



學術報告

Cognitive Battery Management with a Cyber-Physical Approach



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Biography: Dr. Liang He is an assistant professor at University of Colorado Denver. He worked as a research fellow at The University of Michigan at Ann Arbor, MI, USA during 2015-2017, a research scientist at Singapore University of Technology and Design during 2011-2014, and a research assistant at University of Victoria, Canada, during 2009-2011. His research interests mainly focus on cyber-physical systems, cognitive battery management, mobile computing, and internet of things. He has published over 60 research papers at premier conferences such as ACM MobiSys, ACM MobiHoc, IEEE RTSS, IEEE INFOCOM, and ACM/IEEE ICCPS, and journals such as IEEE TMC, IEEE TC, IEEE TSG, and ACM TCPS. He is the recipient of the best paper/poster awards of MobiSys'17, QShine'14, GLOBECOM'11, and WCSP'11, and a best paper candidate of GLOBECOM'14. He also served as TPC members for over 20 international conferences and workshops.

In this talk, I will introduce our recent explorations in battery management with a cyber-physical approach — improving battery management in the cyber space based on their unique physical properties and with users in the loop. Specifically, I will explain battery's relaxation effect and show how it can be exploited for system optimization. I will also highlight several future investigation directions on battery-involved cyber-physical systems such as new energy systems, vehicle systems, and smart cities.