

HLPP 2025

18th International Symposium on
High-Level Parallel Programming and Applications



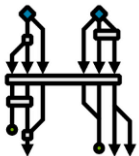
Welcome to HLPP 2025

Philipp Gschwandtner & Peter Thoman

2025-07-03

Welcome to Innsbruck!

We (Philipp and Peter) are happy to welcome you to the 18th International Symposium on High-Level Parallel Programming and Applications



HLPP 2025

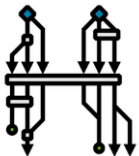
18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04



Organizational

- Internet Access
 - **Eduroam**
 - Alternatively, *if you do not have eduroam access:*
Network: **UIBK** / User: **C7031210** / Pass: **FyUNs7za**
- Locations
 - All sessions take place here, in **Seminar Room 9**
 - Lunch is served at **Uni Lounge**, at the ground floor
 - More information about the Social Event & Dinner later today



HLPP 2025

18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04



Program – Day 1 Morning

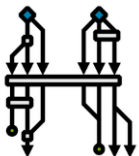
08:30 Registration Opens

09:00 Welcome and Opening

09:15 Keynote 1

10:15 Coffee Break

10:30 Technical Session 1



HLPP 2025

18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04



Program – Day 1 Morning

08:30 Registration Opens

09:00 Welcome and Opening

09:15 **Keynote 1**

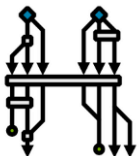
**Towards more Flexible and
Dynamic HPC Software Stacks
for the Post-Exascale Era**

Prof. Dr. Martin Schulz



10:15 Coffee Break

10:30 Technical Session 1



HLPP 2025

18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04

 universität
innsbruck

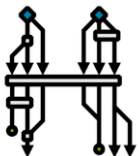
Program – Day 1 Morning

- 08:30 Registration Opens
- 09:00 Welcome and Opening
- 09:15 Keynote 1
- 10:15 Coffee Break
- 10:30 **Technical Session 1**

PHI: a modern C++ library for parallel pattern composition

Enabling Pinning Strategies for Stream Processing Applications on Multicores

Mneme: A Parallel Preprocessing Framework for Large Tabular Datasets



HLPP 2025

18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04

 universität
innsbruck

Program – Day 1 Continued

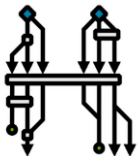
12:00 Lunch Break

13:30 Technical Session 2

15:00 Coffee Break

15:20 Social Event Information

18:30 Dinner at 1965m Altitude



HLPP 2025

18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04



Program – Day 1 Continued

12:00 Lunch Break

13:30 Technical Session 2

15:00 Coffee Break

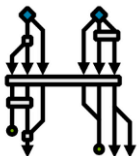
15:20 Social Event Information

18:30 Dinner at 1965m Altitude

**SkePU-Streaming: Distributed Pipelining
of Portable Data-Parallel Skeleton
Computations for the Heterogeneous
Edge-Cloud Continuum**

**A Zero-Overhead Transpiler-Based
Python Frontend for the Skeleton
Programming Framework SkePU**

**Towards Extreme Scalability of Stencil
Applications with Parallel Skeletons**



HLPP 2025

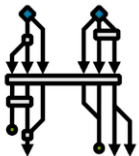
18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04

 universität
innsbruck

Program – Day 2

- 09:00 Keynote 2
- 10:00 Coffee Break
- 10:30 Technical Session 3
- 12:00 Lunch Break
- 13:30 Technical Session 4
- 14:30 Closing Statement
- 15:00 Coffee Break and Farewell



HLPP 2025

18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04

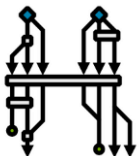


Program – Day 2

- 09:00 Keynote 2**
- 10:00 Coffee Break
- 10:30 Technical Session 3
- 12:00 Lunch Break
- 13:30 Technical Session 4
- 14:30 Closing Statement
- 15:00 Coffee Break and Farewell

**Types as a path from abstract
to performance?**

Prof. Dr. Gabriele Keller



HLPP 2025

18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04

 universität
innsbruck

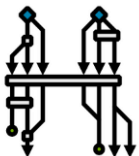
Program – Day 2

- 09:00 Keynote 2
- 10:00 Coffee Break
- 10:30 Technical Session 3**
- 12:00 Lunch Break
- 13:30 Technical Session 4
- 14:30 Closing Statement
- 15:00 Coffee Break and Farewell

High-level Programming of Vulkan-based GPUs through OpenMP

A High-level API for End-to-end Data Compression in Multi-GPU Cluster Applications

SymTensor: Symbolic and Adaptive Tensor Partitioning by Unified Parallelism for Deep Learning



HLPP 2025

18th International Symposium on High-Level
Parallel Programming and Applications

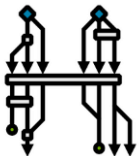
2025-07-03 – 2025-07-04

 universität
innsbruck

Program – Day 2

- 09:00 Keynote 2
- 10:00 Coffee Break
- 10:30 Technical Session 3
- 12:00 Lunch Break
- 13:30 Technical Session 4**
- 14:30 Closing Statement
- 15:00 Coffee Break and Farewell

**East of Eden: Parallel Functional
Programming in Idris**



HLPP 2025

18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04

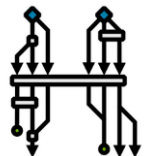
 universität
innsbruck

Sponsors



HUAWEI

Gold Sponsor



HLPP 2025

18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04



Enjoy HLPP 2025!

- More information:

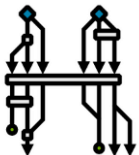
<https://hlpp-conference.github.io/hlpp-2025>

- Any questions?

Ask us (Philipp and Peter) directly or via

philipp.gschwandtner@uibk.ac.at

peter.thoman@uibk.ac.at



HLPP 2025

18th International Symposium on High-Level
Parallel Programming and Applications

2025-07-03 – 2025-07-04