Abstract:
The Supervisory Control Theory was introduced in 1987 by Ramadge and Wonham (1987), and industrial applications are still scarce. This paper outlines an automatic code generation framework to construct the control logic for a programmable logic controller (PLC) from a symbolic, modular supervisor. The modeling and supervisor generation is performed with Supremica (Malik et al. (2017)), and the supervisor is implemented with the IEC 61131-3 programming language Structured Text. This framework is used to teach model-based approaches and SCT to mechanical engineering students.