A Vision towards Pervasive Edge Computing
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Abstract
This talk presents an emerging pervasive edge computing paradigm where heterogeneous edge
devices (e.g., smartphones, tablets, IoT and vehicles) can collaborate to sense, process data and
create many novel applications at network edge. We propose a data centric design where data
become self-sufficient entities that are stored, referenced independently from their producers. This
enables us to design efficient and robust data discovery, retrieval and caching mechanisms. The
future research agenda including scalable data discovery, cache management, autonomous
processing, trust, security and privacy, incentives and semantic data naming) will be discussed.

Biography
Yuanyuan Yang received the BEng and MS degrees in computer science and engineering from
Tsinghua University, Beijing, China, and the MSE and PhD degrees in computer science from
Johns Hopkins University, Baltimore, Maryland, USA. She is a SUNY Distinguished Professor in
the Department of Electrical & Computer Engineering and Department of Computer Science at
Stony Brook University, New York, USA. She is currently on leave serving as a Program Director
at the US National Science Foundation. She is internationally recognized for her contributions in
parallel & distributed computing systems and networking. She was named an IEEE Fellow in 2009
for contributions to the area. Her current research interests include cloud computing, edge
computing and mobile computing.

Yuanyuan Yang is currently the Associate Editor-in-Chief for IEEE Transactions on Cloud
Computing and an Associate Editor for ACM Computing Surveys. She is an inventor/co-inventor of
seven U.S. patents in the area of interconnection networks. She has served as a distinguished visitor
of IEEE Computer Society. She received an IEEE Region 1 Award in 2002, the Best Paper Awards
at the 18th IEEE International Parallel and Distributed Processing Symposium in 2004, and the 7th
International Conference on Parallel and Distributed Systems in 2000, a Distinguished Leadership
Award from the 15th IEEE International Conference on Computer Communications and Networks
in 2006 and four Best Paper Runner-up Awards.

** ALL ARE WELCOME **