

**Auto-DaSP - Workshop on Autonomic
Solutions for Parallel and Distributed
Data Stream Processing**

Workshop on Autonomic Solutions for Parallel and Distributed Data Stream Processing (Auto-DaSP)

Workshop Description

Auto-DaSP is a forum for researchers and practitioners working on parallel and autonomic solutions for Data Stream Processing applications, frameworks, and programming support tools. The data streaming domain belongs to the Big Data ecosystem, where the so-called *data velocity*, i.e., the rate at which data arrive at the system for processing, represents one of the most challenging aspects to be addressed in the design of applications and frameworks. High-volume data streams can be efficiently handled through the adoption of novel high-performance solutions targeting today's commodity parallel hardware. However, despite the large computing power offered by the affordable hardware available nowadays, high-performance data streaming solutions need to be equipped with smart logics in order to adapt the framework/application configuration to rapidly changing execution conditions and workloads. This turns out in mechanisms and strategies to adapt the queries and operators placement policies, intra-operator parallelism degree, scheduling strategies, load shedding rate and so forth, and fosters novel interdisciplinary approaches that exploit Control Theory and Artificial Intelligence methods. The workshop calls the attention of the data stream processing and the distributed and parallel computing research communities in order to stimulate integrated approaches between these two disciplines.

The second edition of the International Workshop on Autonomic Solutions for Parallel and Distributed Data Stream Processing (Auto-DaSP 2018) was held in Turin, Italy. For the second time, this workshop was organized in conjunction with the EuroPar annual series of international conferences. The format of the workshop included a keynote followed by technical presentations. The workshop was attended by around 20 people on average.

This year we received 8 submissions for reviews, from authors belonging to 7 distinct countries. After an accurate and thorough peer-review process, we selected 5 papers for presentation at the workshop. The review process focused on the quality of the papers, their scientific novelty and applicability to existing Data Stream Processing problems and frameworks. The acceptance of the papers was the result of the reviewers' discussion and agreement. All the high quality papers were accepted, and the acceptance rate was 62%. The accepted articles represent an interesting mix of techniques to solve recurrent as well as new problems in Data Stream Processing, such as efficient handling of data streams, distributing DSP tasks that involve machine learning steps, management of fault tolerance and its impact on performance, architectures and strategies to support runtime elasticity and address latency constraints.

The workshop program was completed by the invited talk titled "The Long Road Towards Elastic Distributed Stream Processing" given by Leonardo Querzoni from Sapienza University of Rome, Italy.

Last but not least, we would like to thank the Auto-DaSP 2018 Program Committee, whose members made the workshop possible with their rigorous and timely review process. We would also like to thank Euro-Par for hosting the workshop and our emerging community, and the Euro-Par workshop chairs for the valuable help and support.

Organization

Auto-DaSP Chairs

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