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Towards Cyber-Physical-Social Systems – Towards a New Paradigm for Elastic Distributed Systems

Schahram Dustdar

Distributed Systems Group
Vienna University of Technology, Austria

Abstract

This talk, which is based on our newest findings and experiences from research and industrial projects, I will address one of the most relevant challenges for a decade to come: How to integrate the Internet of Things with software, people, and processes, considering modern Cloud Computing and Elasticity principles. Elasticity is seen as one of the main characteristics of Cloud Computing today. Is elasticity simply scalability on steroids? This talk addresses the main principles of elasticity, presents a fresh look at this problem, and examines how to integrate people, software services, and things into one composite system, which can be modeled, programmed, and deployed on a large scale in an elastic way. This novel paradigm has major consequences on how we view, build, design, and deploy ultra-large scale distributed systems.

About the speaker



Schahram Dustdar is Full Professor of Computer Science and head of the Distributed Systems Group at the TU Vienna. From 2004-2010 he was Honorary Professor of Information Systems at the Department of Computing Science at the University of Groningen (RuG), The Netherlands. He is an Associate Editor of IEEE Transactions on Services Computing, ACM Transactions on the Web, and ACM Transactions on Internet Technology and on the editorial board of IEEE Internet Computing and IEEE Computer. He is the Editor-in-Chief of Computing (Springer). Dustdar is recipient of the ACM Distinguished Scientist award (2009), the IBM Faculty Award (2012), a member of the Academia Europaea: The Academy of Europe, and an IEEE Fellow (2016).