报告人： Dr. Sofie Haesaert

时　间： November 19th, 14:00-15:00

地　点： **Meeting room 2-406, SEIEE**

邀请人： Anders Lindquist

Correct-by-design control synthesis for general Markov decision processes

Abstract:

Discrete-time Markov decision processes are an essential modelling tool for many engineering systems. For Markov decision processes that are evolving over continuous spaces, methods for the formal verification and synthesis of control strategies are computationally hard and generally rely on the use of approximate abstractions. In this talk, I will propose a method to compute control strategies using approximate abstraction for satisfying temporal logic specifications. Via a Mars rover temporal logic planning problem, I will show how these ideas can also be applied over belief models of partially observable Markov decision problems.

Biography:

Dr.ir. S. Haesaert (f) is assistant professor specialized in the verifiable design of cyber-physical systems using data-driven modelling, control engineering, and formal verification. Her expertise is in the data-driven verification of decision-making strategies in engineering systems and safe decision making for uncertain engineering problems such as robot navigation problems.

She received her PhD in 2017 from TU Eindhoven and she did a postdoc at California Institute of Technology. In 2017, she won the best PhD Thesis award of the Dutch Institute of Systems and Control. She started as assistant professor at TU Eindhoven in 2018, where she now leads the lab on formal verification of cyber-physical systems.