

WOSP-C 2020: Workshop on Challenges and Opportunities in Large-Scale Performance

Welcoming Remarks

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It is my great pleasure to welcome you to WOSP-C 2020, the Workshop on Challenges and Opportunities in Large Scale Performance. Our theme this year relates to the use of analytics to interpret system performance and resource usage measurements that can now be gathered rapidly on a large scale.

Our four invited speakers hail from industry. All three presentations in the first session and the last presentation in the second session deal with modeling and measurement to automate the making of decisions about system configuration or the recognition of anomalies, especially for cloud-based systems. The other two papers in the second session address measurement and modeling issues at a granular level. These topics are highly relevant to the issues systems architects and other stakeholders face when deploying systems in the cloud, because doing so need not guarantee good performance. The recent emergence of the ability to gather vast numbers of performance and resource usage measurements facilitates the informed choice of target cloud platforms and their configurations. The presentations in this workshop deal with various aspects of how this can be achieved.

- Tomer Morad's talk will discuss how to leverage machine learning to automate the configuration of system tunables to improve performance while the system is up and running.
- Alberto Avritzer will discuss how to use system measurements to automate the gathering of resource usage requirements and performance requirements in a continually changing environment.
- Boris Zibitsker's and Alex Lupersolsky's presentation addresses the use of modeling to optimally choose and configure a cloud platform as the migration destination for existing or planned systems.
- Anomalies and changes in workload and in system performance may occur gradually or abruptly. Igor Trubin will discuss the automated detection of these anomalies and how to react to them in his presentation.
- The paper by Murray Woodside *et al* explores the extraction and use of kernel data in performance prediction at a very granular level so that performance impediments can be detected and mitigated or eliminated.
- Steffen Becker *et al* discuss the optimal transformation of models to predict performance.

I would like to thank the members of the program committee and the organizers of ICPE2020 for their help in putting together this workshop. We hope that you will find this workshop stimulating and rewarding.

André B. Bondi
WOSP-C 2020 Chair

WOSP-C 2020 Technical Program

Tuesday, April 21st, 2020

Time	Title	Authors
8:50	Welcoming Remarks	Andre B. Bondi (Software Performance and Scalability Consulting LLC and Stevens Institute of Technology)
9:00	Leveraging Machine Learning to Automate Performance Tuning (invited presentation)	Tomer Morad (Concertio)
9:30	Automated Scalability Assessment in DevOps Environments (invited presentation)	Alberto Avritzer (eSulab Solutions)
10:00	How to Apply Modeling to Compare Options and Select the Appropriate Cloud Platform (invited presentation)	Boris Zibitsker (BEZNext); Alex Lupersolsky (BEZNext)
10:30	Break	
11:00	Performance Analysis and Prediction of Model Transformation	Vijayshree Vijayshree (Universität Stuttgart); Markus Frank (Universität Stuttgart); Steffen Becker (Universität Stuttgart)
11:30	Issues Arising in Using Kernel Traces to Make a Performance Model	Murray Woodside (Carleton University); Shieryn Tjandra (Carleton University); Gabriel Seyoum (Carleton University)
12:00	Performance Anomaly and Change Point Detection for Large-Scale System Management (invited presentation)	Igor Trubin (CapitalOne)
12:30	Lunch	
	A joint panel discussion with the HotCloudPerf workshop is planned for the afternoon at a time to be determined. Please visit the two workshop websites, https://wosp-c.github.io/wosp-c-20/ and https://hotcloudperf.spec.org/ , for updates.	

Technical Program Committee

Chair: André B. Bondi – Software Performance and Scalability Consulting LLC and Stevens Institute of Technology, New Jersey, USA

Davide Arcelli, *DISIM - Università dell'Aquila, Italy*

Alberto Avritzer, *eSulabSolutions, New Jersey, USA*

Steffen Becker, *University of Stuttgart, Germany*

Tony Field, *Imperial College, UK*

Nikolas Herbst, *University of Wuerzburg, Germany*

Cati Llado, *University of the Balearic Islands, Spain*

C. Murray Woodside, *Carleton University, Ottawa, Canada*

Boris Zibitsker, *BEZNext, Chicago, USA.*