



Welcome to

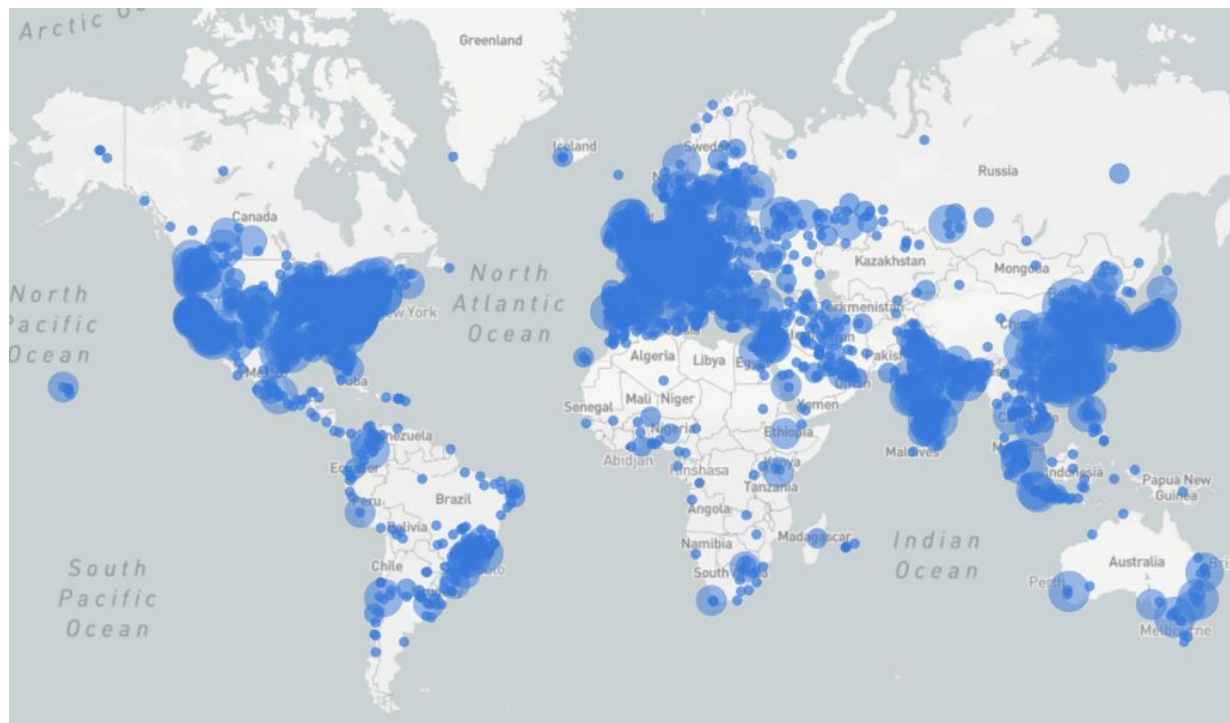
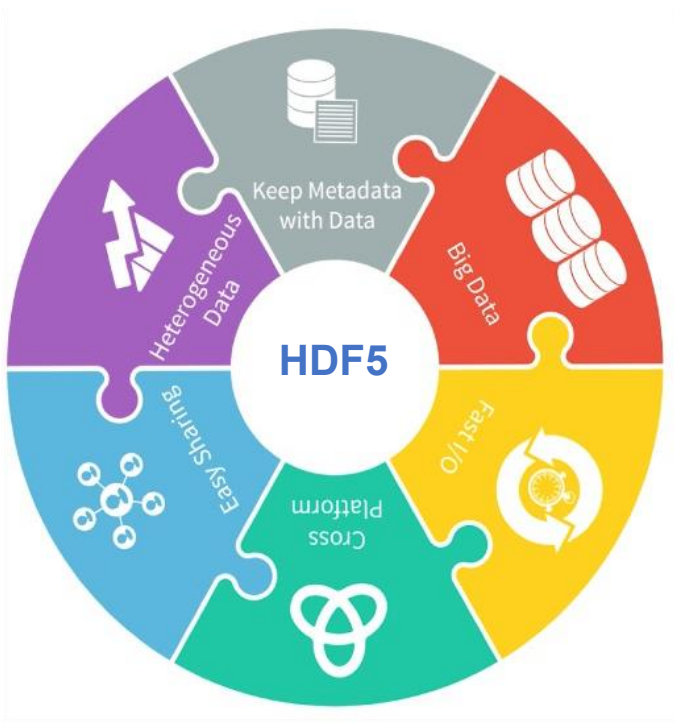
The HDF5 User Group (HUG) meeting 2024

Illinois Institute of Technology, Chicago

HDF5 User Group Meeting Organizing Committee



26 years since the first release



The **HDF** Group



2024 HUG Meeting

HDF5 User Group (HUG) Meetings

The HDF Group along with various partners hosts HDF5 User Group (HUG) meetings. You can access registration and other info for upcoming events, as well as find archival information and presentations for previous events here.

