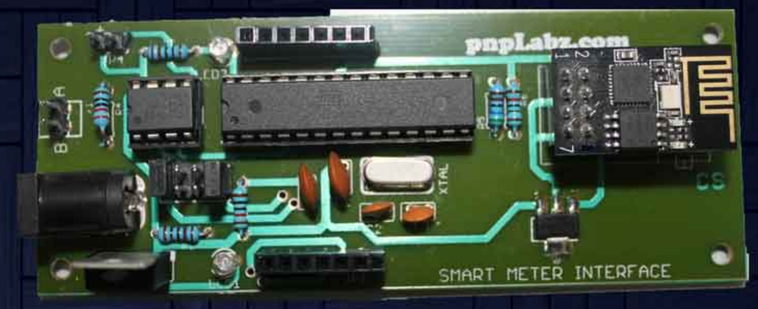
SMART
HOMES.MEASUREMENTS.GRIDS
USING
IOT
Oct. 10-12, 2017



ABOUT GRIET

Gokaraju Rangaraju Institute of Engineering and Technology (GRIET) is a premier autonomous institute committed to imparting quality engineering education. The Electronics & Communication Engineering (ECE) department at GRIET makes continuous efforts to teach real 'engineering' by focusing on hands-on practice in designing, developing and demonstrating projects and products in new and emerging technologies.

SMART HOMES.MEASUREMENTS.GRIDS

Sensors, devices and appliances at home can be connected to enable communication with each other and through the Internet for remote monitoring and control.
Smart energy meters can be dynamically queried now for parameters such as phase voltages, currents, power using standard industrial protocols and the data can be logged on the Internet for analysis and display. With multidrop technologies such as RS485, multiple meters can be connected to one central Internet enabled node. Smart homes and smart metering will serve as essential building blocks in the realization of a smart grid.

The workshop will have industry experts in smart grid, energy management and smart home giving insights into current state-of-the-art technologies at work. The workshop will have hands-on sessions using custom built hardware with sensors, actuators, and wireless connectivity on board for realizing smart home, measurements and grid applications using IOT. The workshop will also teach the participants mobile app development as the preferred mode of user interaction with the smart applications.

REGISTRATIONS

Fee is Rs 3000/- . Payment and registration details available at www.griet.in/smartiotworkshop
The Wokshop kit will have a custom hardware board that can serve as a base board for parameter monitoring, energy metering and cloud connectivity

DAY 1

- Introduction - Smart with IOT
- Ambient parameter monitoring, Intrusion detection, Appliance control
- Microcontroller programming
- IDE, compilation, uploading
- Connecting to the cloud - GRIET web services
- Mobile app development
- IDE, programming, deployment

02

- RS485 basics and the MODBUS protocol
- Connecting to 3-phase energymeter and reading parameters
- Pushing data to the cloud
- Developing mobile app to access the data from the cloud
- Data analytics

03

- Smart Grid - overview
- Proof-of-concept implementation
- Demo of projects
- What next?

ADVISORY COMMITTEE

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ELIGIBILITY

Faculty of any engineering branch
Student of any engineering branch.