

=== The Fifth Workshop on Hot Topics in Cloud Computing Performance ===
(HotCloudPerf-2022)

<https://hotcloudperf.spec.org>

VENUE: Held in conjunction with ICPE, April 9, 2022, Virtual.

Contact: [hotcloudperf2022\[at\]easychair.org](mailto:hotcloudperf2022[at]easychair.org)

IMPORTANT DATES (Anywhere on Earth)

January 27, 2022	Abstract due (informative)
January 27, 2022	Papers due
February 25, 2022	Author Notification
May 4, 2022	Camera-ready
April 9, 2022	Workshop Day

WORKSHOP THEME AND BACKGROUND

Cloud computing is emerging as one of the most profound changes in the way we build and use IT. The use of global services in public clouds is increasing, and the lucrative and rapidly growing global cloud market already supports over 1 million IT-related jobs. The new understanding of cloud computing covers the full computational continuum from data centers to edge resources to IoT sensors and devices. However, it is currently challenging to make the IT services offered by public and private clouds performant (in an extended sense) and efficient. Emerging architectures, techniques, and real-world systems include hybrid deployment, serverless operation, everything as a service, complex workflows, auto-scaling and -tiering, etc. It is unclear to what extent traditional performance engineering, software engineering, and system design and analysis tools can help with understanding and engineering these emerging technologies. The community also needs practical tools and powerful methods to address hot topics in cloud computing performance.

Responding to this need, the HotCloudPerf workshop proposes a meeting venue for academics and practitioners, from experts to trainees, in the field of cloud computing performance. The workshop aims to engage this community and to lead to the development of new methodological aspects for gaining a deeper understanding not only of cloud performance, but also of cloud operation and behavior, through diverse quantitative evaluation tools, including benchmarks, metrics, and workload generators. The workshop focuses on novel cloud properties such as elasticity, performance isolation, dependability, and other non-functional system properties, in addition to classical performance-related metrics such as response time, throughput, scalability, and efficiency.

The HotCloudPerf workshop is technically sponsored by the Standard Performance Evaluation Corporation (SPEC)'s Research Group (RG) and is organized annually by the RG Cloud Group. HotCloudPerf has emerged from the series of yearly meetings organized by the RG Cloud Group, since 2013. The RG Cloud Group group is taking a broad approach,

relevant for both academia and industry, to cloud benchmarking, quantitative evaluation, and experimental analysis.

HotCloudPerf 2022 will be fully virtual. Our experience with a virtual HotCloudperf in 2020 and 2021 was excellent and the participants rated the experience and format very highly. For more information, please contact us at: hotcloudperf2022@easychair.org

WORKSHOP SCOPE AND TOPICS

1. Methodological and practical aspects of software engineering, performance engineering, and computer systems related to hot topics in cloud performance.
2. Empirical performance studies in cloud computing environments and systems, including observation, measurement, and surveys.
3. Performance analysis using modeling, simulation, and queueing theory for cloud environments, applications, and systems.
4. Tuning and auto-tuning of systems operating in cloud environments, e.g., auto-tiering of data or optimized resource deployment.
5. Software patterns and architectures for engineering cloud performance, e.g., serverless.
6. End-to-end performance engineering for pipelines and workflows in cloud environments, or of applications with non-trivial SLAs.
7. Tools for monitoring and studying cloud computing performance.
8. General and specific methods and methodologies for understanding and engineering cloud performance.
9. Serverless computing platforms and microservices in cloud datacenters.
10. Case studies on cloud performance and its interaction with the computational continuum

ARTICLE SUBMISSION GUIDELINES

We solicit the following types of contributions:

- * Talk only: Extended abstract limited to 1-2 pages (without formatting restrictions)
- * Full paper limited to 8 pages including references (double column, ACM conference format)
- * Short paper limited to 4 pages including References (double column, ACM conference format)

Contributions in the 1st category (as Talk only) may have already been (partially) presented at other events or in publications and are not included in the conference proceedings. Contributions in the 2nd and 3rd category (technical papers) must represent original and unpublished work that is not currently under review. Full papers may report on original research, lessons learned from realizing an approach, or experiences on transferring a research prototype into practice. Short papers may report on work-in-progress, a tool/demo, or present a vision or position motivating the community to address new challenges.

Articles and talk only contributions are required to be submitted via the EasyChair system of HotCloudPerf-2022: <https://easychair.org/conferences/?conf=hotcloudperf2022>

Articles must use the ACM conference format. Each valid submission will receive at least three (3) peer reviews. Articles must use the ACM conference format. Each valid submission will receive at least three (3) peer reviews. Presented papers will be published by ACM and included in the ACM Digital Library. Adhering to ACM guidelines for conferences, ICPE requires that at least one author of each accepted paper attends (in person or remote) the workshop and presents the paper.

ORGANIZING COMMITTEE

Cristina L. Abad (ESPOL, Ecuador)
Simon Eismann (U. Würzburg, Germany)
Alexandru Iosup (VU Amsterdam, the Netherlands)

PROGRAM COMMITTEE

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