

ABSTRACT

In Variable Structure Control Systems (VSS) different structures are switched in accordance with some switching logic in order to improve response quality.

It is intended to present an approach to determine a switching function based on some control area criteria. The proposed approach allows easy implementation by controlling the switching frequency and offering suitable realization of the switching function.

The suggested controller is simulated as a part of a closed-loop control system with states feedback. Transient response is shown to be improved when the system is subjected to step or ramp inputs. System sensitivity to parameter changes as well as early or delayed switchings is investigated. The possibility of feeding less number of states is demonstrated.