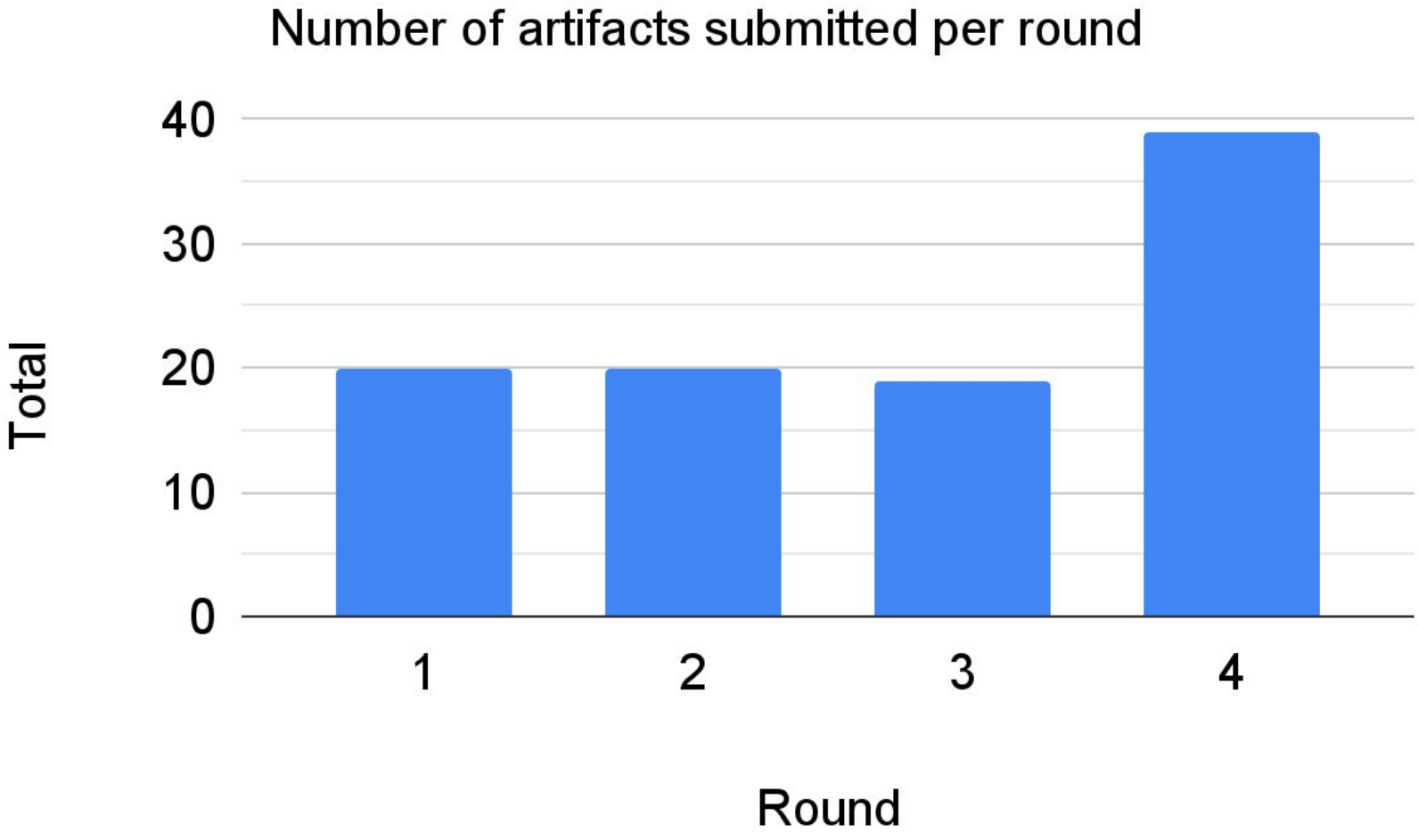
For Townhall

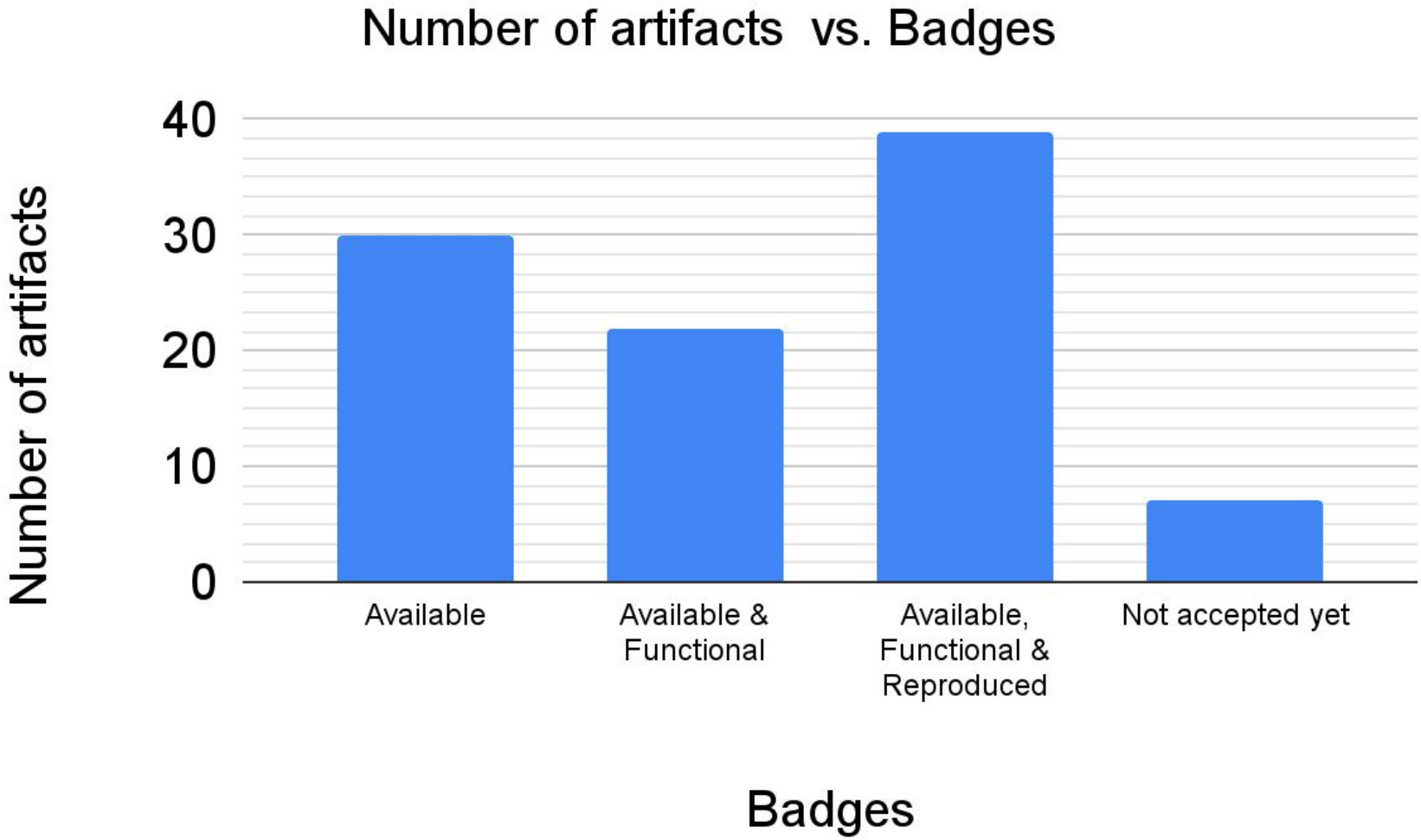
Artifact review process

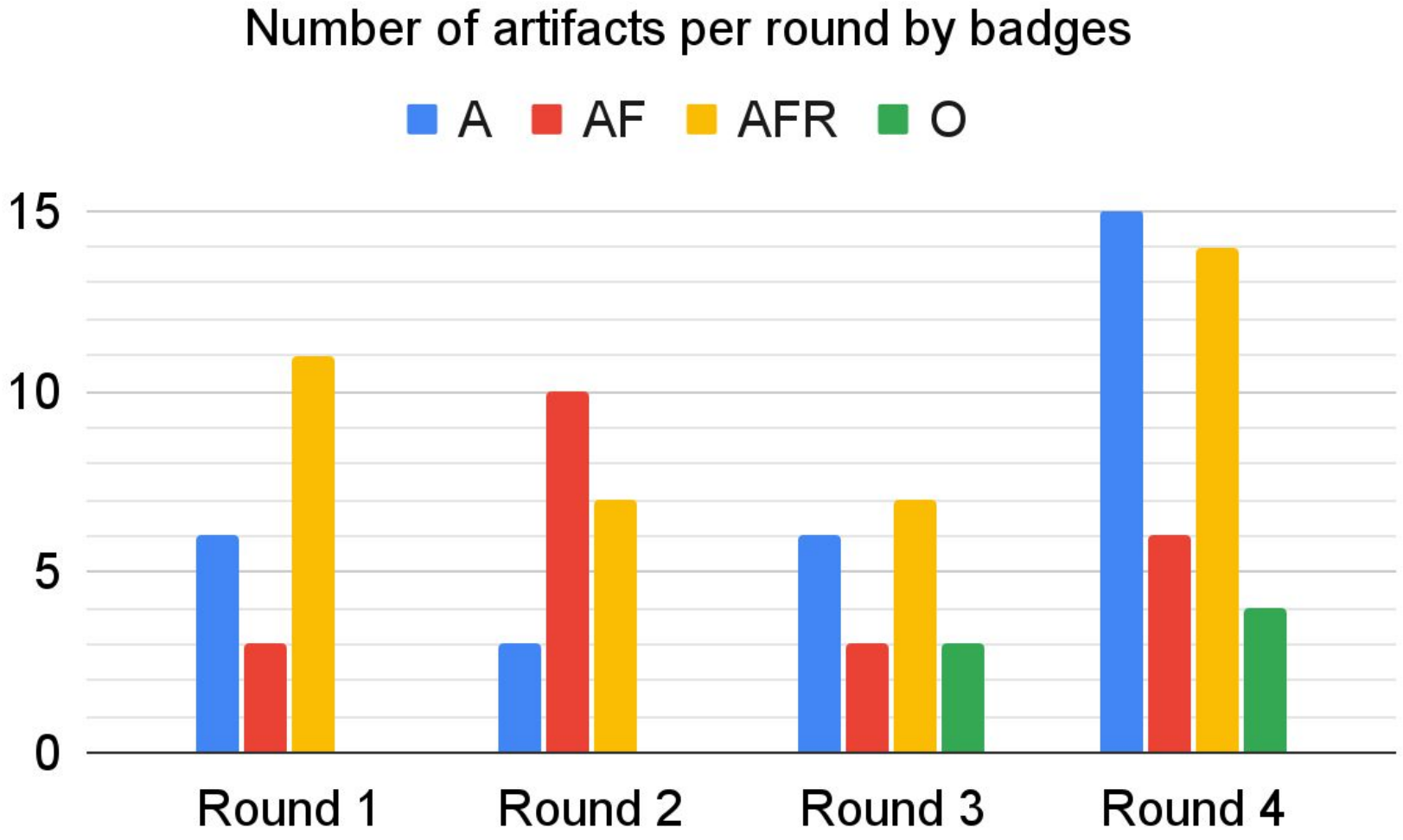
- Address scientific reproducibility crisis within the PETS community.
- Authors submit their source code, datasets, user studies etc. as artifacts
- At the end of the process, each paper artifact gets badges.
- Prior to 2024, there were two badges: *Available & Reproduced.*
- Main change from 2024: we introduced the *Functional* badge, which is “between” the *Available & Reproduced* bages. This aligns PETS with other conferences, such as USENIX Security and NDSS.

Did we have more artifact submissions this year?

