Talk Title: Collaborative Mobile Charging: From Abstraction to Solution

Abstract: Wireless energy charging using mobile vehicles has been a viable research topic recently in the area of wireless networks and mobile computing. This paper gives a short survey of recent research conducted in our research group in the area of collaborative mobile charging. In collaborative mobile charging, multiple mobile chargers work together to accomplish a given set of objectives. These objectives include charging sensors at different frequencies with a minimum number of mobile chargers and reaching the farthest sensor for a given set of mobile chargers, subject to various constraints, including speed and energy limits of mobile chargers. Through the process of problem formulation, solution construction, and future work extension for problems related to collaborative mobile charging and coverage, we present three principles for good practice in conducting research, that is, select a simple problem, find an elegant solution, and use imagination for extension.