

Upper Confidence Bounds for Trees on Demand-Side Management: Charging Electric Vehicles

Ruohua Li, M.Sc.

University of Dublin, Trinity College, 2013

Supervisor: Stephen Barrett

Co-supervisor: Edgar Galván-López

Smart grid had become a popular topic in recent years. One big area of smart grid which make it different from the traditional grid is the demand-side management. Many research efforts have been made to improve demand-side management performance using artificial intelligence, while most of those proposed approaches behaves to be non-real-time. A very recent algorithm UCT, appeared not long from now, has achieved a lot of evidence to make it self one of the best performing real-time optimal solution. In this research, UCT will be tested to deal with real-time demand-side management for its capability on Electric Vehicle charging coordination problem.