2019 International Workshop On Network-Aware Big Data Computing (NEAC)

Co-located with IEEE/ACM CCGrid'19, Larnaca, Cyprus

Call for Papers

All accepted papers in NEAC will be published in the Proceedings of the 19th IEEE/ACM International Symposium in Cluster, Cloud, and Grid Computing, published by **IEEE**.

There will be a Best Paper Award at NEAC 2019 and selected papers will be invited for a fast track review by **Cluster Computing** journal (IF: 1.601), published by Springer.

Organizers

Long Cheng, University College Dublin, Ireland
John Murphy, University College Dublin, Ireland

Program Committee

Leandro Almeida, FTUB, Brazil
Dick Epema, TU Delft, Netherlands
Zhuozhao Li, University of Chicago, USA
Qingzhi Liu, TU Eindhoven, Netherlands
Liam Murphy, University College Dublin, Ireland
Bogdan Nicolae, Argonne National Laboratory, USA
Lukas Rupprecht, IBM Research Almaden, USA
Georgios Theodoropoulos, Southern University of Science and Technology, China
Lei Yang, South China University of Technology, China
Zhiming Zhao, University of Amsterdam, Netherlands

Important Dates

Submission Deadline: Feb 28th 2019
Author Notification: Mar 20th 2019
Camera-Ready Due: Mar 28th 2019
Workshop Date: May 14th 2019

Submission

Submit your paper (up to 8 pages for long papers and 4 pages for short papers, IEEE format) via the EasyChair paper submission website `https://www.easychair.org/conferences/?conf=neac2019`

For further information regarding the NEAC 2019 program, please contact the workshop co-organizer Long Cheng at long.cheng@ucd.ie.

About

Efficient big data computing is still challenging current techniques. One of the main performance challenges is the network communication. The reason is that the performance of CPU has grown much faster than network bandwidth in recent years and, as such, the network creates a bottleneck to computation. Significant performance improvements on big data computing have been achieved by using state-of-the-art methods, such as locality and task scheduling in the distributed data management domain, and data flow scheduling in the data communications domain. However, almost all the techniques in these two fields just view each other as a black box, and the additional performance gains from a co-optimization perspective have not yet been explored. Moreover, although energy-efficient solutions, e.g., dynamic routing, are being studied in the network management domain, few of them have ever considered to improve energy issues from a data angle.

NEAC aims to bridge the gap of current research in big data computing and network communications. It will bring researchers from related fields together to explore innovative models, algorithms, architectures and systems to minimize data movement time, message traffic and energy consumption for big data computing, and consequently deliver significant performance improvements to the large-scale data analytics community.

Topics of Interest

This workshop seeks interesting and innovative contributions and surveys on methods and designs covering all aspects of optimization for data computing, communication, message traffic and energy consumption in different network configurations. This workshop also encourages new initiatives of building bridges between big data computing and network communications. Topics of interest include, but are not limited to:

1. All network-aware optimization techniques for big data computing in distributed environments such as data locality, task, job, flow and routing scheduling in cluster, grid, edge and cloud.
2. All data-aware network designs such as protocols, domain-specific solutions and architectures for wireless networks, software-defined networks, data center networks, peer-to-peer networks, sensor networks, and Internet of Things.
3. All application and network co-design techniques for big data computing such as performance models, algorithms, programming paradigms, architectures and systems.

Sponsors

More details about NEAC 2019 are available at http://neac2019.ucd.ie.