Marcel Moosbrugger

Academic Curriculum Vitae

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Personal Data

Date of Birth:	14th January 1994
Languages:	German (native), English (fluent), French & Italian (basics)
Nationality:	Austria
Personal Interests:	Sports of all kinds, Non-fiction books

Research Interest

- Formal Methods
- Probabilistic Programming
- Computer-Aided Verification
- Machine Learning

Education

Since 2020	PhD in Computer Science – TU Wien Supervision: Prof. Laura Kovács
June 2020	Master of Science – TU Wien GPA 1.0 (grades range from 1 (best) to 5)
February 2018	Bachelor with Honors – TU Wien Special 1 year program - GPA 1.0 (grades range from 1 (best) to 5) Among best 5 % of students - Mentor: Prof. Thomas Eiter
February 2017	Bachelor of Science – TU Wien GPA 1.0 (grades range from 1 (best) to 5)

Career History

Since 2020	PhD Researcher – TU Wien
Jan. - Mar. 2022	Research Scholar (3 months) – RWTH Aachen University – with Prof. Joost-Pieter Katoen
2019	Teaching Assistant – TU Wien
Aug. - Sep. 2019	Research Scholar (2 months) – Purdue University – with Prof. Roopsha Samanta
July 2018	Research Scholar (1 month) – ENS Paris-Saclay – with Prof. Laurent Doyen
2014 - 2018	Software Engineer Massive Art / Sulu

University Teaching Experience

2021	Teaching Assistant & Lecturer – “Formal Methods in Computer Science - Lab” Master course, 91 enrolled students
2020	Teaching Assistant & Lecturer – “Formal Methods in Computer Science” Master course, 414 enrolled students
2019	Teaching Assistant & Lecturer – “Complexity Theory” Master course, 16 enrolled students
2019	Teaching Assistant – “Algorithms & Data Structures” Bachelor course, 791 enrolled students
2017	Lecturer – “Introduction to Java” Free course for refugees – 30 enrolled students

Prizes & Distinctions

2022	Awardee of the “Chrstina Hörbiger Prize” of the TU Wien to promote the international mobility of young scientists.
2021	Winner of the “Diploma Thesis Award” of the City of Vienna for my master’s thesis.
2020	Winner of the “Distinguished Young Alumn Award” for the best master’s thesis of the semester.
2020	Nominee for the “Würdigungspreis” (Prize of the Austrian state for the best master graduates)
2018	Bachelor with Honors – Certifies being among the top 5 % of students
2015 & 2016	Recipient of the Performance Scholarship given to students who “achieved excellent academic performance”

Community Work

PC Member: CAV 2021 (Artifact Evaluation), CAV 2022 (Artifact Evaluation)

Session Chair: CONCUR 2020

Reviewer: POPL 2021, CAV 2021, FMCAD 2021

Committees: Habilitation committee Dr. Dejan Nickovic

Software

- Polar – Analyze probabilistic loops with algebraic recurrences (https://github.com/probing-lab/polar)
- Amber – Analyze termination behavior of probabilistic programs (https://github.com/probing-lab/amber)
- Mora – Generating moment-based invariants for probabilistic loops (https://github.com/probing-lab/mora)

Scientific Talks

2021 Talk at FM 2021 on “The Probabilistic Termination Tool Amber”

2021 Talk at ESOP 2021 on “Automating Termination Analysis of Polynomial Probabilistic Programs”

2020 Talk at the Epilog of the faculty of informatics @ TU Wien.

Selected Publications

[1] M. Moosbrugger et. al., The Probabilistic Termination Tool Amber, FM 2021, Acceptance Rate ~ 26 %

[2] M. Moosbrugger et. al., Automating Termination Analysis of Polynomial Probabilistic Programs, ESOP 2021, Acceptance Rate ~ 30 %

[3] M. Moosbrugger, Automating Termination Analysis of Probabilistic Programs, MA Thesis, TU Wien, June 2020