

🌐 Italy 📅 June 3-7, 2025

CONFERENCE WEBSITE: <https://www.intel4ec-workshop.nl/>

About the Conference

Call for Papers:

Intel4EC 2025: 3rd International Workshop on Intelligent and Adaptive Edge-Cloud Operations and Services 2025

In conjunction with 39th IEEE International Parallel and Distributed Processing Symposium (IPDPS) 2025, Milan, Italy, June 3-7 2025.

Intel4EC 2025 Workshop Date: June 4th, 2025.

Workshop website:

<https://www.intel4ec-workshop.nl/>

Important Dates:


Submission Deadline: January 24th, 2025


Notification of Acceptance: February 26th, 2025

Camera-ready Deadline: March 6th, 2025

Workshop Date: June 4th, 2025

All deadlines are indicated as 23:59 AoE

 **Important Dates**

 **CONFERENCE DATE**
June 3-7, 2025

(Anywhere on Earth)

Submission link:

Submission is via the Official IPDPS 2025 Linking portal: <https://ssl.linklings.net/conferences/ipdps/>

Scope:

The emergence of Computing Continuum with ever-expanding Cloud boundaries and its evolution into the proverbial Fog, Edge, and IoT paradigms has paved the way for realizing transformational and innovative digital solutions. Emerging application areas such as smart transportation logistics, smart cities, healthcare, and industry 4.0 sectors encompassing highly distributed services that use many devices involving large-scale data generation, gathering, storage, and analysis in real-time further encourage its adoption. While the geo-distributed and federated nature of the continuum continues to improve the agility, responsiveness, and effectiveness of such distributed applications. This paradigmatic shift in the post-digital transformation era has also triggered drastically changing expectations of dynamic service deployment and infrastructure usage patterns, further introducing significant complexities to the Edge-Cloud layers. These include challenges related to performance sustainability, resilience, and scalability of massive

digital operations and services. These issues break down to reconciling many and typically allude to dynamically changing demand, requirements, and constraints of digital applications, which require the Edge-Cloud infrastructures to be deployed in sites that are in large numbers and are sometimes located in remote areas.

To manage such fault-prone Edge-Cloud systems, infrastructure and service providers rely on human-intensive means to meet the increasing capacity demand and high availability of digital services. However, due to the continuously changing landscape, utilizing manual interventions to manage such large-scale systems is implausible. Hence, mitigating such issues requires digital applications and Edge-Cloud infrastructure to reposition their focus from adopting more efficient, effective, quick, and cheap compute capabilities to embracing more autonomous and self-driven technologies. Recently, Intelligent Cloud Operations and Services (a.k.a AIOps) gained traction that advocates using AI/ML techniques to embed intelligence at the Edge-Cloud management layers and automate digital operations and services by only requiring human intervention for critical issues beyond automation capabilities. Moreover, the recent emergence of Generative AI and Large Language Models (LLMs) have given a great boost to the vision of realizing autonomous Cloud-Edge systems. While AIOps/LLMs usage is still in early phases, academia and industry foresee many possible advancements ranging from root-cause analysis, early anomaly detection, and mitigation to predictive and prescriptive maintenance and

management in Edge-Cloud systems. Additionally, such intelligence powered transformation can ensure that the continuum supply chain meets the heightened user demands in terms of openness, security, privacy and resilience, energy and resource efficiency and provide Cloud-Edge technologies with an ability to scale, accelerate innovation and enable industry-specific needs.

Following the successful first and second edition, the third edition of Intel4EC workshop aims to bring together researchers, developers and practitioners from academia and industry to present their experiences, results and research progress covering architectural designs, methods and applications of AI/ML/LLM-enabled Edge-Cloud operations and services. By bringing together these research topics, Intel4EC looks forward to helping the community define open standards, AI/ML benchmarks that contribute to experiment reproducibility and systematize the complete management pipeline for a myriad of Cloud-Edge operations.

Topics:

Intel4EC 2025 workshop aims to attract the Cloud, Fog, Edge, AI/ML/LLM, Big Data and distributed computing community for novel research contributions to intelligent, adaptive, manageable and observable Edge-Cloud systems that include topics of interest, but are not limited to:

- Performance instrumentation, monitoring and observability
- Causal attribution and root-cause analysis

- Performance diagnosis and prognosis
- Failure prediction and fault localisation
- Anomaly detection and prediction
- Chaos engineering and analytics
- Capacity planning, scalability and workload management
- Edge-Cloud sprawl management and multi-tenancy issues
- AI/ML techniques for cost and energy-efficient operations
- Adaptive resource provisioning, scheduling and run-time optimisation
- Trust, security and privacy-preserving AI/ML
- SLA breach, violation and vulnerability detection
- Service discovery and microservice composition
- Intelligent programming models
- Distributed data (e.g. logs, traces) integration, management and analysis
- Self-adaptive and self-healing systems
- Experiment reproducibility, benchmarks, and application case-studies

Submission Guidelines:

The Intel4EC 2025 workshop invites original research papers, as well as architectural vision papers and experience reports that have not been previously published and are not currently under review for publication elsewhere. Following paper categories are welcome:

- Regular Full Papers: Full research papers should describe the original work and be no longer than 8 single-spaced double-column pages using 10-point size font on 8.5x11 inch pages (IEEE conference

style) including figures, tables, and references.

- Short Papers: Short research papers up to 4 single-spaced double-column pages in length using 10-point size font on 8.5x11 inch pages (IEEE conference style) including figures, tables, and references, should contain enough information for the program committee to understand the scope of the contribution and evaluate the novelty of the problem or approach.

All manuscripts should adhere to page limits and be submitted in PDF. Each paper submitted to the workshop will be peer-reviewed by a minimum of three technical program committee members and will be evaluated on the basis of scientific significance, originality, technical quality, correctness, presentation, and relevance to the workshop attendees.

The accepted papers will be included in the IPDPS 2025 Workshop proceedings. Proceedings of the IPDPS workshops will be distributed at the conference and submitted for inclusion in the IEEE Xplore Digital Library after the conference. Presentation of an accepted paper at the conference is a mandatory requirement for publication. Any accepted paper that is not presented at the conference will not be included in IEEE Xplore.

Submission Page:

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Workshop Chairs:


Organizers and Program Chairs:

- Dr. Nishant Saurabh, Utrecht University, The Netherlands (Email: n.saurabh@uu.nl)
- Dr. Dragi Kimovski, Universität Klagenfurt, Austria (Email: dragi.kimovski@aau.at)
- Dr. Zhiming Zhao, University of Amsterdam, The Netherlands (Email: z.zhao@uva.nl)

Publicity Chairs:

- Dr. Narges Mehran, University of Salzburg, Austria
- Dr. Zahra Najafabadi Samani, University of Innsbruck, Austria

For any queries and questions regarding the workshop and submissions, please contact the organisers.

 **TOPICS OF INTEREST** 2 topics

Research papers are invited in, but not limited to, the following areas:

Networking & Cloud Computing

Uncategorized

