

Master's Thesis

Implementation of reinforcement learning based MPTCP scheduler

In order to fully utilize the capabilities of a LiFi-RF Heterogeneous network, the client devices should be capable of using multiple network interfaces simultaneously. Thanks to multipath solutions like MPTCP, this is possible.

The challenge in a MPTCP-enabled heterogeneous network lies in designing a policy to schedule data packets onto the multiple paths with heterogeneous characteristics (eg. delay, packet loss).

This work involves

- Re-implementing an existing deep reinforcement learning model of a multipath scheduler
- Extending the scheduler
- Evaluating the models extensively in an emulation environment (Mininet)
- Evaluating the models extensively on the hardware testbed

If you are interested in this work, please send an email with a short introduction of yourself along with your CV and grade transcript.

Prerequisites

- Strong Python programming skills
- Experience with reinforcement learning
- Experience with Linux
- Experience using Mininet is an advantage

Advisors

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