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# First International Workshop on Architecting with MicroServices

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**Abstract**—Netflix, Amazon, The Guardian and other companies have evolved their applications towards the promising and challenging style of microservice architectures (MSAs).

MSA arises from the broader area of Service Oriented Architecture and focuses on specific aspects, such as componentization of small services, application of agile practices for development, deployment and testing of services, usage of infrastructure automation with continuous delivery features, decentralized data management and decentralized service governance.

The goal of AMS 2017 is to gather researchers and practitioners to share challenges, solutions, and reflections on the frontiers of architecting with microservices. AMS solicits contributions from both academic and industrial participants, thus fostering active synergy between the two communities.

**Index Terms**—Microservices, Software Architecture.

## I. MESSAGE FROM THE CHAIRS

Welcome to AMS 2017, the first International Workshop on Architecting with MicroServices on April 3, 2017 in Gothenburg, Sweden. AMS 2017 is co-located with the IEEE International Conference on Software Architecture (ICSA).

Inspired by Service Oriented Architecture (SOA), and from the convergence of Cloud Computing and Web 2.0 [3], Microservice Architecture (MSA) has recently emerged as an *architectural style* particularly suitable to the adoption of cloud technologies and infrastructures [2, 6]. Companies like Netflix, Amazon, The Guardian have evolved their applications towards a microservice architecture [4]. The MSA style is an approach to developing a single application as a suite of small services, each running in its own process and communicating with lightweight mechanisms. Although the set of MSA principles aims for high degrees of *flexibility*, *modularity* and *evolution* [1], adopting MSA in the real world is a challenging task and a long process.

Even though the design principles around the microservice architectural style have been identified, many aspects are still unclear or unexplored. The goal of AMS 2017 is to gather researchers and practitioners to share challenges, solutions, and reflections on the frontiers of architecting with microservices. AMS 2017 topics of interest tackle various levels of MSA, e.g.: MSA modelling and representation, architecture description languages for MSA [5], MSA functional and extra-functional analysis, MSA integration with agile processes and continuous delivery, MSA automated deployment, elasticity in and thanks to MSA.

To further trigger synergy between academic research and practice, we kickstart the workshop with a keynote from

*Jesper Derehag*, designer, architect and part-time researcher at Ericsson Packet Core, as well as active contributor to many OSS projects. Jesper will share his reflections and lesson learned from years of experience in developing with microservices. He will also propose his perspective on open issues and research challenges.

We are deeply indebted to a great many people for their help and support in organizing AMS 2018. First of all, we would like to thank all the authors who submitted papers and all the participants who contributed their ideas, expertise and energy. We particularly would like to thank the members of our Program Committee who reviewed the papers. We also greatly acknowledge the generous support from our host ICSA 2017 and, in particular, the ICSA 2018 Workshop Chairs, Rafael Capilla and Ivano Malavolta. Enjoy AMS 2017 and have a wonderful time in Gothenburg!

## II. AMS 2017 ORGANIZATION

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