European Symposium on Serverless Computing and Applications – ESSCA 2018 – Symposium Proceedings

Editor: Josef Spillner, Zurich University of Applied Sciences, Switzerland

Foreword

This proceedings volume contains the works presented in the scientific track at ESSCA 2018. While being a dedicated event to mix academic, industry, educational and community views, ESSCA 2018 was collocated with the IEEE/ACM UCC and BDCAT 2018 conferences and ran subsequent to the 4th Workshop on Serverless Computing (WoSC4), thus bringing large parts of the research community around FaaS and serverless systems together.

A total of seven submissions were received in the scientific track, of which five were selected to pass the quality gate on the condition of achieving an average score of at least +0.5. Each paper had received at least four reviews to ensure the diversity and representativeness of feedback and advice to the authors.

Scientific Track programme committee

- Maria Fazio, University of Messina, Italy
- Martin Garriga, Politecnico di Milano, Italy
- Tyler Harter, University of Wisconsin, USA
- Višnja Križanović, Josip Juraj Strossmayer University of Osijek, Croatia
- Theo Lynn, Dublin City University, Ireland
- Maciej Malawski, AGH University of Science and Technology, Poland
- Manuel Mazzara, Innopolis University, Russia
- Lucas Nussbaum, LORIA, France
- Claus Pahl, Free University of Bozen-Bolzano, Italy
- Josef Spillner, Zurich University of Applied Sciences, Switzerland (chair)
- Dan Williams, IBM Research, USA

Table of contents

Session 1: Regular and short papers

2–8 Andreas Christoforou, Andreas S. Andreou: An effective resource management approach in a FaaS environment

9–17 Serhii Dorodko, Josef Spillner: Selective Java code transformation into AWS Lambda functions

18–24 Yessica Bogado-Sarubbi, Walter Benitez-Davalos, Josef Spillner, Fabio Lopez-Pires: Towards sustainable ecosystems for cloud functions

25–29 Daniel Barcelona Pons, Álvaro Ruiz Ollobarren, David Arroyo Pinto, Pedro García López: Studying the feasibility of serverless actors

30–35 Mohammed Al-Ameen, Josef Spillner: Systematic and open exploration of FaaS and Serverless Computing research

Session 2: Talk and tutorial abstracts

36 Diego Martín: Building a serverless application using FaaS workflows

37 Erez Freiberger: Monitoring/debugging AWS Lambda applications

38 Erwin van Eyk: Going FaaSter: Cost-performance optimizations of serverless on Kubernetes

39 Maciej Pawlik: Performance considerations on execution of large scale workflow applications on cloud functions

40 Yu-An Chen: Feedback-based resource allocation for Serverless Computing

41 Massimo Villari: Osmotic Computing

42 Oleksii Serhiienko: Distributed Lambda functions to improve and extend the functionality of cloud management platforms

CEUR-WS.org/Vol-2330/preface.pdf