

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 be at most four pages long in double-column format. Information regarding the submission process is 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 14, 2018

Notification special session
December 21, 2018

Submission of full papers
February 8, 2019

Notification of acceptance
March 15, 2019

Camera-ready submission
April 2, 2019

General Chairs

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