

Robin Ohs

www.robinohs.dev | me@robinohs.dev

EDUCATION

SAARLAND UNIVERSITY

MSC IN COMPUTER SCIENCE

Oct. 2023 | Saarbrücken, Germany

EU: 1,3 | GPA: 3.7/4.0

BSC IN CYBER SECURITY

Sep 2020 | Saarbrücken, Germany

COURSEWORK

GRADUATE

Automated Debugging

Artificial Intelligence

Data Networks

Embedded Systems

Software Engineering

Space Informatics

Hands-On Dependability with Rust

Side-Channel Attacks and Defenses

Physical-Layer Security

Digital Currencies & Smart Contracts

UNDERGRADUATE

Functional Programming

Object-oriented Programming

Concurrent Programming

Big Data Engineering

Software Engineering Lab

Cyber Security Project

Algorithms and Data Structures

Web Security

Cryptography

Generating Software Tests

SKILLS

LANGUAGES

German (Native)

English (Fluent)

Spanish (Pre-Intermediate)

ACADEMIC EXPERIENCE

SAARLAND UNIVERSITY | PHD STUDENT

Oct 2023 - Now | Saarbrücken, Germany

- Research in the field of space networks and sustainable computer systems.
- Implementation of required software in Rust.

SAARLAND UNIVERSITY | GRADUATE RESEARCH ASSISTANT

Jan 2023 - July 2023 | Saarbrücken, Germany

- Contribution to a Rust library that makes applications resource-efficient.
- Implementation of a system daemon that enables carbon-aware operating systems.

SAARLAND UNIVERSITY | GRADUATE RESEARCH ASSISTANT

June 2021 - June 2022 | Saarbrücken, Germany

- Implementation of a dynamic simulator for satellite scheduling and energy data processing using Java and the Spring Framework.
- Calculation of satellite orbits and telemetry data using Orekit and two-line elements.

RESEARCH

IGSCC 2024 | PAPER

Austin, TX | Saarland Informatics Campus

- **Title:** Dirty Electrons: On the Carbon Intensity of Stored Energy
- We investigated the influence of power supply units and batteries on the carbon intensity of energy used in computer systems. To achieve this, we extended our previous work carbond with a battery tracker and PSU efficiency calculations to enable applications to determine the actual carbon intensity of the system.

HOT CARBON 2023 | PAPER

Boston, MA | Saarland Informatics Campus

- **Title:** carbond: An Operating-System Daemon for Carbon Awareness
- Together with colleagues from SIC, FAU and RUB, we proposed a Linux daemon service that seeks to make the operating system carbon-aware and thus enable applications to make carbon-aware decisions enabling sustainable decisions.

DEPENDABLE SYSTEMS AND SOFTWARE | MASTER'S THESIS

April 2023 – Oct 2023 | Saarbrücken, Germany

EU: 1.3 (Seminar) + 1.0 (Writing) | GPA: 3.7/4.0 (Seminar) + 4.0/4.0 (Writing)

- **Title:** Routing in Low-Earth Orbit Constellations: A Performance Comparison
- We developed a simulator for networks that are formed by satellite constellations in Low-Earth Orbit and investigated the performance of different routing algorithms proposed in the literature in terms of achieved delays, congestion control, fault tolerance, and packet delivery performance.