# Alex Loitzl

## Education

**2024 – ...**    **PhD Candiate**, *Institute of Science and Technology Austria*

**2021 – 2024**    **Masters Program Logic & Computation**, *TU Wien, AT*
Thesis: Modeling Register Pairs in CompCert. Advisor: Florian Zuleger
***Runner-up: Best Master Thesis TU Wien Informatics 2024***

**2018 – 2021**    **Bachelors Program Computer Science**, *Universität Salzburg, AT*
Thesis: 3-valued automata. Advisor: Ana Sokolova

## Working Experience

**7/23 – 7/24**    **Software Engineer**, *AbsInt Informatik GmbH*, Saarbrücken, DE
Working on the backend of the CompCert Verified C compiler, first during an internship and then a master's thesis project.
○ Improve code generation for function prologue and epilogue for CompCert
○ Implement a more precise register model and a new register allocator

**2020 & 2021**    **Software Engineer**, *Salzburger Banken Software*, Salzburg, AT
Summer internships. Implementing a microservice prototype banking application in Java and deploying it with Kubernetes

## Teaching Experience

**2019 – 2021**    **Teaching Assistant**, *University of Salzburg*
○ *Linear Algebra* 2021: Hold office ours for students and help with homeworks
○ *Formal Systems* 2019, 2020: Recitations, working throught related problems and grade exams
○ *Problem Solving and Algorithmic Thinking* 2019, Give lectures to non-computer scientists about basic problems in computer science

## Publications

**2024**    **Modeling Register Pairs in CompCert [1]**, *iFM24*
Alexander Loitzl, and Florian Zuleger.
***Runner-up: Best Paper***

## References

[1] Alexander Loitzl and Florian Zuleger. "Modeling Register Pairs in CompCert". In: *Integrated Formal Methods*. Ed. by Nikolai Kosmatov and Laura Kovács. Cham: Springer Nature Switzerland, 2025, pp. 128–147. ISBN: 978-3-031-76554-4.

*Vienna, Austria*
✉ firstname.lastname@ista.ac.at  •  *https://alexloitzl.github.io*