Course Title: Fuzzy Logic Using MATLAB/ Simulink for Control System Application

Course Code: EEA 152

Course Background / Summary:

Fuzzy Logic has been widely applied in industry and home appliances for several applications from complex systems such as aircraft to washing machines which is a less complex system. The flexibility of fuzzy logic makes it popular to be applied in control engineering. This course will introduce participants to how to make use of Fuzzy Logic control such as speed, position, level, and temperature. It also exposes the participants to Arduino as an interface device to pass and receive control Fuzzy control algorithm from MATLAB/Simulink signals from sensors and actuators.

Course Objectives:

- Understand and make use of fuzzy logic to control applications such as speed, position, level, and temperature.
- Utilize MATLAB/Simulink as the processor to process fuzzy control.
- Use Arduino as the interface to pass and receive control variables from and to input sensors and actuators.

Target Audience:

- Electricians, Research assistants, Research officers, Researchers, Academicians
- Technicians and Engineers

Course Duration: 3 Days

Course Contents
1.0 Basic Knowledge about MATLAB/Simulink
2.0 Theory of Control System
3.0 Construct Physical Based Model, Transfer Function, State Space from Linear Differential Equation
4.0 Control Speed, Position, Level System with Aid of System Identification and SISO tool.

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