



dutch institute  
of systems  
and control

## Program DISC Winter Course on Numerics and Control

Eindhoven University of Technology  
March 16-18, 2020

### Monday, March 16, 2020

10.00	<i>Welcome and Introduction</i>
10.00 – 12.00	Introduction to port-Hamiltonian systems (pHs)
12.00 – 13.00	<i>Lunch</i>
13:00 – 15.00	Boundary control of PDEs in one space dimension
15.00 – 15.30	<i>Break</i>
15.30 – 17.30	Lab-1 in Matlab
18.30 – 20.30	<i>Winter Course dinner</i>

### Tuesday, March 17, 2020

09.00 – 10.30	Boundary Control of PDEs in higher space dimension
10.30 – 11.00	<i>Break</i>
11.00 – 12.00	Partitioned Finite Element Method in higher space dimension
12:00 – 13.30	<i>Lunch</i>
13.30 – 15.00	Lab-2 in Python (1)
15.00 – 15.30	<i>Break</i>
15.30 – 16.30	Lab-2 in Python (2)

### Wednesday, March 18, 2020

09.00 – 10.30	Discrete formulation of conservation laws
10.30 – 11.00	<i>Break</i>
11.00 – 13.00	Exterior calculus representation of pHs and geometric finite elements
13:00 – 14.00	<i>Lunch</i>
14.00 – 16.00	Discrete time pHs for simulation and control
16.00	<i>Closure and farewell drinks</i>