



# CSC Seminar

## SPEAKER

**Friedrich Philipp**

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## TITLE

**Optimal control of port-Hamiltonian descriptor systems with minimal energy supply**

## ABSTRACT

We consider optimal control of linear port-Hamiltonian ODE and DAE systems by minimizing the energy supply transferred via the ports. We examine the reachability properties of the system and prove that under suitable assumptions optimal trajectories exhibit a turnpike behavior towards the conservative subspace. In addition, we introduce the notions of port-Hamiltonian matrices and pencils and provide characterizations of these classes.

Tuesday, May 4, 2021 at 2:30 pm

BBB