Optimal Scheduling for Future Low Carbon Power Systems

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Abstract:

Decarbonisation of the global electricity system is expected to be achieved by the integration of a large share of renewable energy resources (RES). However, the variability, uncertainty, limited inertia capability, and limited short circuit current capability of inverter-based RES impose significant challenges, at different time scales, on the efficient and reliable operation of future power systems. This talk will discuss the latest development of the multi-time-scale modelling approach and the application of stochastic and conic programming in power system scheduling problem to tackle those challenges.