[8th SIGKDD International Workshop on Mining and Learning from Time Series -- Deep Forecasting: Models, Interpretability, and Applications 2022]: Call for papers

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Workshop CFP Webpage: **https://kdd-milets.github.io/milets2022/#call**

8th SIGKDD International Workshop on Mining and Learning from Time Series -- Deep Forecasting: Models, Interpretability, and Applications, 2022

Aug 15th, 2022 - KDD 2022, Washington DC

Website: **https://kdd-milets.github.io/milets2022/**

KEY DATES

Paper Submission Deadline: May 26, 2022, 11:59PM Alofi Time (GMT-11)
Author Notification: June 20, 2022
Camera Ready Version: July 2, 2022
Workshop: August 15, 2022 (EDT)

MiLeTS is the premier KDD workshop on Mining and Learning from Time Series and has been organized for the past 7 years. This year, the workshop will focus on models, interpretability, and applications of deep forecasting.

Time series data is ubiquitous. In domains as diverse as finance, entertainment, transportation, and health care, we observe a fundamental shift away from parsimonious, infrequent measurement to nearly continuous monitoring and recording. Rapid advances in diverse sensing technologies, ranging from remote sensors to wearables and social sensing, are generating rapid growth in the size and complexity of time series archives. Thus, although time series analysis has been studied extensively, its importance only continues to grow. What is more, modern time series data pose significant challenges to existing techniques (e.g., irregular sampling in hospital records and spatiotemporal structure in climate data). Finally, time series mining research is challenging and rewarding because it bridges a variety of disciplines and demands interdisciplinary solutions. Now is the time to discuss the next generation of temporal mining algorithms. The focus of our workshop is to synergize the research in this area and discuss both new and open problems in time series analysis and mining. The solutions to these problems may be algorithmic, theoretical, statistical, or systems-based in nature. Further, this workshop emphasizes applications to high-impact or relatively new domains, including but not limited to biology, health and medicine, climate and weather, road traffic, astronomy, and energy.

The MiLeTS workshop will discuss a broad variety of topics related to time series, including but not limited to:

- Time series pattern mining and detection, representation, searching and indexing, classification, clustering, prediction, forecasting, and rule mining.
- BIG time series data.
- Hardware acceleration techniques using GPUs, FPGAs and special processors.
- Online, high-speed learning and mining from streaming time series.
- Uncertain time series mining.
- Privacy preserving time series mining and learning.
- Time series that are multivariate, high-dimensional, heterogeneous, etc., or that possess other atypical properties.
- Time series with special structure: spatiotemporal (e.g., wind patterns at different locations), relational (e.g., patients with similar diseases), hierarchical, etc.
- Time series with sparse or irregular sampling, non-random missing values, and special types of measurement noise or bias.
- Time series analysis using less traditional approaches, such as deep learning and subspace clustering.
- Applications to high impact or relatively new time series domains, such as health and medicine, road traffic, air quality, internet of things and environmental science.
- New, open, or unsolved problems in time series analysis and mining.
- New datasets or benchmarks for time series analysis and mining tasks.

Submission Guidelines

Submissions should follow the SIGKDD formatting requirements and will be evaluated using the SIGKDD Research Track evaluation criteria. Preference will be given to papers that are reproducible, and authors are encouraged to share their data and code publicly whenever possible. Submissions are limited to be no more than 9 pages (suggested 4-8 pages), including references (all in a single pdf). All submissions must be in pdf format using the KDD main conference paper template (see: https://kdd.org/kdd2022/cfpResearch.html). Submissions will be managed via the EasyChair website: **https://easychair.org/conferences/?conf=milets2022**

Note on open problem submissions: To promote new and innovative research on time series, we plan to accept a small number of high-quality manuscripts describing open problems in time series analysis and mining. Such papers should provide a clear, detailed description and analysis of a new or open problem that poses a significant challenge to existing techniques, either theoretically or via a thorough empirical investigation demonstrating that current methods are insufficient.

COVID-19 Time Series Analysis Special Track: The COVID-19 pandemic is impacting almost everyone worldwide and is expected to have life-altering short and long-term effects. There are many potential applications of time series analysis and mining that can contribute to the

understanding of this pandemic. We encourage the submission of high-quality manuscripts describing original problems, time-series datasets, and novel solutions for time series analysis and forecasting of COVID-19.

The review process is single-round and double-blind (submission files have to be anonymized). Concurrent submissions to other journals and conferences are acceptable. Accepted papers will be presented as posters during the workshop and listed on the website. Besides, a small number of accepted papers will be selected to be presented as contributed talks.

Any questions may be directed to the workshop e-mail address: kdd.milets@gmail.com

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Any questions may be directed to the workshop e-mail address: kdd.milets@gmail.com