

IEEE Data Science Workshop

Call for papers

June 2-5, 2019 – Minneapolis, MN, USA

The 2019 IEEE Data Science Workshop will take place at the University of Minnesota, Twin Cities. It will bring together researchers to share exciting advances in data science theory and applications.

The event will gather researchers and practitioners from a gamut of data-driven disciplines, including learning, data mining, signal processing, optimization, statistics, and computing, along with experts from Academia, Government, and Industry groups with interests on fundamentals and applications, as diverse as agriculture, personalized health and medicine, biology and physics, grid analytics, earth and the environment, education, finance and economics.

The scientific program will include tutorials, invited plenary talks, as well as regular oral and poster sessions with contributed research papers. Papers are being solicited in (but not limited to) the following topics.

Computational models and representation for data science.

Tensor factorizations. Compressive sampling. Randomized linear algebra. Graph simplifications and multiresolution representations. Transformations and spectral representations. Distributed algorithms.

Acquisition, storage, and retrieval for large-scale data.

Hardware and architectures. Software and Cyberinfrastructure. Protocols for networked storage. Compression for data storage. Sketching and streaming. Scaling up algorithms.

Visualization, summarization, and analytics.

Data presentation architectures and dashboards. Data visualization and human perception. Business intelligence. Data wrangling.

Learning, modeling, and inference with data.

High-dimensional spatio-temporal modeling. Graph signal processing. Theoretical limits. Anomaly detection. Graph learning. Statistical modeling of heterogeneous data types. Post-selection inference. Analysis of deep learning algorithms. Crowdsourcing. Stream mining. Statistical uncertainty quantification.

Data science education.

Innovative approaches to teaching data science. Data-informed learning theory. Learning analytics.

Data science process and principles.

Reproducible research. Open source data science. Workflow. Meta-analysis. Data science ethics. Automation of data science via meta-learning. Algorithmic fairness. Bias in science.

Applications.

Social media, recommendation systems and collaborative filtering. Defense, intelligence and security. Biology and medicine. Astronomy and other physical sciences. Audio, image, video analytics and computer vision. Urban informatics. Social sciences. Business analytics, forensics and finance. Applications leveraging domain knowledge for data science.



PAPER SUBMISSION

Papers should include at most 4 pages of technical content in double-column format (plus references). Papers with a major experimental component are allowed to have up to 6 pages of technical content. More information available on the workshop website.

SPECIAL SESSIONS

Special session proposals can be submitted through the workshop website. They must include a topic title, session outline, contact information of proposers, and the list of invited papers and authors. Special session authors are referred to the website for additional information about the submission process.

AWARDS

Two types of awards will be granted: Best Paper Award and Best Student Paper Award. The selection criteria for these awards include the scientific quality of the paper, and the presentation of the contribution.

IMPORTANT DATES

Special session proposals
December 23, 2018

Notification special session
December 28, 2018

Submission of full papers
February 17, 2019

Notification of acceptance
March 15, 2019

Camera-ready submission
April 2, 2019

General Chairs

Georgios B. Giannakis
Geert Leus
Antonio G. Marques

Honorary Chair
Mostafa Kaveh

Technical Chairs
George Karypis
George Michailidis
Rebecca Willett

Keynotes & Tutorials Chairs

Alfred O. Hero, III
Wotao Yin

Special Sessions Chairs
Olga Milenkovic
Hao Zhu

Publicity and Publications

Waheed U. Bajwa
Santiago Segarra

Finance Chair
Gonzalo Mateos

Local Arrangements Chairs

Jarvis Haupt
Gilad Lerman

Paper Awards Chairs

Yuejie Chi
Alle-Jan van der Veen

Industry Liaison & Datathon

Michael Rabbat
Dorina Thanou

Government Liaisons

Phillip A. Regalia
Ananthram Swami

2019.ieeedatascience.org



University of Minnesota