CALL FOR PAPERS

The IEEE/ACM International Conference on Utility and Cloud Computing (UCC 2024)

The IEEE/ACM International Conference on Utility and Cloud Computing (UCC) is a premier annual conference series aiming to provide a platform for researchers from both academia and industry to present new discoveries and high-quality contributions in the broad area of Cloud, Edge and Computing Continuum utility computing and applications. The conference features keynotes, posters, workshops and a student symposium. UCC 2024 will be held in conjunction with the 11th IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT 2024).

Authors are invited to submit original, unpublished research manuscripts in all areas of Cloud-Edge Continuum for utility computing and related computing paradigms such as Serverless, Distributed Computing and Function as a Service. **The theme of this year is Self-adaptive and Autonomic Cloud, Edge, and Utility Computing in the Era of Large Language Models (LLM). The theme will explore new synergies between self-* and autonomous management of cloud, edge and their computing utilities and LLM approaches and solutions. We invite novel contributions with excellent balance between sound and rigorous foundational research and experimental results that relate to this year's theme and to the general UCC topics, as below.**

A selection of papers of highest quality that relate to this year's theme will be invited to a special issue in ACM Transactions on Autonomous and Adaptive Systems (TAAS).

UCC 2024 topics of interest include but not limited to:

Resource Management for Cloud-Edge Continuum:

Principles and Theoretical Foundations of Utility Computing; Architectural Models and Patterns to achieve Utility; Virtualization, Containerization, Composition and Orchestration; Formal and Qualitative Aspects; Middleware and Stacks; Networking and Network Management; Saas, Paas, Iaas and XaaS; Resource Management and Scalability: Brokering, Scheduling, Capacity planning and Elasticity; Security, Trust, Privacy, Policies and Blockchains.
Autonomic, Adaptive, Self-*, SLAs, Management and Monitoring; Designs and Deployment
Models: Private, Public, Hybrid, Federated, Aggregated, Inter-Cloud; High Performance Computing (HPC); Performance Analysis and Modelling. Foundational self-* solutions, possibly leveraging LLM techniques (see this year theme)

Artificial Intelligence for Cloud-Edge Continuum and Utility Computing

Machine Learning Operations (MLOps); Artificial Intelligence Solutions for Scheduling, Provisioning and Deployment; Lightweight machine learning for edge learning; Artificial Intelligence Solutions for Orchestration; GPU as a Service (GPUaaS), Artificial Intelligence as a Service (AIaaS); Support for Extract/Transform/Load (ETL) or ETL Pipelines; Machine Learning Cloud Frameworks; Artificial Intelligence Infrastructure; Distributed, Federated, Collaborative Learning, and Large Language Models (LLM).

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16-19 DEC 2024

Sharjah, UAE

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UCC 2024 topics of interest include but not limited to:

Applications, Systems and new Computing Paradigms for Cloud-Edge Continuum:

Applications, Systems and new Computing Paradigms for Cloud-Edge Continuum:
Native Application Design, Programming Models and Engineering; Serverless and Function-Based Applications (FaaS); Microservices Architectures, Quantum Computing; Interfacing to Internet of Things, (IoT) Applications; Utility-Driven Models and Mechanisms in All Domains (e.g., Smart Cities, Mobility, Healthcare, Industry 4.0); Micro Data Centers; Interfacing to Mobile Devices: Management, Hierarchy Models and Business Models; Energy-Efficiency and Sustainability; Development; Operations (DevOps); Economic and Business Models; Business and Legal Implications Beyond Technology; Digital Twins solutions.

Paper Submission: Please follow the instructions on the conference website:
www.ucc-conference.org

Submitted manuscripts must represent original unpublished research that is not currently under review for any other conference or journal. Manuscripts are submitted in PDF format and may not exceed ten (10) ACM-formatted *double-column* pages, including figures,
tables, and references. All manuscripts undergo a double-blind peer-review process and will be reviewed and judged on correctness, originality, technical strength, rigor in analysis, quality of results, quality of presentation, and interest and relevance to the conference attendees. Your submission is subject to a determination that you are not under any sanctions by ACM.

At least one author of each paper must be registered for the conference in order for the paper to be published in the proceedings. The conference proceedings will be published by the ACM and made available online via the IEEE Xplore Digital Library and ACM Digital Library.

Important Dates
Time zone: Anywhere in the world!
Paper Submissions Due: 10 August 2024
Acceptance Notification: 7 October 2024
Camera Ready Papers Due: 20 October 2024

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