



MINDS Workshop @ COMSNETS 2024

16th International Conference on COMmunication Systems & NETworkS

January 3 - 7 | In-person Conference | Bengaluru, India

https://www.comsnets.org/minds_workshop.html

Workshop on Machine Intelligence in Networked Data and Systems (MINDS)

January 3, 2024; Wednesday

As connectivity and storage are getting cheaper, we are seeing more opportunities for data-driven approaches for Networked Data and Systems. The adaptation of machine learning, artificial intelligence, and data analytics techniques in these networked systems is set to transform and disrupt many areas of business and everyday human life. The MINDS (Machine Intelligence in Networked Data and Systems) workshop (co-located with COMSNET 2024) aims to bring together researchers and practitioners to understand and explain this inter-working of machine learning, big data analytics, and networked systems for various application domains.

MINDS welcomes original research submissions that define challenges, report experiences, or discuss progress toward design and solutions that integrate machine learning, artificial intelligence, data analytics, deep learning, mobile systems, and networked systems in various application areas. These application areas include but are not limited to healthcare, environment, retail, transportation, life sciences, e-commerce and cloud services. Contributions describing techniques applied to real-world problems and interdisciplinary research involving novel networking architectures, system designs, IoT systems, big data systems that use techniques from machine learning, artificial intelligence, deep learning, and data analytics as the core component are especially encouraged.

Benefits of Paper submission:

- Chance to present paper to a focused target audience from around the globe
- Global media coverage

The topics of interest include but are not limited to:

Applications

- Design and implementation of intelligent systems for applications such as home automation, self-driving vehicles, driver assistance systems, supply chain, and logistics
- Cloud based machine and deep learning applications in retail and e-commerce
- Machine learning systems for healthcare, weather modeling, life sciences, and environment monitoring
- Machine learning in management of pandemics (e.g. Covid-19, Ebola, SARS)
- Detection of fake news and control of spread of misinformation

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Internet of Things (IoT)

- Machine learning driven systems using mobile phones, embedded devices, and sensor networks
- Applications of machine learning in IoT, IIoT, manufacturing, and supply chain optimisation
- Experiences in managing wearable devices, smart-home systems and mobile sensor networks
- **Federated Learning and Distributed Learning for distributed computation (e.g., computational offloading) and decision making**
- **Learning with Noisy Labels and Adversarial Robustness**

Networking

- Root cause analysis and failure prediction using system and network logs
- Applications of machine/deep/reinforcement learning in satellite networks, cellular networks and WiFi networks
- **Machine learning driven algorithms and tools for network anomaly detection. Privacy and network security**
- Machine learning and data mining of large-scale network measurements
- Stream-based machine learning for networked data
- Machine learning driven algorithms for network scheduling and control
- Challenges and solutions in IoT data and stream processing at the edge and in the cloud
- Offloading for IoT-Fog interconnection networks.
- High dimensional big data (images, videos) analysis using machine/deep learning
- Scalability, privacy, and security of networked learning architectures
- Distributed privacy-preserving algorithms, privacy attacks, and federated learning
- Applications of machine/deep/reinforcement learning for Intent-based Networking (IBN): Intent expression through Natural Language Processing (NLP) and automated policy conflict detection and resolution.
- Automated assurance for self-managed networks (Self-Healing, Self-Configuration, Self-Optimization, Self-Protection)

Social Media Networks

- Machine learning driven analysis of text, image, and video data on social media
- Security, privacy, trust analysis, health analytics in social media and digital networks
- Information diffusion modeling and inference, fake news detection, and knowledge transfer in social media and digital networks,
- Anomaly and outlier detection in social networks

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- Computational models and agent-based simulations of social networks
- Reinforcement learning, Inverse reinforcement learning, and other learning-based interventions for tackling misinformation spread.
- Learning-based approaches to analyze COVID-related issues on social media.

Submission Guidelines

- MINDS invites submission of original work not previously published, or under review at another conference or journal.
- Submissions (including title, author list, abstract, all figures, tables, and references) must be no greater than **6 pages** in length.
- Reviews will be **double-blind**: authors name and affiliation should not be included in the submission.
- Submissions must follow the formatting guidelines as given on [IEEE Website](#); and those that do not meet the size and formatting requirements will not be reviewed.
- All papers must be in Adobe Portable Document Format (PDF) and submitted through the MINDS Workshop submission site on EDAS.
- All workshop papers will appear in the conference proceedings and be submitted to IEEE Xplore as well as other Abstracting and Indexing (A&I) databases.

Important Dates

Paper Submission Deadline	27th October 2023 (AoE) 3rd November 2023 (AoE) 10th November 2023 (AoE) [Firm]
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Notification of Acceptance	3rd December 2023
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Camera-ready Submission	10th December 2023
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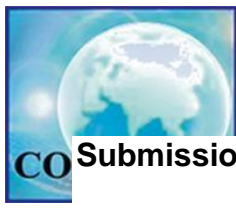
Workshop Date	3rd January 2024
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Submission Link: <https://edas.info/N31567>

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- **Dr. Andrey Chechulin**, St. Petersburg Federal Research Center of Russian Academy of Sciences (SPC RAS)
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MINDS Workshop Co-Chairs



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