October 13, 2025
Seoul, Republic of Korea

Association for
Computing Machinery

Advancing Computing as a Science & Profession

Welcome to PLOS ’25!

13th Workshop on Programming Languages and Operating Systems

Stefan Lankes (PC Chair)

Format

- Open discussions!
  - Interaction between all research groups
- Keynote
  - ~30 minutes

  + ~10 minutes Q&A
- Talks (4 sessions)
  - ~15 minutes

  + ~5 minutes Q&A
- Breaks
  - 2x Coffee breaks
  - Lunch

Link to https://plos-workshop.org/2025/program.php

Paper Selection

- 27 submission
  - 11 more than 2023
  - 14 – North America
  - 10 – Europe
  - 2 – Asia
  - 1 – Australia
- 3 reviews per paper
- Online PC discussions
  - 15 members spread around the world
  - Maximize acceptance rate
- 16 papers accepted
  - 7 – North America
  - 8 – Europe
  - 1 – Australia

Link to the workshop proceedings

Schedule

- 9:00 AM – Welcome, Best Paper Award
- 9:05 AM – Keynote
- 9:45 AM – Session 1: A Resource Manager's Journey
  - **Comparing Isolation Mechanisms with Osmosis**
    Sidhartha Agrawal (University of British Columbia), Shaurya Patel (University of British Columbia, Google), Linh Pham (Hammerspace), Arya Stevinson (Oracle Labs), Ilias Karimalis, Hugo Lefeuvre, Aastha Mehta, Reto Achermann, Margo Seltzer (University of British Columbia)
  - **Monolift: Automating Distribution With the Tools You Have at Home**
    Tim Goodwin, Esteban Ramos, Andi Quinn, Lindsey Kuper (University of California, Santa Cruz)
  - **Static Analysis of Reference-Counted Objects for the C Programming Language**
    Ole Wiedemann, Volkmar Sieh (Friedrich-Alexander-Universität Erlangen-Nürnberg)
- 10:45 AM – Coffee Break

Schedule

- 11:15 AM – Session 2: The Power of Verification
  - **Modal Verification Patterns for Systems Software**
    Ismail Kuru, Colin S. Gordon (Drexel University)
  - **Towards Hybrid Cooperative-Preemptive Scheduling**
    Yizheng Xie, Di Jin, Nikos Vasilakis (Brown University)
  - **Applying Modern Verification Techniques to a Root-of-Trust Bootloader**
    Nicholas Gordon, Carsten Weinhold (Barkhausen Institut)
  - **Compositional Model-Driven Verification of Weakly Consistent Distributed Systems**
    Bryant J. Curto (Northeastern University), Jeonghyeon Kim (KAIST), Alan Wang (Northeastern University), Gijung Im, Jieung Kim (Yonsei University), Jeehoon Kang (FuriosaAI), Ji-Yong Shin (Northeastern University)
  - **Debug, Execute, Verify! - Development-Verification Co-Design Made Practical**
    František Farka, Carmine Abate, Shuanglong Kan, Sebastian Ertel (Barkhausen Institute)
- 01:00 PM – Lunch

Schedule

- 02:00 PM – Session 3: To Wait Or Not To Wait?
  - **High-Fidelity Specification of Real-World Devices**
    Liam Murphy (UNSW Sydney), Albert Rizaldi (PlanV GmbH), Lesley Rossouw (UNSW Sydney), Chen George (University of Wisconsin), James Treloar, Hammond Pearce, Miki Tanaka, Gernot Heiser (UNSW Sydney)
  - **Path Expressions Revisited – Towards Compiler-enforced Reusable Synchronization Patterns**
    Thomas Alexander Hövelmann (TU Dortmund University), Olaf Spinczyk (Universität Osnabrück), Alexander Krause (TU Dortmund University), Horst Schirmeier TU Dresden, Peter Ulbrich (TU Dortmund University)
  - **Are Your GPU Atomics Secretly Contending?**
    Peter Maucher, Nick Djerfi, Lennard Kittner, Lukas Werling, Frank Bellosa (Karlsruhe Institute of Technology)
  - **Tapestry: Revealing Wait-For Dependencies Between Application Threads**
    Tomáš Faltín (Charles University), Himadri Chhaya-Shailesh (Inria), Julia Lawall (Inria), Jean-Pierre Lozi (Inria)
- 3:25 PM — Session 4a: Crossing Boundaries
  - **Propagating C++ Exceptions across the User/Kernel Boundary**
    Dmitry Voronetskiy, Tom Spink (University of St Andrews)

Schedule

- 3:45 PM — Coffee break
- 04:15 PM – Session 4b: Crossing Boundaries
  - **From Rust Till Run: Extending Memory Safety From Rust to Cryptographic Assembly**
    Shai Caspin, Nikhil Pimpalkhare, Amit Levy (Princeton University)
  - **KLean: Extending Operating System Kernels with Lean**
    Di Jin (Brown University), Ethan Lavi (Brown University), Jinghao Jia (University of Illinois Urbana-Champaign), Robert Y. Lewis (Brown University), Nikos Vasilakis (Brown University)
  - **From Browser to Kernel: Exploring a Lightweight Sandboxed Approach for Unikernel Extensions**
    Jonathan Klimt, Martin Kröning, Stefan Lankes, Antonello Monti (RWTH Aachen University)
- 05:15 PM — Closing remarks

Best Paper Award

- Unanimous most positive **reviewer' feedback**

From Rust Till Run: Extending Memory Safety From Rust to Cryptographic Assembly

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Thanks!

- Keynote speaker
- Organizing committee
  - Antonio Barbalace, The University of Edinburgh
  - Pierre Olivier, The University of Manchester
  - Olaf Spinczyk, Universität Osnabrück
- Program committee
  - 19 members
- Paper authors
- Paper presenters
- ACM SIGOPS and the organizers of SOSP
- You all!