Sydney, Australia.
Developed *Transactional Memory with Finalizers*, an extension to the runtime system of the Glasgow Haskell Compiler (GHC). Invited to present work at Oracle Labs, Brisbane.
Funded by a stipend from TU Wien.

Education

2019–present — **PhD, Computer Science**, *TU Wien*, Vienna, Austria.
Working on inferring formal grammars for ad hoc parsers via refinement types.
Advised by Jürgen Cito.

2012–2015 — **MSc, Software Engineering & Internet Computing**, *TU Wien*, Vienna, Austria.
Thesis: **Durability and Contention in Software Transactional Memory**.
Advised by Jens Knoop and Gabriele Keller (UNSW). *Graduated with distinction.*

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

Selected Publications

ICSE NIER **Grammars for Free: Toward Grammar Inference for Ad Hoc Parsers**.
2022 Michael Schröder and Jürgen Cito.

EMSE **An Empirical Investigation of Command-Line Customization**.
2022 Michael Schröder and Jürgen Cito.

KPS **Transactional Tries**.
2015 Michael Schröder.

Service

2022 **The Programming Journal**, Artifact Evaluation Committee (Volume 7).

2022 **ECOOP**, Artifact Evaluation Committee and Extended Review Commitee.

2021 **ICSE**, Additional Reviewer (Demonstrations).

2020 **CIKM**, Program Committee (Resource Track).

2015 **ZuriHac**, Beginner's Mentor.

2014 **Vienna Summer of Logic**, Student Volunteer.

2014 **HiPEAC**, Student Volunteer.

Teaching

2019–present **Web Engineering**, *TU Wien.* Best Distance Learning Award 2020.

2015–2017 **Program Construction**, *TU Wien.*

2012–2014 **Functional Programming** (Student Tutor), *TU Wien.*

Other Projects

2015–present **Landjäger Kürzestfilmfestspiele**, Vienna, Austria.
The world's shortest film festival, where every film has to be exactly twelve seconds long.
Hosting and co-writing the annual(ish) award show.

2015 **Queerbot**, *Roboexotica*, Vienna, Austria.
A cocktail robot that aimed to get people drunk and challenge misconceptions about
genotype and phenotypic expression of gender and sexuality. Coding and UX design.

Skills

— English (fluent), German (native).

— Haskell, Python, C, Obj-C, Swift, JavaScript, Java, SQL.

— Compiler design and implementation, advanded type systems, web engineering.