

Adaptive Variable Structure Controller Using Neural Networks

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Summary

A power system stabilizer (PSS) of a single machine power system model has been designed using a neural network based variable structure controller (VSC). The need for adaptive VSC comes from the fact that the power system model operates over a wide range of operating points, some of which are unstable, and hence no single VSC gains are sufficient for the entire operating range. Neural networks are used for on-line prediction of the suitable VSC gains when the operating point changes. Simulation results are included to demonstrate the performance of the proposed control scheme

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