

The 1st Workshop on Vector Databases

VecDB@ICML2025, 18 July 2025, Vancouver, Canada



Yusuke Matsui
(The University of Tokyo)



Martin Aumüller
(IT University of Copenhagen)



Magdalen Dobson Manohar
(Carnegie Mellon University)



Harsha Vardhan Simhadri
(Microsoft)

Introduction

- ❖ Vector DBs are essential for injecting info into LLMs.
- ❖ Dedicated to discussions on Vector DBs.
- ❖ This workshop covers Vector DBs from ***theory*** to ***implementation***.
- ❖ Platform for researchers and engineers to discuss Vector DB technologies.

Keynotes



Matthijs Douze (Meta)

“Vector search for machine learning and machine learning for vector search 🌀”



Hiroyuki Ootomo (NVIDIA)

“GPU-oriented High-Performance Graph-based Approximate Nearest Neighbor Search”



Prashant Pandey (Northeastern University)

“Vector Search for Large-Scale Genomic Discovery”

Papers

- ❖ Oral presentations
 - 6 papers (15min presentation + 5min QA)
- ❖ Poster presentations
 - 15 papers
 - (+6 oral papers)

Schedule

Time	Event
8:40 AM -- 9:25 AM	Keynote 1: Matthijs Douze (Meta)
9:30 AM -- 10:30 AM	Oral Session 1
10:30 AM -- 12:00 PM	Poster Session 1
12:00 PM -- 1:00 PM	Lunch
1:00 PM -- 1:45 PM	Keynote 2: Hiroyuki Ootomo (NVIDIA)
1:45 PM -- 3:00 PM	Poster Session 2
3:00 PM -- 3:30 PM	Coffee Break
3:30 PM -- 4:15 PM	Keynote 3: Prashant Pandey (Northeastern University)
4:15 PM -- 5:15 PM	Oral Session 2
5:15 PM -- 5:30 PM	Closing Remarks
8:00 PM	VecDB Meetup! Everyone is welcome to join! @Showcase Restaurant and Bar in the Marriott

Poster1: take down posters;
Poster2: put up posters.

Best Paper Award
Announcement 🏆

Datasets/Benchmarks/Competition

- Datasets and Baselines:

- [Ann-benchmarks.com](https://ann-benchmarks.com); big-ann-benchmarks.com

- Competitions:

- NeurIPS'21: Billion-scale, software and hardware tracks
- NeurIPS'23: Filtered, Streaming, Out-of-distribution, Sparse Vectors

- Need for diverse datasets for better science

- More Filtered datasets, Multi-Modal, Transactional, etc.

- Reach out to us if you are interested in collaboration on future efforts.
(let's discuss over lunch or dinner)