

Workshop

Quality Engineering for a Reliable Internet of Services

organized by **COST Action IC1304 (ACROSS)**
hosted by **ITC 28, Würzburg, Germany, 16 September 2016**

Background

The emergence of new, powerful network concepts like 5G and advanced cloud technologies –complemented with the nearly unlimited data access nowadays – will provide unbounded possibilities and flexibility in the creation and implementation of new, innovative services. A challenging factor in service reliability and quality provisioning is the highly dynamic nature of these complex environments, imposing a high degree of uncertainty in many respects (e.g., in terms of number and diversity of the service offerings, the system load of services suddenly jumping to temporary overload, demand for cloud resources, etc.). This raises the need for online control methods that quickly adapt to – or even anticipate to – changing circumstances. The workshop addresses fundamental scientific challenges for (autonomous) quality-driven control in such virtualized (through NFV, SDN), cloud-based network settings. Particular focus will be on: (i) quantitative methods and algorithms for quality control, and resource and energy efficiency (ii) concepts and methods for QoS monitoring and prediction, and (iii) pricing and competition in the future IoS.

Programme

- 09.45 – 10.00 **Hans van den Berg** (workshop co-chair), TNO, The Hague, Netherlands
Welcome and Introduction
- 10.00 – 10.30 **Gunnar Karlsson**, KTH, Stockholm, Sweden
Energy-Aware Opportunistic Mobile Data Offloading
- 10.30 – 11.00 **Jan Willem Kleinrouweler**, CWI, Amsterdam, Netherlands
Delivering stable high-quality video with DASH assisting network elements
- 11.00 – 11.30 *Coffee break*
- 11.30 – 12.00 **Vasilios Siris**, Athens University of Economics and Business, Greece
Exploiting Mobility Prediction for DASH Adaptation
- 12.00 – 12.30 **Lucia D’Acunto**, TNO, The Hague, Netherlands
Auctioning In-Network Caching Capacity in ICN
- 12.30 – 13.30 *Lunch*
- 13.30 – 14.00 **Andrea Araldo**, Télécom ParisTech, France
Enhanced Network Caching to Improve Video Delivery and Reduce ISP Cost
- 14.00 – 14.30 **Åke Arvidsson**, Ericsson, Stockholm, Sweden
Challenges within Transport Protocols (tentative)
- 14.30 – 15.00 **Barbara Pernici**, Politecnico di Milano, Italy
Characterizing Energy Consumption and Adaptation Strategies for Cloud Applications
- 15.00 – 15.15 **Rob van der Mei** (workshop co-chair), CWI, Amsterdam, Netherlands
Wrap-up and Closing