

MARIUS ROCKSCHIES

Computer Engineer

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Hamburg, Germany



EDUCATION

M.Sc. in Computer Science and Engineering (GPA 1.3)

Hamburg University of Technology

Oct. 2017 - December 2019

Exchange Semester (GPA A-)

Nanyang Technological University

Jan. 2018 - June 2018

B.Sc. in Computer Science and Engineering (GPA 2.1)

Hamburg University of Technology

Oct. 2014 - Oct. 2017

High school (GPA 2.5)

Emil Possehl Schule

Aug. 2011 - June 2014

WORK EXPERIENCE

Research Associate

@ Institute of Aircraft Systems Engineering

Hamburg University of Technology

May. 2020 - ongoing

Research activities in multi-core safety-critical systems.

HARD SKILLS AND INTERESTS

Information Theory

Hardware Description (Verilog)

Real Time Operating Systems

safety-critical avionics systems

Elliptic-curve cryptography

Embedded Systems

PERSONAL TRAITS

- Strong ambitions to solve technical problems
- Strong ability to work across multicultural backgrounds and multidisciplinary teams

CAREER OBJECTIVE

To contribute in an organization which pushes progress in technology.

PASSIONS

Exploring new technologies

Sports (especially Diving)

LANGUAGES

German



English



Dutch



*currently learning

PROGRAMMING LANGUAGES

Python, C



Java, C++



Matlab & Simulink



NGOs

Verband Deutscher Sporttaucher

Association of German Scuba Divers

2009 - today

bonding-studenteninitiative e.V.

2014 - 2020

IEEE Student Branch TUHH

2022 - today

PROJECTS

Distributed Algorithms for Threshold Detection in Event Monitoring (Bachelor Thesis)

Adapting Threshold Monitoring Algorithms for multi-hop networks and evaluating them using discrete Event Monitoring Simulations

📅 May 2017 - Sept. 2017

📍 Institute of Telematics, Hamburg University of Technology

C++

OMNeT++

Adapting Scheduler in FreeRTOS for mixed-criticalities

Implementation of a mixed criticality schedule algorithm

📅 Jan 2018 - May 2018

📍 CPS Research Group, Nanyang Technological University, Singapore

🔗 github.com/MariusRock/EDF-VD

C

Embedded Programming

Efficient Sensor Design with Rate Constraints Using the Deterministic Information Bottleneck Algorithm

Evaluation to similar information theoretical methods

📅 Nov. 2018 - Jan. 2019

📍 Institute of Communications, Hamburg University of Technology

Python

Minimizing Execution Time of Artificial Neural Networks on Resource-Restricted Devices (Master Thesis)

Investigating the Deep Compression Approach on an Arduino

📅 May 2019 - December 2019

📍 Institute of Telematics, Hamburg University of Technology

C

Embedded Programming

Python

TensorFlow

SaCriMa - Safety Critical Functions on Many-Core Avionics Architectures (SaCriMa)

Investigating many-core safety-critical systems with Flight Control as use-case. Setting-Up Co-Simulations with VxWorks653, Simics and Simulink. Processor-in-the-loop & Software-in-the-loop.

📅 April 2020 - July 2022

📍 Institute of Aircraft Systems Engineering, Hamburg University of Technology

🔗 tinyurl.com/sacrima

C

RTOS

Matlab & Simulink

Many-Core Avionics Design, Architecture, Modelling and Simulation (MC-ADAMS)

Investigating many-core safety-critical systems with Integrated Modular Avionic as use-case. Probe new architecture optimization methods.

📅 July 2020 - July 2024

📍 Institute of Aircraft Systems Engineering, Hamburg University of Technology

🔗 tinyurl.com/mcadamsproject

Matlab & Simulink

Modelling

Integer Linear Programming
