Association for Computing Machinery

Advancing Computing as a Science & Profession

SNTA'20

Proceedings of the 3rd International Workshop on
Systems and Network Telemetry and Analytics

General Chairs:
Massimo Cafaro (Università del Salento, Italy)
Jinoh Kim (Texas A&M University, Commerce, USA)
Alex Sim (Lawrence Berkeley National Laboratory, USA)

Additional copies may be ordered prepaid from:

Printed in the USA

Foreword

The 3rd International Workshop on Systems and Network Telemetry and Analytics (SNTA 2020), a full-day meeting at the HPDC 2020 conference in Stockholm, Sweden, aims at bridging the systems and network telemetry and the latest advances in machine learning and data science technologies, to advance the performance and reliability of HPC and distributed systems.

The tasks of systems and network telemetry are a key element for effective operations and management of HPC and distributed computing systems, by offering comprehensive monitoring and analysis capabilities to provide the visibility into what is occurring at any time. The tasks will be significantly complicated with the greater complexity of computing systems, increasing network speed, and the newly introduced mobile and IoT devices. Such changes will render the existing telemetry and analysis techniques outdated, and more scalable techniques may be in place for data-driven and deeper data analysis. In addition to the quantitative and qualitative challenges, data pressure in systems and networks also comes from various sources such as end systems, routers, firewalls, intrusion sensors, and the newly emerging network elements speaking with different syntax and semantics, which makes organizing and incorporating the generated data difficult for extensive analysis. This workshop aims at bridging the systems and network telemetry and the latest advances in machine learning and data science technologies, to advance the performance and reliability of HPC and distributed systems, and sharing visions of investigating new approaches and methods at the intersection of HPC systems and data sciences from the diverse angles of systems/network performance, availability, and security.

This year, the physical in-person conference meeting was cancelled due to the COVID-19 pandemic, and the pandemic disrupted our daily lives so much. Putting together SNTA2020 was not easy, but with the team effort, we expect another successful organization of the workshop. The workshop has about 41% of full-paper acceptance rate, after a rigorous review process. We would like to thank all authors who submitted to the workshop. The diverse submission and selection assure interesting discussions and most importantly out-of-the-box thinking and generation of new ideas during the workshop. We are grateful to the program committee, who worked very hard in reviewing papers and providing feedback for authors in such a difficult situation.

SNTA'20 Workshop Co-Chairs
Massimo Cafaro *Università del Salento, Italy*
Jinoh Kim *Texas A&M University, Commerce, USA*
Alex Sim *Lawrence Berkeley National Laboratory, USA*

Table of Contents

2020 SNTA Workshop Organization

General Chairs: Massimo Cafaro (*Università del Salento, Italy*)
Jinoh Kim (*Texas A&M University, Commerce, USA*)
Alex Sim (*Lawrence Berkeley National Laboratory, USA*)

Program Committee: Stergios Anastasiadis (*University of Ioannina, Greece*)
Engin Arslan (*University of Nevada at Reno, USA*)
Sang-Yoon Chang (*University of Colorado at Colorado Springs, USA*)
Eric Chan-Tin (*Oklahoma State University, USA*)
Jerry Chou (*National Tsing Hua University, Taiwan*)
Italo Epicoco (*University of Salento, Italy*)
Jens Jenson (*STFC, UK*)
Peter Kacsuk (*SZTAKI, Budapest, Hungary*)
Rajkumar Kettimuthu (*Argonne National Laboratory, USA*)
In Kee Kim (*University of Georgia, USA*)
Ikkyun Kim (*ETRI, Korea*)
Alina Lazar (*Youngstown State University, USA*)
Dongeun Lee (*Texas A&M University-Commerce, USA*)
Chul-Ho Lee (*Florida Institute of Technology, USA*)
Laurent Lefèvre (*INRIA and Université de Lyon, France*)
Wei-keng Liao (*Northwestern University, USA*)
Kwangsung Oh (*University of Nebraska Omaha, USA*)
Amir H. Payberah (*KTH Royal Institute of Technology, Sweden*)
Marco Pulimeno (*University of Salento, Italy*)
Kurt Stockinger (*Zurich Univ. of Applied Sciences, Switzerland*)
John Wu (*Lawrence Berkeley National Laboratory, USA*)
Lingfei Wu (*IBM, USA*)
Shinjae Yoo (*Brookhaven National Laboratory, USA*)

Sponsors:

In cooperation With:

Supporters: