

KL UNIVERSITY
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
REPORT ON STAFF COLLOQUIUM

Resource Person : **Mr. Teja Srinu**
DATE : 19-04-2016
EVENT : Staff Colloquium
TOPIC : **“Sensor less Control of Switched Reluctance Motor Based on Phase Inductance Vectors”**.
TIME : 03.00 P.M
VENUE : E105,EEE Dept., K L University
ORGANIZED BY : EEE Dept.
FACULTY INCHARGE : G.Mamatha

EVENT DESCRIPTION:

‘Staff Colloquium’ is an activity organized by Dept. of E.E.E of K L University on 19-04-2016 from 03.00 P.M to 04:30 P.M. The Staff Colloquium is given Mr.Teja Srinu, Ass. Prof. in EEE Dept., KL University. The topic of the Staff Colloquium is **“Sensor less Control of Switched Reluctance Motor Based on Phase Inductance Vectors”**.In order to contribute to the Department mission, the Staff Colloquium is organized in our campus premises to bring awareness among the faculty and M. Tech. students on Pricing of Transmission Services.

SESSION ACTIVITIES:

The Department has made the necessary arrangements for the Staff Colloquium activity in the lecture room (E105) for commencement of the event in scheduled time. All the faculty members are asked to move to lecture room before 03:00 PM and the attendance of the faculty is collected in the lecture room.

SEMINAR IN BRIEF:

A new sensorless control method based on phase inductance vectors of switched reluctance motor (SRM) is presented in this paper. To implement this method, the following was done.First, based on the pulse injection technique, a new method called phase current slope difference is proposed for identifying the full cycle phase inductance of each phase. Second, the phase inductances are considered as vectors with fixed phase difference and the composed vector is rotated with the varied rotor position. Combining the composed vector orthogonal decomposition method and a new inductance sub regional method, the rotor position can be estimated.

This method can realize sensor less control of SRM from starting up at standstill to high-speed operation and is quite easy to implement. No additional hardware or complex computation is required and no a priori knowledge on magnetic characteristics of SRM is necessary. To verify the performance of the proposed sensorless scheme, the following experiments have been performed: 1) the initial rotor position at standstill and rotating shaft conditions are estimated for sensor less start up control; and 2) the rotor position and rotational speed are estimated at different reference speeds for sensor less speed closed-loop control and the dynamic performance is fully validated.

PHOTOS:



Asst.Prof.Teja Srinu delivered a Seminar on “Sensorless Control of Switched Reluctance Motor Based on Phase Inductance Vectors”



Faculty listening the lecture along with the students

Faculty Incharge

HOD, E.E.E