

## AN EFFECTIVE MEC SUSTAINED CHARGING DATA TRANSMISSION ALGORITHM IN VANET-BASED SMART GRIDS

### ABSTRACT

Available charging information exchanges between mobile electric vehicles (EVs) and charging stations are significantly critical in spatio-temporal coordinated charging services introduced by smart grids. In this project propose an efficient information transmission strategy for intelligent charging navigations of enormous moving EVs in large scale urban environments. Specifically, we firstly design a heterogeneous VANET-based (vehicular ad hoc network) communication framework by means of mobile edge computing concept. In addition, based on the established multi-objective communication optimization problem, we propose an effective charging information dissemination algorithm between mobile edge computing servers and moving EVs. Moreover, in order to further increase charging information delivery efficiency and reduce redundant overheads, an improved local relaying scheme for charging information is designed on the basis of the formulated waiting time model. Finally, a series of simulation experiments are implemented to demonstrate the excellence and feasibility of our charging information transmission strategy.