

Pushing Down User Information to Enhance Smart Device System Design

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VENUE CS Seminar Room, Y6405
6th Floor, Yellow Zone
Yeung Kin Man Academic Building
City University of Hong Kong
83 Tat Chee Avenue
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ABSTRACT

Recent popularity in smart devices, for example smartphones, has created an increased interest in carrying small devices with limited battery capacity. Unfortunately, smartphones are notorious for consuming energy far too quickly. Although certain advances have been made on the hardware side such as better batteries, the first part of the talk will be focused on improving energy management software in the lower layer system to make better use of existing batteries. We aim to save smartphone radio energy with a network traffic aware approach. More specifically, we exploit application priority with machine learning for energy savings; we also exploit delay tolerant time periods within high priority applications, such as real-time applications, for energy savings. The second part of the talk will be focused on a learning-based approach to analyze disk I/O traffic, rather than network I/O traffic, from users to optimize lower layer system design for both smartphone energy savings and delay reduction.

BIOGRAPHY

Dr. Gang Zhou is an Associate Professor in the Computer Science Department at the College of William and Mary. He served as Graduate Program Director of this department during 2015~2017. He received his Ph.D. degree from the University of Virginia in 2007 under Professor John A. Stankovic. He has published more than 80 papers in the areas of ubiquitous & mobile computing, body sensor networks, smart healthcare, internet of things, wireless communication & networking. There are in total 6000 citations of his papers per Google Scholar. He also has 15 papers each of which has been cited more than 100 times since 2004. He serves in the Journal Editorial Board of (1) IEEE Internet of Things, (2) Elsevier Computer Networks, and (3) Elsevier Smart Health. He served as NSF, NIH, and GENI proposal review panelists multiple times. He received an award for his outstanding service to IEEE Instrumentation and Measurement Society in 2008. He is a recipient of the Best Paper Award of IEEE ICNP 2010. He received NSF CAREER Award in 2013. He received a 2015 Plumeri Award for Faculty Excellence. He is a Senior Member of IEEE and ACM. He is a co-founder of Ultigesture LLC.

All are welcome!



In case of questions, please contact Dr Jianping Wang at Tel: 3442 7737, E-mail: jianwang@cityu.edu.hk, or visit the CS Departmental Seminar Web at <http://www.cs.cityu.edu.hk/news/seminars/seminars.html>.

