

Michael Schmid

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Research Field: Autonomous Systems

OBJECTIVES

- Provide better automation in automotive and increasing utility for humans
- Enable the design of more complex, highly automated vehicle systems

PROFESSIONAL EXPERIENCE

09/2018 – today **Massachusetts Institute of Technology, Cambridge**

Research Assistant: Automation Design in Automotive

- Analyzed existing automation designs and consulted on improvements (Baidu Apollo vehicle)
- Used STPA to derive requirements for new designs (confidential vehicle OEM)

05/2017 – 07/2018 **German Aerospace Center, Braunschweig**

Flight Control Systems (FCS) Engineer: Methods for preliminary design of FCS architectures

- Developed parametric, physics-based methods for design prediction of unconventional FCS
- Implemented design methods with object-oriented programming in Python

10/2016 – 02/2017 **UTC Aerospace Systems, Frankfurt/Main**

Project Manager: Development of the A320 ACJneo Cabin Pressure Control System (Outflow Valve)

- Led the project team of twenty and coordinated their activities with Airbus and suppliers
- Planned system design, validation and verification activities and oversaw \$4.0 million budget

07/2016 – 09/2016 **Liebherr-Aerospace Lindenberg GmbH, Lindenberg**

System Safety Engineer (vacation work): Flight Control and Landing Gear Systems

- Reviewed fault tree analyses of the Sukhoi Superjet 100 Flight Control System
- Developed a tool for automatic basic event generation for fault trees with Excel VBA

09/2015 – 02/2016 **Liebherr-Aerospace Lindenberg GmbH, Lindenberg**

Bachelor Thesis Student: Hydraulic flight control equipment and hydraulic fluids of type IV and V

- Developed a verification strategy for hydraulic flight control equipment
- Created equipment specific verification plans and validated the strategy with a spoiler actuator

04/2014 – 09/2014 **Airbus Operations GmbH, Hamburg**

Intern: A380 Environmental Control Systems

- Analyzed A380 Environmental Control Systems components lifetime (MTBUR, etc.)
- Helped establish the Equipment Definition Evolution process for Modification Management

06/2013 – 12/2013 **German Aerospace Center, Augsburg**

Research student: Lightweight production technology

- Modelled different handling device suggestions for lightweight production foils with CATIA V5
- Developed a concept for a carbon fiber gripping tool

EDUCATION

05/2020 – today **Massachusetts Institute of Technology, Cambridge**

Doctor of Philosophy: Autonomous Systems and Artificial Intelligence

09/2018 – 05/2020 **Massachusetts Institute of Technology, Cambridge**

Master of Science: Engineering Systems with focus on Autonomy

10/2011 – 05/2016 **University of Applied Sciences Augsburg, Augsburg**

Bachelor of Engineering: Mechanical Engineering with focus on Aeronautical Engineering

09/2007 – 05/2011 **Holbein Gymnasium Augsburg, Augsburg**

Higher education entrance qualification: Abitur with focus on natural sciences

FURTHER PROJECTS

05/2015 – 07/2015 **Chief Engineer: US-German Aircraft Design Project**

- Predesigned a reconnaissance aircraft for use against drug operations
- Coordinated all technical tasks in an international work environment
- Took responsibility for all technical decisions

02/2015 – 03/2015 **Design Engineer: International Engineering Project**

- Determined requirements and evaluated different possible solutions
- Designed an electric motor test bench and rotor balancing shaft
- Worked onsite and presented results in front of the customer

PERSONAL ACHIEVEMENTS & HONORS

2018 Fulbright scholarship for graduate studies in the US (2018 - 2019)

2016 Best mechanical engineering degree in Augsburg, Germany

2014 Airbus internship reward for excellent work

2014 Full scholarship from the German National Academic Foundation (incl. graduate studies)

MEMBERSHIPS & ENGAGEMENT

American Institute of Aeronautics and Aerospace (AIAA)

German Association for Aerospace (DGLR)

German National Academic Foundation

German American Fulbright Association

Voting Member of the SAE TC 22 SC 32 WG 8 US committee for functional safety

FURTHER SKILLS

Programming: Python (proficient), Excel VBA (rusty), Matlab (rusty)

Languages: German (native language), English (business fluent), French (basic)