



Implementation and evaluation of deterministic transmission scheduling algorithm in TSN

Description of Master's Thesis

March 10, 2023

Title: "Implementation and evaluation of deterministic transmission scheduling algorithm in TSN"

Supervisor: Rubi Debnath

Context

Time-sensitive network (TSN) enables deterministic transmission on standard Ethernet. Large-scale industrial network requires complex schedules to configure the network. In this topic, the student will implement an optimized scheduling algorithm for large scale networks. The first step is to go through the current state of the art, followed by designing and developing an optimized scheduling algorithm keeping the resource utilizations at the minimum. Finally, perform a detailed comparison between the optimized algorithm and other scheduling mechanisms.

Requirements

- **Very good Python programming skills.**
- **Should be motivated to work in research topics.**
- **Knowledge of communication networks.**
- **Optimization techniques.**
- **Interest in layer-2 communication or TSN.**
- Independent and able to work with minimal supervision.

Contact

If you are interested in this topic, please send your full application (CV, current transcript of records, research interests, possible start dates) to Rubi Debnath (rubi.debnath@tum.de).