Pervasive Platforms: From Cloud to Fog

Prof. Philippe Lalanda
Professor
Grenoble-Alpes University
France

Date: 15 August 2018 (Wednesday)
Time: 2:30 p.m. – 3:30 p.m.
Venue: Room PQ703, 7/Floor, PQ Core, Mong Man Wai Building,
The Hong Kong Polytechnic University

Abstract

The proliferation of smart objects, coupled with the widespread availability of the Internet, makes pervasive computing more concrete every day. Whether at home, in commute, or at work, we can already enjoy a variety of unobtrusive services. These services are however still limited in terms of performance, security, cost and value. A number of reasons can be put forward to explain the difficulties currently experienced. In this talk, we focus on two major challenges: building context-aware services and designing the right architecture to do so. Regarding architecture, most pervasive services rely on cloud solutions. The attractiveness of this approach is easy to explain: elasticity, easy administration, computing power, storage capabilities, etc. However, a number of added-value services impose requirements that cannot be met by cloud-based architectures. These services call for fog-based solutions or for mixed approaches. To support this statement, we will present iCasa, a service-oriented pervasive platform designed for the fog. iCasa allows the production of context-aware applications that can be autonomically adapted at runtime. This platform has been experimented for several years in the smart home domain. We will also take the opportunity of this talk to present the notion of smart home and its current situation.

About the Speaker

Philippe Lalanda is a Professor at Grenoble-Alpes University (UGA) where he teaches Software Engineering and leads the Adele research team. He completed his PhD on real-time blackboard systems in Nancy University and applied this work to the control of smart robots at Stanford University in the Knowledge System Laboratory. He then worked for ten years in the industry (Dassault Aviation, Thales, Schneider Electric) where he held the positions of software architect and R&D project leader. Philippe Lalanda now conducts research in the fields of autonomic computing and software engineering, mostly applied to pervasive computing. He has authored some 100 papers in international journals and conferences and supervised 20 PhD. He has also co-authored a reference book on Autonomic Computing (Springer Verlag). He has served in a number of conferences as reviewer, program chair and general chair. He finally serves as an expert at the European Commission and in diverse French research institutions. Philippe Lalanda received an IBM Faculty Award in 2015.

All are welcome!

Enquiries:
Professor George Baciu
Email: csgeorge@comp.polyu.edu.hk
Tel: 2766 7295 / 2766 7272