[2024 HDF5 User Group Meeting](#) – McCormick Tribune Campus Center, Chicago, Illinois – August 5-7, 2024

- [2023 European HDF5 User Group Meeting](#) – DESY, Hamburg, Germany – September 19-21, 2023
- [2023 HDF5 User Group Meeting](#) – Scott Laboratory, Columbus, Ohio – August 16-18, 2023
- [2022 European HDF5 User Group Meeting](#) – ITER, Aix-en-Provence, France – May 31-June 2, 2022
- [2021 Virtual Conference – October 12-14, 2021](#)
- [2021 European Virtual Conference – July 7-8, 2021](#)
- [2020 Virtual Conference – October 14-16, 2020](#)
- [2019 European Workshop in Grenoble, France](#)

<https://www.hdfgroup.org/hug>

- **Second in-person meeting in the USA (also hybrid)**
 - In person: 40 registrations
 - Online: 8 registrations
 - 17 students, 18 industry staff,
- **Keynote talks**
 - Rajeev Thakur, Argonne National Laboratory
 - Quincey Koziol, NVIDIA
- **Invited talks**
 - Bogdan Nicolae, Argonne National Laboratory
 - Jay Lofstead, Sandia National Laboratories
 - Barnali Chowdhury, Argonne National Laboratory
- Student posters
- US RSE Association support funded several students to attend the meeting

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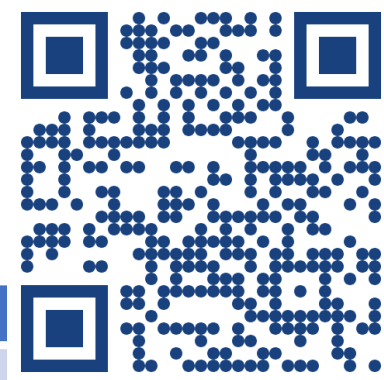


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Agenda – Day 1

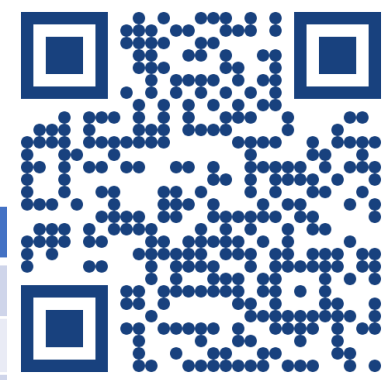
<https://tinyurl.com/hug2024>



Time	Presenter	Title of the talk
9:00 am – 9:10 am	HUG 2024 Committee	Opening remarks
9:10 am – 9:35 am	Luke Logan	Hermes: A Heterogeneous-Aware Multi-Tiered Distributed I/O Buffering System – Luke Logan
9:35 am – 10:00 am	Wei Zhang	Distributed Affix-Based Metadata Search in Self-Describing Data Files
10:00 am – 10:25 am	Chenxu Niu	Semantic Search and Natural Language Query over HDF5
10:25 am – 10:50 am	Jean Luca Bez	Drishti VOL: The performance profiling and tracing HDF5 VOL connector (Zoom)
10:50 am – 11:00 am		Break
11:00 am – 12:00 pm	Rajeev Thakur	KEYNOTE: AuroraGPT: A Large-Scale Foundation Model for Advancing Science
12:00 pm – 1:00 pm		Lunch break
1:00 pm – 1:25 pm	Hariharan Devarajan	Optimizing molecular dynamics AI model using HDF5 and DYAD
1:25 pm – 1:50 pm	Donpaul C. Stephens	Analytical Data Platform: Divide & Conquer the Multi-Dimensional Gordian Knot
1:50 pm – 2:15 pm	Jay Lofstead	INVITED TALK: Rebasing For The Win!
2:15 pm – 2:40 pm	John Mainzer and Elena Pourmal	Upcoming new HDF5 feature: our progress on HDF5 multi-threading and more
2:40 pm – 2:55 pm		Break
2:55 pm – 3:20 pm	Jordan Henderson	New datatypes in HDF5
3:20 pm – 3:55 pm	Dana Robinson	HDF5: State of the Union
3:55 pm – 5:00 pm	Community Discussion	

