



## Robust Control of STATCOM Based on Sliding Mode Technique

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**Abstract.** This paper presents a robust controller for GTO based static compensators (STATCOM), which guarantees fast and stable voltage regulation under all operating conditions. The design of control system is based upon the Sliding Mode technique. The system is simulated in order to validate the controller performances. The stability of proposed composite controller is proved by Lyapunov theory. The effectiveness and validity of the controller system is supported by computer simulation. Simulation results obtained, confirm that the controller is robust and stable against all of the parameters variations and uncertainties.

**Key words:** STATCOM, FACTS, Robust Control, Sliding Mode.

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