**Research to Reality: Applying Concepts to Practice**

According to a Gartner Group ([www.gartner.com](http://www.gartner.com)) report, the ratio of mobile to fixed connections is exceeding 4-to-1 by 2012. Mobile data usage continues to grow exponentially as 3G technology spreads globally with a large portion of devices will be mobile devices (e.g., iPhone, iPad, Android devices, etc). My early research lies in the area of computer networks with an emphasis on wireless personal area networks (WPAN), mesh network, sensor networks, mobile and vehicular networks. In the case of vehicular networks (VNETs), industry pressure has created a situation in which an overwhelming interesting in solutions to problems leads to a preference for real-world research as opposed to fancy theory. In VNETs, we proposed a Virtual Router concept to reduce the frequency of reconnections which is a hard problem as it is an innate property of mobility beyond the control of any routing algorithm. However, the reality of large deployment of sensor networks and vehicular networks is nearly impossible due to its cost.

With the dramatically increase of smart phone (Android and iPhone devices) users in recent year and ability (e.g., sensors on smart phones), it is only reasonable to take advantage toward to this new trend. In PLASH (Platform for Location Aware Service with Human Computation) project, we design and build a platform to allow fast deployment of various location aware services. PLASH applies Web 2.0 and human computation to consolidate the intelligence and efforts of general public. PLASH platform provides develop environment for programmers to build, contribute, and deploy their applications (e.g., iPhone and Android apps). In addition, this project provides a platform for researches with dataset (e.g., location traces and network communication) for new researches and users from real world to test the proposed algorithms/techniques. With the PLASH project, I am able deploy the Virtual Router concept using smart phones and turn a research concept to a reality.

**Short Bio:** Dr. Yao H. Ho is Assistant Professor in the Department of Computer Science and Information Engineering at National Taiwan Normal University since 2012. He received his B.S., M.S., and Ph.D. degrees in Computer Science from University of Central Florida, U.S.A., in 2001, 2002, and 2009, respectively. Prior to NTNU, he is with the Institute of Information Science, Academia Sinica and worked under Dr. Chen, Meng Chang at Advanced Network Technologies and Services (ANTS) Lab. His research targeted following areas: Application/System and Platform Design (Grid/Distributed/Cloud/Mobile), Social Network and Computing, Mobile and Wireless Networks (WLAN/Sensor/Vehicular/Mobile Ad Hoc), Network Protocols, Network Measurements, and Database. In addition, he has been involved in number of major research projects that resulted in **22 publications** at refereed international conferences, **8 journal** papers, and **one U.S. patent**. All the research projects are sponsored by some well-known name such Symantec®, National Science Foundation (NSF) – U.S., and Networked Communications Program (NCP) with National Science Council (NSC) – Taiwan. Two of the published papers are selected as the **best papers** in the *IEEE International Conference on Communication Theory, Reliability, and Quality of Service*, 2008 and the *IEEE Symposium on Computer and Communication*, 2008. Overall citations of the virtual router concept are **over 100 citations**.