Agenda – Day 2

<https://tinyurl.com/hug2024>



Time	Presenter	Title of the talk
9:00 am – 10:00 am	Quincey Koziol	KEYNOTE: Uncharted Territory – Exploring New Frontiers for HDF5
10:00 am – 10:15 am		Break
10:15 am – 10:40 am	Luke Logan	Enlarging Effective DRAM Capacity through Hermes
10:40 am – 11:05 am	Bogdan Nicolae	INVITED TALK: DataStates: Scalable Lineage-Driven Data Management In The Age of AI
11:05 am – 11:30 am	Aleksandar Jalennak	Update on Cloud Optimized HDF5 Files
11:30 am – 11:55 am	Matt Larson	HSDS Multi API
11:55 am – 1:00 pm		Lunch Break
1:00 pm – 1:25 pm	Chen Wang	Potential revision to MPI-IO consistency and its impact on HDF5
1:25 pm – 1:30 pm	Houjun Tang	Efficient HDF5 Data Access for Exa-scale Scientific Application
1:30 pm – 2:30 pm	Anthony Kougkas	StoreHub: Building a Community for the Future of Data Storage Research
2:30 pm – 2:55 pm	Scot Breitenfeld	HDF5 Subfiling: A Scalable Approach to Exascale I/O
2:55 pm - 3:15 pm	Poster Session: 5 minute talks	
	Meng Tang	Optimizing Workflow Performance by Elucidating Semantic Data Flow
	Luke Logan	Enlarging Effective DRAM Capacity through Hermes
	Keith Bateman	DTIO: Unifying I/O for HPC and AI
	Hua Xu	I/O model based on HDF5
	Vinay Vyas	HDF5 to drive research and new target discovery in immuno-oncology
3:15 pm - 3:50 pm	POSTERS	
3:50 pm – 4:15 pm	Barnali Chowdhury	HDF5 infrastructure in DUNE
4:15 pm – 4:30 pm	Sandra Gesing	US-RSE: Empowering Hidden Contributors Driving Science
4:30 pm – 5:00 pm	Student Introductions	

Social event - Banquet



- Time: August 6th @ 6 pm
- Address: 200 S Halsted Chicago, IL 60661
- Menu: <https://www.hdfgroup.org/wp-content/uploads/2024/07/HUG24-Greek-Island-banquet.pdf>
 - Dinner is included for all registrants! If you have a +1, please email hug@hdfgroup.org

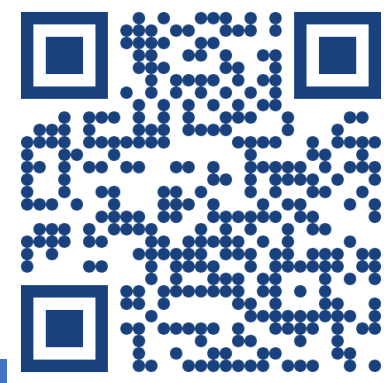
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Agenda – Day 3

<https://tinyurl.com/hug2024>



Time	Presenter	Tutorial
9:00 am – 10:00 am	The HDF Group Staff and contributors	Best Practices for HDF5
10:00 am – 11:00 am	Quincey Koziol and M. Scot Breitenfeld	HDF5 Performance Tuning
11:00 pm – 12:00 pm	Matt Larson, John Readey, and Aleksandar Jelenak	Cloud Ready HDF5
12:00 pm – 1:00 pm		Lunch Break



Logistics

- Breakfast and Lunch are in the next room.
- Presenters: Upload to Google Drive
 - <https://zenodo.org/communities/hug24>
 - In case you must present from your laptop, see the session chair.
- Session notes Google doc
 - <https://tinyurl.com/hug24-notes>
- WiFi
 - <https://tinyurl.com/iitguest>
 - eduroam
- Restrooms

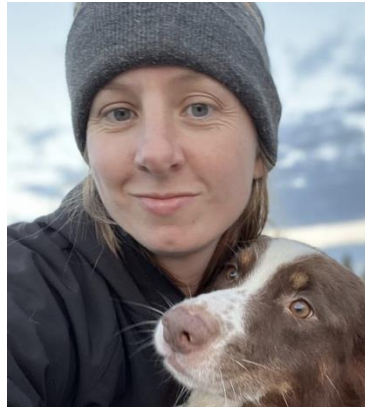




2024 HUG Organizing Committee



Suren Byna



Lori Cooper



Gerd Heber



Anthony Kougkas



Quincey Koziol



Elena Pourmal



Dana Robinson



Thanks to the HDF5 Community!