Control of Networked Dynamical Systems:

towards multi-technology dynamically changing networks

TECHNISCHE UNIVERSITÄT DARMSTADT

ntrol and Cyber-Physical Systems

Master's and Bachelor's thesis proposal (Home office possible)

With the recent development of wireless technology, the opportunities with feedback control of networked dynamical systems are promising. However, feedback control over network is challenging due to delays, package loss, unstable quality of service. The previous approaches often consider the controller design independently from the communication capabilities, which can limit the performance of the closed-loop systems.

This project aims to propose an efficiently integrated overall optimization of control and communication systems to guarantee safety and robustness. The prospective students should have good background on control theory and knowledge of optimal control, model predictive control or wireless communication is a plus.

The project can offer a wide range of topics for students, depending on their backgrounds. Therefore, potential students are encouraged to contact via email for more information.

The language for discussion and writing is preferably English.

