

# Message from the USENIX ATC '22 Program Co-Chairs

## Introduction

Welcome to the 2022 USENIX Annual Technical Conference (ATC). We are excited that, after two years of being virtual due to the COVID-19 pandemic, this year’s conference is held again in person. Because of the ongoing special circumstances, USENIX has adopted a hybrid model with some attendees and presenters connecting remotely.

Similar to last year, ATC 2022 is co-located with OSDI. Our 2021 predecessors have already written extensively about the opportunities and challenges of running two systems conferences at the same time ([https://www.usenix.org/sites/default/files/atc21\\_message.pdf](https://www.usenix.org/sites/default/files/atc21_message.pdf)). This year brings the new challenge of running the two co-located events in a hybrid model. We very much look forward to meeting everyone in the systems community whether they attend ATC, OSDI, or both.

The rest of this document provides some insights into the submission and selection process that culminated in 64 accepted works that will be presented at the conference.

## Submissions process

We have solicited full length and short papers presenting new and original computer systems work. We adopted a double-blind review process to minimize bias. To further the USENIX mission of bringing together researchers in academia and systems practitioners, we have designated a special Operational Systems Track (OST) category to solicit submissions describing the experiences from deployed systems at “production” scale with real-world data. OST submissions received the same rigorous review process but with different criteria. The submission’s novelty bar was lower, and system and organization names did not have to be blinded. Switching submission tracks after the deadline was forbidden.

Authors were requested to provide additional information with their submission. First, we asked whether the paper was a re-submission from prior ATC or some other conference. 65% of the papers were marked as first-time submissions and 45% of the accepted papers were first time submissions. In case of a resubmission, authors provided a description of what changes they made since the previous submission. The reviewers and the program committee (PC) had access to this information, but they did not know the venue where the paper was submitted or specific review comments (unless provided by the authors). Prior submission information had no bearing on assigning reviewers.

We also asked the authors to indicate whether they would make an artifact available. 70% of submissions indicated they would, if accepted. With all else being equal, the PC viewed more favorably submissions that would share an artifact over those that did not. As researchers, we need to ensure reproducibility of published works. As members of the USENIX community, we want to provide free and open access to data. The artifact evaluation process, which we instituted this year together with OSDI, provides this assurance.

We received 394 submissions, of which 21 (5%) were in OST and 23 (6%) were short papers. This was about 15% more submissions than in the previous two years. We rejected 5 submissions without a review due to violating one or more directives stated in the call for papers (CFP). The most popular submission topics were Distributed System (26%), Storage (24%), Machine Learning (21%), Operating Systems (15%), Networking (14%), Databases (13%) and Security (13%).

In the end, the PC accepted 64 submissions for an overall 16.5% acceptance rate. Acceptance was based on the quality of the submissions, while in-person conference constraints had no bearing on our decisions. Of the 64 accepted submissions, 7 (33% acceptance rate) were in Operational Systems Track and 2 (9% acceptance rate) were short papers.

## Program Committee

We have assembled a program committee with many goals in mind: good coverage across diverse computer systems topics, balance between academia and industry, a mix of veterans of prior ATC PCs with individuals in early stages of their professional careers, geographic diversity, and adherence to the USENIX diversity and inclusion principles.

The assembled PC had 97 members from 15 countries, 52% from North America, 37% from EMEA and 10% from APAC. 60% of the PC were from academia and 40% from industry, though some PC members from academia were also affiliated with industry. 36% of the reviewers were early career researchers. Women were 64% more likely to decline an invitation to join the PC, which we find to be an alarming indication.

The main areas of expertise of PC members were Storage (22%), Distributed Systems (20%), Operating Systems (14%), Security (13%), Networking (12%) and Databases (9%). This was a good match to the submissions topics, given the PC was assembled in advance. As only 9% of PC members indicated that Machine Learning is their main expertise, a mismatch with 21% of submissions, we expanded the PC post submission deadline with more machine learning experts and recruited the help of a few expert external reviewers.

## Reviewing Process

We proceeded with two double-blind review rounds with the authors’ response after round 2 and before the PC meeting. We sent early rejection notifications to 58% of papers 10 weeks after the initial submission to allow authors a quick turnaround on their resubmission. In the first round, we assigned 3 reviewers per paper, in the vast majority of cases, complementing the expertise with external reviewers as necessary. In the second round, we assigned at least two additional reviewers to the 162 submissions not rejected earlier.

After the authors’ response and an online discussion among the reviewers (with some papers receiving over 20 comments), we pre-accepted 48 papers. We identified additional 39 papers for discussion at the face-to-face (virtual) PC meeting, of which 42% of papers were accepted, and PC members had the opportunity to “revive” papers. Despite having PC members spanning a geographic area of 13 time zones, we conducted the virtual meeting “live”. While the day (and night) was long, with the usual logistical challenges of handling conflicts virtually in break-out rooms, we found that the ability to discuss and calibrate our acceptance criteria during the PC meeting was very important and proved very useful.

## Artifact Evaluation Process

For the first time this year, ATC adopted an artifact evaluation process. The process ran jointly with OSDI, led by Anuj Kalia, Neeraja J. Yadwadkar, and Chengyu Zhang. The artifact evaluation committee chairs assembled a committee consisting of 118 members.

The authors of all accepted papers were invited to submit an artifact for an evaluation. 52 out of 64 papers (81%) had done so. 88% of artifacts received an “Available” badge, 76% received a “Functional” badge, and 61% received a “Reproduced” badge. 51% of papers received all three badges (some artifacts were reproduced, but are not available). Only one artifact received no badge.

## Additional Observations

Strong papers easily stood out; 38% of the accepted papers received only positive reviews, and an additional 44% had only a single weak-reject initial recommendation. This is also why so many papers were accepted prior to the PC discussion.

The Operational System Track (OST) was intended only for operational systems, especially those deployed at scale. In particular, there was an interest in the experience using these operational systems. Some authors mistook a working prototype for an operational system. While all submissions to ATC are expected to describe working systems, a prototype implementation to gather experimental results is not the same. OST submissions required describing the experience of using the system.

Anonymization rules were not always followed. Only one paper was rejected immediately during post-submission checks for blinding authors names and affiliations. However, several papers were rejected following the first round of reviews, as authors had a technical report using a similar title or a similar system name. This, in turn, led to unblinding the papers to reviewers and violated the submission rules. Anonymization rules, especially when applied to technical reports, vary from year to year and between conferences. Authors should be extra vigilant when submitting blinded manuscripts.

## Acknowledgements

More than 200 people have contributed to the organization of the USENIX ATC '22, most of them in a voluntary capacity. We would like to thank each and every one of them. We are tremendously grateful to the program committee members for a job extremely well done, and for their personal sacrifices. We thank the Artifact Evaluation committee and the Artifact Evaluation Committee Chairs for their work and contribution, which improves our community and enables future research. Last, we thank the USENIX organization, the USENIX ATC steering committee and OSDI '22 co-chairs. The amount of work and preparation that goes into organizing a conference is immense, and we were astounded by the help and support provided by everyone involved.

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