Haoyi Zeng

Saarbrücken, Germany

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https://haoyizeng.github.io

EDUCATION

Saarland University	2021 - 2025
B.Sc. in Computer Science	Saarland Informatics Campus

PAPERS

A Deductive System for Contract Satisfaction Proofs
Arthur Correnson, **Haoyi Zeng**, Jana Hofmann — Draft

Post's Problem in Constructive Mathematics (pdf)
Haoyi Zeng, Yannick Forster, Dominik Kirst, Takako Nemoto — Draft

The Blurred Drinker Paradox (pdf)
Constructive Reverse Mathematics of the Downward Löwenheim-Skolem Theorem
DISTINGUISHED PAPER AWARD
Dominik Kirst*, **Haoyi Zeng*** — LICS 2025

Destabilizing Iris (pdf)
DISTINGUISHED PAPER AWARD
Simon Spies, Niklas Mück, **Haoyi Zeng**, Michael Sammler,
Andrea Lattuada, Peter Müller, Derek Dreyer — PLDI 2025

EXTENDED ABSTRACT AND TALKS

Formalizing Hardware-Software Contracts in Lean (talk)
Haoyi Zeng, Thomas Bourgeat — Teatime@FP Group

KAWA: An Abstract Language for Scalable and Variable Detection of Spectre Vulnerabilities (doi)
Zheyuan Wu, Haoyi Zeng, Aaron Bies — BRONZE MEDAL SRC SPLASH'24

Post's Problem in Constructive Mathematics (pdf)
Haoyi Zeng, Yannick Forster, Dominik Kirst, Takako Nemoto — CCC 2024

Constructive Reverse Mathematics of the Downward Löwenheim-Skolem Theorem (pdf)
Dominik Kirst, Haoyi Zeng — Logic Colloquium 2024

Post's Problem and the Priority Method in CIC (pdf) (talk)
Haoyi Zeng, Yannick Forster, Dominik Kirst — TYPES 2024

The Blurred Drinker Paradox and Blurred Choice Axioms for the Downward Löwenheim-Skolem Theorem (pdf)
Dominik Kirst, Haoyi Zeng — TYPES 2024

THESIS

Post's Problem and the Priority Method in Synthetic Computability (pdf)
Supervisor: Gert Smolka
Advisors: Yannick Forster, Dominik Kirst — Saarland University

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*equal contribution

ACHIEVEMENTS

Distinguished Paper Award	PLDI 2025, LICS 2025
Summer@EPFL Fellowship	École polytechnique fédérale de Lausanne (EPFL)
Member of the Bachelor's Honors Program	Saarland University
Deutschlandstipendium (German National Scholarship)	Saarland University

TEACHING

Teaching Assistant   Apr. 2025 - Oct. 2025
of Introduction to Computational Logic   Saarland University

· Lecturer: Prof. Gert Smolka
· Led an exercise group, helped students in office hours, graded weekly tests and exam.

Teaching Assistant   Apr. 2023 - Oct. 2023
of Introduction to Computational Logic   Saarland University

· Lecturer: Prof. Gert Smolka
· Led an exercise group, helped students in office hours, graded weekly tests and exam.

Teaching Assistant   Apr. 2023 - Oct. 2023
of Programming 2   Saarland University

· Lecturer: Prof. Sebastian Hack
· Led an exercise group, helped students in office hours, graded exam.

Teaching Assistant   Apr. 2023
of Programming 2 Precourse   Saarland University

· Lecturer: Prof. Sebastian Hack
· Led an exercise group.

EVENTS

LICS	2025
PLDI	2025
SuRI@EPFL	2025
PLISS	2025
SPLASH	2024
Summer@EPFL	2024
TYPES	2024
Iris Workshop	2023, 2024, 2025
Proof and Computation	2023

SKILLS

Programming Languages	**Gallina, OCaml, Java**, Chisel, RISC-V, Rust, Python
Theorem Provers	**Rocq , Lean**, Agda
Software & Tools	Git, LaTeX
Human Languages	English (B2), Chinese (native), German (A2)