TECHNISCHE UNIVERSITÄT
IN DER KULTURHAUPTSTADT EUROPAS
CHEMNITZ

Professur Kommunikationsnetze
Institut für Informationstechnik
Fakultät für Elektrotechnik und Informationstechnik

Master Thesis or Research Project Opportunity on TSN over 5G

5. November 2024

In recent years, efforts of the IEEE 802.1 Time-Sensitive Networking (TSN) Task Group and 3GPP standardization bodies have focused on unifying industrial communication technologies. TSN aims to enable both real-time and non-real-time applications, while 5G, driven by its ultra-Reliable Low Latency Communications (uRLLC) profile, meets stringent Quality of Service (QoS) demands. By efficiently combining TSN with 5G it is possible to achieve deterministic latency and reliability in a converged wired and wireless domain. However, effectively operating a combined TSN-5G system remains an open challenge, requiring further research and standardization.

Project Overview: Interested students will have the opportunity to work with advanced machine learning algorithms to dynamically configure parameters in 5G networks for the allocation of time-sensitive flows, fulfilling deterministic requirements. This project includes testing your designed algorithms in both a simulator (Omnet++) and our cutting-edge TSN-5G testbed.

How to Apply: If you're interested, please apply with your CV and Leistungsübersicht. Send your email to syed-tasnimul.islam@etit.tu-chemnitz.de with the subject: Äpplication for TSN-5G Thesis/Research Project."

URZ

Contact: syed-tasnimul.islam@etit.tu-chemnitz.de