



The 13th advanced summer school on service-oriented computing

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The 13th advanced Summer School on Service Oriented Computing (SummerSOC'19) continued a successful series of summer schools that started in 2007, regularly attracting world-class experts in Service Oriented Computing to present state-of-the-art research during a week-long program organized in several thematic tracks: IoT, formal methods for SOC, Cloud Computing, Data Science, Advanced Manufacturing, Software Architecture, Digital Humanities, Quantum Computing, and emerging topics. The advanced summer school is regularly attended by top researchers from academia and industry as well as by Ph.D. and graduate students.

During the different sessions at SummerSOC renowned researchers gave invited tutorials on subjects from the themes mentioned above. The afternoon sessions were dedicated to the SummerSOC symposium and its original research contributions in these areas mentioned above. All accepted contributions were submitted in advance and have been peer-reviewed. In addition, the contributions had been extensively discussed during a poster session. The feedback of this discussion too has been folded into the version published in this special issue.

The first article provides a systematic review on the white and grey literature on design principles, architectural smells and refactoring for microservice; the first author received the “SummerSoC Young Researcher Award” sponsored by ICSOC. The next article introduces the ASAP-DM framework, which enables an automatic selection of ana-

lytic platforms for data mining, followed by a contribution presents a framework for task-parallelization for entity resolution. The next article proposes a lightweight messaging engine for decentralized data processing in the internet of things. The subsequent one provides a suitable collection of transactional properties criteria to analyze permissioned blockchains and apply them to a prominent set of these systems. The next contribution presents a systematic review of declarative deployment technologies and introduces the essential deployment metamodel by extracting the essential parts that are supported by all these technologies, followed by a contribution focusing on rational decomposition and orchestration for serverless computing. The subsequent article is devoted to requirements for a model-driven cloud-native migration of monolithic web-based applications and is followed by a contribution introducing two approaches on automated saving and restoring of running applications. The next two papers concentrate on the area of patterns suggesting a rewrite and refinement of architectures using graph theory and providing new ideas on how to find entry points for pattern language. Finally, the second last article in this journal introduces a formal approach to build privacy awareness into clinical workflows. The journal concludes with a vision for quantum humanities discussing the benefits for quantum computing in digital humanities.

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January until June 2017 he was a Visiting Professor at UC Berkeley, USA.

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 Innovation award of the Austrian Chamber of Commerce (2002).

He is co-Editor-in-Chief of the new ACM Transactions on Internet of Things (ACM TIoT) 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), 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).