Abstract:

In this paper, a control strategy based on fuzzy emulation of LQG controller is proposed. The design procedure aims to construct fuzzy logic based controllers by emulating higher-order control laws using fuzzy reasoning and clustering techniques. The study is conducted on a nonlinear drum boiler-turbine model for which a multivariable LQG fuzzy emulator is designed. Simulations under different operating conditions are performed to assess the efficiency of the proposed control strategy.