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## 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  
**Runners-up: Best Master Thesis TU Wien Informatics**
- 2018 – 2021    **Bachelors Program Computer Science**, *Universität Salzburg, AT*  
Thesis: 3-valued automata. Advisor: Ana Sokolova

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## 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

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## 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 through related problems and grade exams
  - *Problem Solving and Algorithmic Thinking* 2019, Give lectures to non-computer scientists about basic problems in computer science

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## Publications

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

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## 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.