

📅 March 31, 2025

CONFERENCE WEBSITE: <https://edge-sys.github.io/2025/>

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## | About the Conference

### Call For Papers

Given the growing demand for real-time gathering and processing of vast amount of data from data-intensive services such as autonomous driving and augmented reality (AR), we are witnessing a visible trend to push computing and data analytics closer to the edge of networks for benefits in low latency, reliability, throughput, security and privacy. Supported by lightweight virtualization technologies such as Docker Containers and Unikernels, the decentralized edge computing paradigm aims to offer efficient access to various geographically distributed computing resources. In this context, the EdgeSys workshop focuses on the confluence of edge computing, decentralized communication and distributed computing. For example, there are several industry-led edge computing and orchestration platforms such as KubeEdge, Firecracker, and Azure Sphere. In the decentralized communication space, systems such as Mastodon and Matrix have been developed. There are also lots of academic research activities on mobile data and computation offloading (e.g., Cloudlet, Talket, ThinkAir, MAUI, and MADNet) and

### Important Dates

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systems that combine decentralization and computation/storage offloading together, such as IPFS. In addition, as data analytics and machine learning are increasingly offered as a service, the next phase of evolution is to extend the offerings beyond basic algorithms and push the analytics closer to the edge where the data from users and devices is first captured. In this regard, edge computing has the potential to enable a new class of real-time data analytics platforms and services. We expect such edge-driven data analytics will emerge and reshape the existing cloud-based data processing pipelines. The knowledge from this new edge pipeline can further power future cyber-physical and network services, such as cognitive assistance and proactive accident prevention for autonomous driving.

The 8th Workshop on Edge Systems, Analytics and Networking (EdgeSys'25) aims to bring together system researchers, data scientists, engineers and practitioners to identify open directions and discuss the latest research ideas and results on edge systems, analytics and networking, especially those related to novel and emerging technologies and use cases. EdgeSys focuses on systems, analytics and networking aspects, covering system architecture, distributed ML algorithms, decentralized networking, distributed consensus and ledger techniques, edge services and data analysis.

The topics include but are not limited to the following:

System Architecture for Edge Computing

Distributed Machine Learning for Edge Analytics  
and Services

Generative AI on Edge

Edge Storage Systems

Edge-driven Data Analytics

Lightweight Virtualization for Edge Computing

Distributed Consensus Algorithms and Ledger  
Technologies

Infrastructure and Toolkit for Edge AI

Trustworthy Edge AI

Sustainable Edge Computing

IoT Networking and Communications

(Autonomous) Management for Edge Systems

System Performance and Measurement

Security and Trust Management

Privacy-Preserving Analytics

Data Provenance for Distributed Processing

Heterogeneous & Scalable Orchestration

Serverless, In-network Computing

Joint Optimization of Edge Network, Computation  
and Storage Resources

Important Dates

Submission deadline: 31 January 2025

Acceptance notification: 28 February 2025

Workshop date: 31 March 2025

Submission Guidelines

Authors are encouraged to submit papers describing original and unpublished research, not currently under review in other venues. In particular, innovative, early-stage ideas and preliminary results are welcome. Papers must be submitted electronically as PDF files, formatted for

8.5x11-inch paper. The length of the paper must be no more than 6 pages in the ACM double-column format (10-pt font), including references and everything. Authors are suggested to use the ACM Master article template. The reviews will be single blind. The first page must contain an abstract, the name(s) and affiliation(s) of the author(s), as well as the corresponding contact information. Each submission will receive independent, blind peer reviews from the program committee. Accepted papers will be published in the ACM Digital Library. At least one of the authors of every accepted paper must register and present the paper at the workshop. The program committee will elect one paper for the Best Paper Award.

Submission: <https://edgesys25.hotcrp.com/>