Curriculum Vitae Martin AVANZINI, PhD

Name	Martin AVANZINI, PhD
Nationality	Austrian
Date / Place of Birth	30/07/1982 / Hall in Tirol, Austria
Marital Status	married
Personal Address	27bis Chemin des Bérenguiers
	06530 Peymeinade, France
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Affiliations

• INRIA Sophia Antipolis Méditerranée	2018 – now
Charge de Recherche.	
 Universities of Bologna and Innsbruck 	2014 – 2017
FWF (Austrian science fund) Schrödinger Fellow.	
 University of Innsbruck 	2008 – 2014
Research Assistant.	

Higher Education

0	PhD Degree in Computer Science. Institute of Computer Science, University of Innsbruck, Austria.	2013
	Thesis Verifying Polytime Computability Automatically, supervised by Georg Moser.	
0	Master's Degree in Computer Science.	2009
	Institute of Computer Science, University of Innsbruck, Austria.	
	Master Thesis Automation of Polynomial Path Orders, supervised by Georg Moser.	
0	Bachelor's Degree in Computer Science.	2007
	Institute of Computer Science, University of Innsbruck, Austria.	
	Bachelor Thesis Termination Analysis for Scheme using S-Expression Rewrite Systems, supervised by Na	ao Hi-
	rokawa and Scheme Programs with Polynomially Bounded Evaluation Length supervised by Georg Moser.	
0	Diploma Höhere Technische Lehranstalt.	2001

Civil Engineering, Htl Trenkwalderstraße, Innsbruck, Austria.

Awards

Proposed for the Heinz Zemanek Price.
 The Heinz Zemanek price is awarded every 3 years by the Austrian Computer Society (OCG) to young researchers for outstanding PhD dissertations. I was nominated by the University of Innsbruck for this price, and also passed the final selection (8 persons) from the OCG.

• Kurt Gödel Medal. Our *Tyrolean Complexity tool* was distinguished with the prestigious *Kurt Gödel Medal* as best tool for the complexity analysis of term rewrite systems at the *FLoC Olympic Games*, held during the *Vienna Summer of Logic*. • European Summer School in Logics, Languages and Computation. My work received second place in Springer best paper awards.

Scientific Activities

0	Reviewer. Reviewer for the Deutsche Forschungsgemeinschaft (DFG).	
0	Secretary. IFIP Working Group 1.6 on Rewriting.	
0	Organiser. 21st International Workshop on Logic and Computational Complexity, Saarbrücken, Germany (Virtual).	2020
0	Invited speaker. 10th International Workshop on Higher-Order Rewriting, Dortmund, Germany.	2019
0	PC member. Workshop on Developments in Implicit Computational Complexity and Foundational and Practical Aspec Resource Analysis 2019, Prague, Czech Republic.	2019 cts of
0	Guest editor. Special issue on DICE (TCS, Elsevier).	2018
0	Organiser. 9th Workshop on Developments in Implicit Computational Complexity, Thessaloniki, Greece.	2017
0	PC member. 17th International Workshop on Logic and Computational Complexity, Reykjavik, Iceland.	2017
0	PC member. 5th Workshop on Developments in Implicit Computational Complexity, Grenoble, France.	2014
0	Invited speaker. 15th International Workshop on Logic and Computational Complexity. Torino, Italy.	2013
0	Invited speaker. 3rd Workshop on Proof Theory and Rewriting, Kanazawa, Japan.	2013
S	cholarships and Projects	
0	Site Leader. January, 2020 – December, Probabilistic Programming Semantics. ANR PRC Project 2019 (DS0705) 2014 (project number ANR-19-CE48-0014). INRIA, IRIF, LIPN, I2M.	2024

• Project member. June, 2015 – June, 2020 Concurrent, Resourceful and Effectful COmputation, by Geometry of Interaction. Multilateral research project with members from France, Italy and Japan. University of Bologna / INRIA Sophia-Antipolis.

• Project member. Expanding Logical Ideas for Complexity Analysis.

ANR Digital Foundations (DS0705) 2014 (project number ANR-14-CE25-0005). INRIA (Focus, Carte), Paris 6 (LIP6), Paris 7 (IRIF), Paris 13 (LIPN), Paris Paris-Est Créteil (LACL), ENS Lyon (Plume).

• Principle investigator.

Higher-Order Complexity Analysis of Rewrite Systems.

FWF Schrödinger Fellowship (project number J-3563). University of Bologna / University of Innsbruck.

• Research assistant.

Improving Certifiers for Termination Proofs. FWF standalone project (project number P22767). University of Innsbruck. April, 2014 – May, 2017

December, 2013 - March, 2014

October, 2014 – September, 2019

• Research assistant.

Structural and Computational Proof Theory. Bilateral research project between ANR and FWF (project number 1608-N18). University of Innsbruck.

Principal investigator. November, 2011 – October, 2012
 Automated Complexity Analysis.
 Doctoral fellowship (project number NWF-2011/2/Mip7). University of Innsbruck.

• Research assistant.

October, 2008 – August, 2011

Derivational Complexity Analysis. FWF standalone project (project number P20133). University of Innsbruck.

Software Development

The following gives a short list of most important software projects that I was involved in. If not mentioned otherwise, I am (among) the main developer(s). Details can be found at my software page.

- IsaFoR/CeTA: A formally verified tool for checking termination, confluence and complexity proofs. I have contributed the formalisation of dependency tuples.
- Expected Cost Analysis for Imperative Programs (eco-imp): Expected Cost Analysis for Imperative Programs.
- GUBS: A constraint solver for polynomial inequalities.
- Higher Order Complexity Analysis (HOCA): Frontend for analysing the runtime complexity of OCaml programs through first-order tools.
- Higher Order Sized-Type Analysis (HOSA): Complexity analyser of higher-order programs through sized-type analysis and program instrumentation.
- Implicit Computational Complexity Tool (ICCT): Analyses the complexity of functions defined through rewrite systems.
- Tyrolean Complexity Tool (TCT): Full-fledged runtime complexity analyser.