

# **Abstract**

**Yasser Gaber A. Dessouky**

## **Steady state behavior of series connected synchronous motor**

Series Connected Synchronous Motor (SCSM) is a slip-ring induction motor with stator and rotor windings connected in series. This motor runs synchronously at double the rated speed when runs as a normal induction motor. This paper presents theoretical and experimental investigation for steady state performance based on the d-q model as derived for a synchronously rotating frame. The model is extended to include saturation.