

International Conference on Smart Grids (icSmartGrids) 2018 December 4-6, 2018, Nagasaki  
Prefectural Art Museum, Nagasaki, Japan Keynote Speech,  
Prof. Dr. Ramazan BAYINDIR (Abstract)

## **Title : I A Comprehensive Study on Microgrid Technology**

### **Abstract**

Grid interconnected capability distributed generation attracts researcher due to the cumulative demand for electricity and environment pollution concern as a new emerging technology for providing reliable and clean power supply. Microgrid comprises with distributed generation, energy storage, loads and control system which is capable of operating in grid-tied mode and islanded mode. In transition between two modes, microgrids must be robust in regulating the local voltage and frequency, and protecting the network and connected equipment to the system. Besides, it requires facilitating generation and load side management, and resynchronization.

This keynote speech presents an overall description and typical distributed generation technology of microgrid. It also adds a comprehensive study on energy storage devices, microgrid loads, interfaced distributed energy resources (DER), power electronic interface module and microgrids interconnection. The speech is concluded emphasizing the worthy findings and potential areas of research that would enrich for microgrid facilities.