Research issues of Cloud Federations and IoT systems

**Doctoral School:** Doctoral School of Computer Science  
**Institute:** University of Szeged  
**Supervisor:** Attila Kertész  
**Topic Description:**
Cloud Computing offers on-demand access to computational, infrastructure and data resources operated from a remote source. These services are offered at different Cloud deployment models ranging from the lowest infrastructure level to the highest software or application level. Within Infrastructure as a Service solutions we can differentiate public, private, hybrid and community Clouds according to recent reports. The previous two types may utilize more than one Cloud system, which is also called as a Cloud federation. Mobile devices can also benefit from these Cloud services: the enormous data users produce with these devices are continuously posted to online services, which may require the use of several Cloud providers at the same time to efficiently store and retrieve these data. The Internet of Things is a dynamic global network infrastructure with self configuring capabilities, the things in this network interact and communicate among themselves and with the environment by exchanging data and information sensed, and react autonomously to events and influence them by triggering actions with or without direct human intervention. The aim of this research topic is to study the interoperation of Cloud Federations and IoT systems, and develop solutions integrating IoT and possibly social networking services into a Cloud ecosystem of compute, data, networking and sensing resources.

**Admissible number of students:** 1  
**Deadline for applications:** 2016-09-30

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