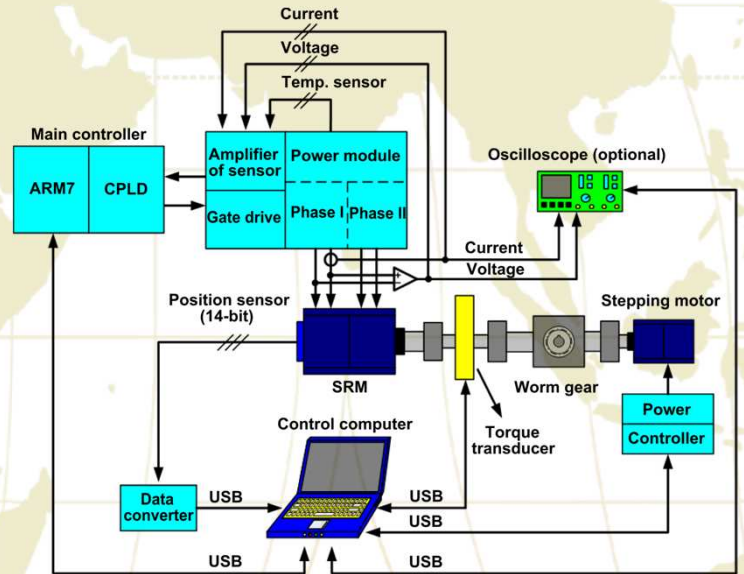


# Development of an Automated Characterization Test Bench for Switched Reluctance Machines

## Concept of Test Bench System :

The magnetic characteristic of the switched reluctance machines (SRMs) is highly nonlinear. As a result, there is no mathematical equation to describe their behavior completely. In order to control this machine type, it is necessary to have the information of the flux-linkage and static torque characteristic.

Thus, an automated characterization test bench has been developed in order to reduce the measured time and to avoid the human errors in measuring data.



## Test Bench Hardware :

Main components used to obtain SRM data consist of

- Converter with controller
- Rotor position sensor
- Torque transducer
- Stepping motor and worm gear

## Software Interface :

All hardware of automated measurement system is able to control through LabVIEW application. The measured data which are current, voltage, rotor position and static torque are processed and plotted into graphs in 3D view by MATLAB/SIMULINK software.

