

## **A Novel Stator Resistance Estimation Method and Control Design of Speed-Sensorless Induction Motor Drives**

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**Abstract :** Speed sensorless systems are intensively studied during recent years; this is mainly due to their economical benefit and fragility of mechanical sensors and also the difficulty of installing this type of sensor in many applications. These systems suffer from instability problems and sensitivity to parameter mismatch at low speed operation. In this paper an analysis of adaptive observer stability with stator resistance estimation is given.

**Keywords :** motor drive, sensorless control, adaptive observer, stator resistance estimation

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