	2024	2025
Number of papers	147	169
Number of artifacts	64	94
% of papers with (submitted & accepted) artifacts	0.435	0.556


Number of artifacts submitted per round
Total
40
30
20
10
0
1
2
3
4
Round


Number of artifacts vs. Badges
Number of artifacts
40
30
20
10
0
Available
Available & Functional
Available, Functional & Reproduced
Not accepted yet
Badges


Number of artifacts per round by badges
A
AF
AFR
O
15
10
5
0
Round 1
Round 2
Round 3
Round 4

Artifact Evaluation Committee 2025/2026

- Outgoing: Maximilian Noppel, Karlsruhe Institute of Technology
- Me: Miti Mazmudar, University of Waterloo / Calgary
- Incoming: Yohan Beugin, University of Wisconsin-Madison

Let’s thank Max for his service & let’s welcome Yohan!

Fill out the self-nomination form to volunteer for the artifact PC for PETS 2026 (on PETS website too) ⇨

Planned improvements

- **Aligning artifact review process with the paper review process.**
- **Ensuring responsive reviews.**
- Acknowledging artifact reviewers in the editor's intro for each issue?

Will discuss the items below in the BoF session on **Wednesday 1:30-3pm**.

- Providing guidance for authors and reviewers (lots of this for the 2026 cycle): Templates for Dockerfiles, dealing with large datasets & multiple repositories per artifact, etc.
- Improving HotCRP: submission & review form fields.
- Access to infrastructure for reproducibility: IoT devices, VMs.

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For Awards ceremony

Runner-ups for Best PETS Artifact Award for 2025

- *Janus: Fast Privacy-Preserving Data Provenance For TLS*
  - Jan Lauinger, Jens Ernstberger, Andreas Finkenzeller, Sebastian Steinhorst
- *Optimal Piecewise-based Mechanism for Collecting Bounded Numerical Data under Local Differential Privacy*
  - Ye Zheng, Sumita Mishra, Yidan Hu
- *MProve-Nova: A Privacy-Preserving Proof of Reserves Protocol for Monero*
  - Varun Thakore, Saravanan Vijayakumaran
- *PrePaMS: Privacy-Preserving Participant Management System for Studies with Rewards & Prerequisites*
  - Echo Meißner, Frank Kargl, Benjamin Erb, Felix Engelmann
- *Navigating Social Media Privacy*
  - Pithayuth Charnsethikul, Almajd Zunquti, Gale Lucas, Jelena Mirkovic

Best PETS Artifact Award for 2025

PIGEON: A High Throughput Framework for Private Inference of Neural Networks using Secure Multiparty Computation

Badges: Available, Functional & Reproduced

Christopher Harth-Kitzerow (Technical University of Munich (TUM), BMW Group), Yongqin Wang (University of Southern California), Rachit Rajat (University of Southern California), Georg Carle (Technical University of Munich (TUM)), Murali Annavaram (University of Southern California)

What makes a good artifact reviewer?

1. Providing actionable items & questions for each badge.
2. Following up and responding to authors' comments in a timely manner.
3. Rerunning the artifact after the authors' changes and finalizing the artifact.
4. Going above & beyond: Reviewers who have volunteered for artifacts that require hardware resources etc.

New in 2025: Distinguished Artifact Reviewers!

Distinguished artifact reviewers for 2025

- Mir Masood Ali
- Yohan Beugin
- Darion Cassel
- Panos Chatzigiannis
- Marc Damie
- Kasra Edalatnejad
- Yongming Fan
- Preston Haffey
- Simon Koch
- Elena Long
- Caterina Maidhof
- Alexandra Nisenoff
- Nathan Reitinger
- Guruprasad Viswanathan Ramesh
- Arul Thileeban Sagayam
- Harshal Shah
- Malte Wessels

We thank our infrastructure chairs!

- Artifact Infrastructure Chair:
  - Tobias Fiebig, Max Planck Institute for Informatics
  - Administered the VMs for Artifact Review through HotCRP.
- PETS Infrastructure chairs:
  - Ian Goldberg, University of Waterloo
  - Handled our HotCRP instances for Artifact Review.

