Message from the Guest Editor

Dear Colleagues,

The smart grid implementation is facilitated by microgrids development. Microgrids are considered the main smart grid building blocks. Whether they are AC or DC, high voltage or low voltage, high power or small power, or integrated into the distribution system or the transmission network, microgrids always require an intelligent energy management that is integrated in the power system. A comprehensive intelligent energy system is aimed at providing overall energy efficiency with regard to the following: increased power generation flexibility, improved energy consumption, reduced CO2 emission, improved stability, and minimized energy cost. This Special Issue focuses on recent key theoretical and practical developments that concern the models, technologies, and flexible solutions to facilitate the following optimal energy and power flow strategies: the techno-economic model for optimal sources dispatching, real-time optimal scheduling, and real time optimization with model predictive control.