Technische Universität Graz
Institut für Elektronik

Master Thesis

Co-Operation with Infineon Technologies

Functional Safety Investigation of Mixed Signal Circuitry

Motivation

One of the big challenges in the Automotive Industry today is making the complex ICs safe and dependable. This is especially true for Radar sensor applications in e.g. self-driving cars. In this master thesis you are going to tackle this challenge and apply it on a mixed signal block (e.g. PLL, digital filter, ...).

Objectives

Getting familiar with different topologies of your mixed signal block.
Developing a safety strategy for detecting and/or controlling random hardware faults. Verifying the Safety Concept with the help of safety analysis.

Approach/Methods/Tasks

Literature research on mixed signal block topologies and state-of-the art safety concepts. Learning about the safety analysis methods FTA (Fault Tree Analysis) and FMEDA (Failure Mode Effects and Diagnostics Analysis) with support from functional safety experts.

Organizational matters

- Begin: March 2022 onwards
- Working place: Infineon Technology Graz
- Full time (temporary) 38,5h/week
- Pre-requisites and further details (see link)
  https://www.infineon.com/cms/en/careers/jobsearch/jobsearch/337414-Master-Thesis-Functional-Safety-Investigation-of-Analog-Digital-Circuitry/

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