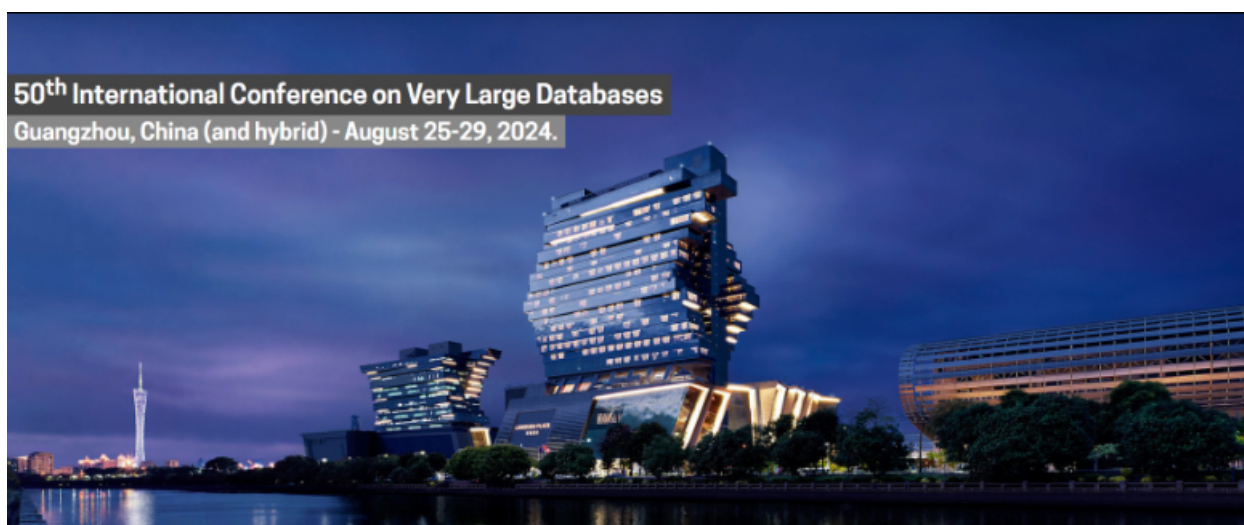


TPC[®] Newsletter

Issue 4, April 2024

TPC Technology Conference 2024 – TPCTC Guangzhou,
China August 29th, 2024



TPCTC is TPC's annual technology conference. Its mission is to bring together industry experts and researchers to explore new methodologies for measuring the performance of datacentric applications. Over the last 15 years TPCTC has been recognized as the international event for anyone interested in performance related topics in database technology, including Transaction Processing, Data Warehousing, Big Data Analytics, Internet of Things, Virtualization, and Artificial Intelligence.

Performance evaluation has and still is one of the main differentiators of computer systems. Constant hardware and software improvements require a fresh look at performance methodologies that allow performance evaluation in a technically sound, fair and meaningful ways. The TPC has always been at the forefront of these benchmark developments. While the TPC has focused historically on database centric benchmarks, recent developments include benchmarks for Artificial Intelligence, Internet-Of-Things, Hyper-Converged Infrastructure, Big Data and Virtualization. Many of these benchmarks were sparked by ideas that originated in papers presented at past TPCTC events. These papers were mostly academic papers, that inspired ideas for new benchmarks, identified deficiencies in existing benchmarks and motivated improvements.

At the same time the academic community and industry have benefited from TPCTC to define their own performance methodologies. The last ten years have seen the rise of many new DBMSs, some with unique approaches to traditional problems, like columnar databases and in memory databases, others specializing on specific applications, such as graph databases, NoSQL databases, Timeseries databases etc. With them came a flurry of new performance methodologies resulting in customized benchmarks, many of which were based on methodologies originally developed in the TPC.

TPCTC has always served as a venue where both practitioners with real world performance expertise met with highly innovative academics to discuss performance methodologies for emerging technologies. The results, both in academia and TPC benchmarks, are a direct result of this knowledge exchange.

TPCTC 2024, chaired by Raghu Nambiar and Meikel Poess, will take place in Guangzhou, China on August 29, 2024 in conjunction with the 50th conference on Very Large Databases (VLDB), a top tier academic conference for databases. TPCTC 2024 marked TPCTC's 16th anniversary.

We are looking for contributions in the following subject areas:

- Vector Processing **NEW**
- GenAI (e.g. LLM, Stable Diffusion) **NEW**
- Hyperscale Data Center
- Big Data Analytics
- Cloud Computing
- Social media infrastructure
- Internet of Things
- Blockchain
- Lessons learned in practice using TPC workloads
- Database Optimizations
- Disaggregated Data Center
- Sustainability
- Virtualization
- In-memory databases
- Complex event processing
- Hybrid workloads
- Blockchain
- General Enhancements to TPC workloads

This year we are offering authors the option to submit the tools and scripts used to conduct performance measurements together with their paper. We refer to the tools and scripts as a workload artifact. It will be evaluated using the following criteria:

- Is the artifact well documented?
- Is the workload description accurate?
- Is the workload sound?
- Does the artifact clearly state all pre-requisites?
- Does the artifact provide a high-level script to:
 - Prepare the measurement (e.g. create test data),
 - Run measurement and
 - Produce measurement reports.

If an artifact is accepted, it will be hosted in TPC's GitHub repository and promoted on the TPC's website together with author names. The TPC will also provide a mechanism for results from workload artifacts to be listed on the TPC's webpage.

Accepted papers will be published in Springer's Lecture Notes in Computer Science (LNCS) and listed on ACM DL and DBLP. Selected papers will be considered for future TPC benchmark developments.

IMPORTANT DATES

- Abstract due May 17, 2024
- Papers due June 7, 2024
- Notification of acceptance June 28, 2024
- Conference Day August 28, 2024

SUBMISSION GUIDELINES

Authors are invited to submit original, unpublished papers that are not currently under review for any other conference or journal. We also encourage the submission of extended abstracts, position statement papers and lessons learned in practice. The length of a paper should not exceed 16 pages. All papers must comply with the Springer's LNCS format, described at http://www.springer.com/cda/content/document/cda_downloaddocument/Springer+CS+Proceedings+Author+Guidelines+19APR2011.pdf?SGWID=0-0-45-1121537-0