For BoF session

Planned improvements

Three categories:

- Providing guidance for authors and reviewers (lots of this for the 2026 cycle)
  - Updating the Artifact Review page on the PETS website.
  - Updating our email templates for artifact submissions, bidding and reviews.
- Improving HotCRP: submission & review form fields.
- Access to infrastructure for reproducibility.

Providing guidance for reviewers

What makes a good review?

1. Providing actionable items & questions for each badge.
2. Following up and responding to authors' comments in a timely manner.
3. Rerunning the artifact after the authors' changes and finalizing the artifact.

Formalizing criteria for the "Award Worthiness" option in the HotCRP review form.

Providing guidance for authors

- Dealing with large datasets: Artifacts still(!) use Google Drive links for datasets
  - GitHub has a 100MiB file size limit. Trying to use Git LFS for large files still runs into this problem (2GB limit).
  - Artifacts have used Zenodo & HuggingFace.
    - For Zenodo, the per record limitation is 50GB / 100 files + one-time quota increase up to 200GB per record
    - We plan to recommend Zenodo for hosting datasets
  - An alternative is using OCI artifacts, especially for AI/ML models.

- Artifacts that involve multiple repositories
  - We can only point to one repository; our recommendation is to use Git submodules.

Providing guidance for authors

Should I focus on having a good Dockerfile or a Docker image or a VM?

- Use a VM only if Docker does not work (e.g. Tor / Shadow VM artifacts)
- Always focus on a good Dockerfile.
  - We will provide Dockerfile templates based on popular setups that we've encountered e.g., privacy-preserving ML artifacts that require Nvidia CUDA, virtual network with docker compose, etc.
  - We will link to examples for CI workflows so that the Docker image can be automatically built and packaged for you, based on the Dockerfile.
- Authors can use these templates early on in their project, so that it's easy for them to work with (and not just for the AE process).
  - The goal is to remove cognitive burden from authors so that they can focus on their work and not on how-to-containerize.

HotCRP improvements (1/3)

Author-facing changes — new submission form fields as follows:

- Field for the final artifact link, after authors implement changes & reviewers approve: This will help the process of updating the website with the necessary badges & links.
- Artifacts that require temporary access credentials such as Cloud API keys, SSH keys, etc.: Authors will be expected to provide this in a new field in the submission.
- Enable authors to rate reviews on HotCRP.

HotCRP improvements (2/3)

Reviewer-facing changes:

- Bidding process: Incorporate whether the reviewers have access to matching resources for the artifact.
- Assigning one reviewer per artifact as a shepherd — to finalize the artifact.
- Number of reviewers per artifact $\propto$ number of badges: 1 for Available, 2 for Functional, 2 or 3 for Reproduced
- Improve accountability to others in the PC & exemplify good reviews:
  - For the assigned artifact, the reviewers should be able to see other reviewers' names.
  - Allow any reviewer to see comments & discussions (not reviewer / author names) on other artifacts.

HotCRP improvements (2/3)

Reviewer-facing changes:

- Review form: Separate sections for the reviewers' notes for each badge (Available, Functional, Reproduced).
- Other minor improvements to make the reviewers & chairs' life easier:
  - HotCRP feature that doesn't let reviewers view authors' responses until they submit a review
  - Use HotCRP's "Collect final submissions" feature to help make a CSV with artifact links.

Access to infrastructure for reproducibility

- Access to IoT devices: We've reviewed 2 artifacts by video call, since reviewers didn't have access to the devices.
  - Authors of papers on IoT / hardware S&P are advised to join the AEC process & volunteer their university hardware resources for scientific reproducibility.
  - Will talk to other AECs on how they handle reviews that require access to devices.

- VMs: In some rounds, we've run out of GPU VMs as there are only two.
  - We are in talks with people from the SPHERE (Security and Privacy Heterogeneous Environment for Reproducible Experimentation) project: https://sphere-project.net/

Questions for BoF attendees

- You have a paper at PETS but did not submit an artifact? We would be curious to hear from you to see if we could make some changes.
- Your code/dataset is released publicly but you did not apply for the “Available” badge? Please reach out to the artifact chairs.
- Other suggestions?

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