

The 1st International Workshop on Middleware for the Computing Continuum (Mid4CC) - colocated with ACM MIDDLEWARE 2023

Call for Papers

The Computing Continuum (CC) concept refers to the opportunity for applications to take advantage of a broad computing context that mixes Cloud, Fog/Edge, and IoT resources. The CC offers a spectrum of computing resources that vary in terms of capabilities, form factors, deployment models, etc. In a more extreme vision, at the two far ends the CC also encloses mobile resources (e.g., smartphones, wearables) and high-performance computing (HPC) clusters. In such a heterogeneous computing environment, resource interoperability and seamless integration must be granted in order to enable users to leverage the right (mix of) computing resources according to requirements and constraints. To unleash the real potential of the CC and make it broadly accessible and usable, software solutions are needed that mediate between the complexity of the computing infrastructures/technologies that build up the continuum on the one hand, and the challenging QoS requirements posed by end users on the other one.

This workshop seeks proposals of platforms, software prototypes, tools, libraries, etc. that act and characterize as a middleware for the CC, i.e., a software layer that sits atop the CC and offers end users high-level services and functions to implement their applications. We encourage submissions of middleware proposals that explore, among others, key functions like, e.g., resource management, data management, communication and connectivity management, service composition and orchestration, adaptation and context awareness, security and privacy.

Conference topics

Topics of the workshop include (but are not limited to):

- Resource scheduling, monitoring and orchestration
- Service provisioning in the continuum
- Implementation of data pipes along the continuum
- Data governance in the continuum
- Scalable storage architectures in the continuum
- Service reuse and data caching
- End-to-end provisioning of network services in the continuum
- Network economics and pricing mechanisms in the continuum
- QoS and SLA management across heterogeneous environments

- Support for seamless service migration
- Support for the implementation of dependable systems and applications
- DevOps platforms for the continuum
- Benchmarking environments in the continuum
- Tools for security, privacy and trust management across multiple domains
- Tools for Cloud/HPC integration

Authors are invited to discuss practical use cases in vertical domains such as Smart City, Smart Industry, Smart Health, Smart Grids, Smart Agriculture, Digital Humanities, and Urgent Science. Finally, we welcome the submission of contributions supported by validating experiments conducted in real testbeds. In that regard, the most valuable contributions will be selected for a short live demonstration during the workshop.

Paper Submission

Authors are invited to submit papers electronically through the following link: <https://mid4cc2023-workshop.hotcrp.com/paper/new>.

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 six (6) As in previous years, the Middleware conference organizers will provide companion proceedings including all workshop papers, which will be available in the ACM Digital Library. This is subject to the availability of their camera-ready papers by the due date. For the camera-ready instructions, please visit the camera-ready instructions page: <https://middleware-conf.github.io/2023/camera-ready-instructions/>. Your submission is subject to a determination that you are not under any sanctions by ACM.

A "Best Paper Award" certificate will be conferred on the author(s) of a paper presented at the workshop, selected by the workshop organizers based on scientific significance, originality and outstanding technical quality of the paper.

Important Dates

Timezone: Anywhere in the world!

Paper Submissions Due (**extended**): ~~September 25th, 2023~~ **October 2nd, 2023**

Acceptance Notification: October 20th, 2023

Camera Ready Papers Due: October 27th, 2023
