

Education

- Oct. 2022 **PhD candidate (Computer Science)**, Radboud University, Nijmegen, Netherlands
Mar. 2024
- 2018-2022 **Master of Science in Mathematics**, *Saarland University*, Saarbrücken, Germany, GPA: 1.3 (Germany)
- Achieved top grade (1.0) MA Thesis, resulting in a peer-reviewed journal publication
 - Coursework: Logic and Set Theory, Computational Logic, Topology, Machine Learning, Probability Theory, Stochastic Processes, Image Processing and Computer Vision
- 2013-2017 **Bachelor of Science in Physics**, *Saarland University*, Saarbrücken, Germany, GPA: 2.2 (Germany)
- Modelling physical systems (C, MATLAB), and analyzing experimental data
- 2010-2013 **Primary Education**, *Lycée Classique d'Echternach*, Echternach, Luxembourg, GPA: Good (Luxembourg)
- 2006-2010 **Secondary Education**, *Lycée Technique Joseph Bech*, Grevenmacher, Luxembourg

Scientific Research

- 2024 **Conference Publication**, *Modular Verification of Intrusive List and Tree Data Structures in Separation Logic*, ITP 2024, Marc Hermes, Robbert Krebbers
- 2024 **Journal Publication**, *An Analysis of Tennenbaum's Theorem in Constructive Type Theory*, Logical Methods in Computer Science, Dominik Kirst, Marc Hermes
- 2023 **Journal Publication**, *Synthetic Undecidability and Incompleteness of First-Order Axiom Systems in Coq (Extended Version)*, Journal of Automated Reasoning, Dominik Kirst, Marc Hermes
- 2022 **Conference Publication**, *An Analysis of Tennenbaum's Theorem in Constructive Type Theory*, FSCD 2022, Marc Hermes, Dominik Kirst
- 2021 **Master Thesis**, *Modeling Peano Arithmetic in Constructive Type Theory*, Saarland University, Department of Mathematics, under supervision of Prof. Dr. Moritz Weber. (Grade: 1.0)
- 2021 **Conference Publication**, *Synthetic Undecidability and Incompleteness of First-Order Axiom Systems in Coq*, ITP 2021, Dominik Kirst, Marc Hermes
- 2017 **Bachelor Thesis**, *Quantum memory for photons*, Saarland University, Physics Department, under supervision of Prof. Dr. Giovanna Morigi. (Grade : 2.0)

Awards

- 2022 **Best Paper by Junior Researcher**, Issued by the FSCD Committee for our paper "*An Analysis of Tennenbaum's Theorem in Constructive Type Theory*"

Work Experience

- 2022-2024 **PhD candidate (Computer Science)**, Radboud University, Nijmegen, Netherlands
- Conducted and published research on the formal verification of data structures related to the C programming language
 - Helping students with their course material in practical sessions, grading exams and doing student supervision for seminar talks
- 2022-2024 **Voluntary Service**, PhD Organization Nijmegen
- Organizing and hosting events for PhD students as a member of the social committee
- 2017-2022 **Student Teaching Assistant**, Saarland University
- Leading tutorial and exercise sessions for numerous courses in Mathematics, grading exams and occasional lecturing
- 2017-2018 **Voluntary service**, Saarland University, Chairman of the Physics student council

Skills and Strengths

- **Programming:** Python, C, Github, OCaml, SML, Racket, Coq, \LaTeX , Shell scripting
- Familiar with object-oriented, functional, and logical programming paradigms
- **Natural Languages:** German (native), Luxemburgish (native), English (proficient), French (fluent) and Dutch (beginner)
- Successfully transitioned between related fields (Physics, Mathematics, Computer Science) and adapting new domain-specific ways of thinking
- Very strong analytical and logical skills
- Effective and clear communication to experts and non-experts