

## **111. STABILITY ANALYSIS & EXPERIMENTAL VERIFICATION IN BIFURCATION OF INDUCTION MOTOR DRIVE SYSTEM**

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Variable voltage/ frequency induction motor drives are known to become unstable at certain operating condition. In this paper the in stability phenomena in power electronic induction motor drive system are investigate from the point of view of bifurcation theory. It is shown that some kinds of bifurcations are observed in power electronic induction motor drivesystems .The proposed method make it possible not only determine instability regions of system parameters but also the investigate qualitative properties of the instability phenomena.

Keywords: Voltage source inverter, DC link filter, Induction motor ,Bifurcation, chaos.

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