In this talk I will explore the integration of people, software services, and things with their data, into a novel resilient ecosystem, 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 and establishes a novel foundation for an “architecture of value” driven Smart City.

In particular, this talk addresses three novel paradigms for designing the service-oriented information systems of the future: Elastic Computing, Social Compute Units, and Osmotic Computing. These three paradigms serve as a foundation for future large-scale distributed systems. Furthermore, we will discuss our responsibilities as computer scientists, technologists, and researchers for creating technologies, which benefit society in a positive way, thereby strengthening the new fabric of interconnected people, software services, and things into a novel resilient ecosystem.

Speaker Info:
Schahram Dustdar is Professor of Computer Science heading the Distributed Systems Group at the Technical University of Vienna (TU Wien). From 2004-2010 he was also Honorary Professor of Information Systems at the Department of Computing Science at the University of Groningen (RuG), The Netherlands. From 1999 - 2007 he worked as the co-founder and chief scientist of Caramba Labs Software AG in Vienna (acquired by Engineering NetWorld AG), a venture capital co-funded software company focused on software for collaborative processes in teams. Caramba Labs was nominated for several (international and national) awards: World Technology Award in the category of Software (2001); Top-Startup companies in Austria (Cap Gemini Ernst & Young) (2002); MERCUR Innovationspreis der Wirtschaftskammer (2002).

From Dec 2016 until Jan 2017 he was a Visiting Professor at the University of Sevilla, Spain and from January until June 2017 he was a Visiting Professor at UC Berkeley, USA.

He is co-Editor-in-Chief of the new ACM Transactions on the Internet of Things as well as Editor-in-Chief of Computing (Springer). He is an Associate Editor of IEEE Transactions on Services Computing, IEEE Transactions on Cloud Computing, ACM Transactions on the Web, and ACM Transactions on Internet Technology, as well as on the editorial board of IEEE Internet Computing and IEEE Computer. Dustdar is recipient of the ACM Distinguished Scientist award (2009), the IBM Faculty Award (2012), the IEEE TCSVC Outstanding Leadership Award, for Outstanding Leadership in Services Computing (2018), an elected member of the Academia Europaea: The Academy of Europe, where he is chairman of the Informatics Section, as well as an IEEE Fellow (2016).

More info on: dsg.tuwien.ac.at/Staff/sd