10:00 - 11:00 Keynote

Scalable Polyhedral Compilation in Open-Source and AI Compilers - Tobias Grosser (University of Cambridge)

11:00 - 11:30 Break

11:30 - 12:30 Session 1: Polyhedral Foundation

- A Polyhedral Compilation Library with Explicit Disequality Constraints - Sven Verdoolaege
- Easy Counting and Ranking for Simple Loops - Alain Ketterlin

12:30 - 12:50 Session 2: Affine Transformations

- Reuse Analysis via Affine Factorization - Ryan Job, Sanjay Rajopadhye

12:50 - 13:00 Lunch

14:00 - 15:30 Session 3: Code Generation Techniques

- ParameTrick: Coefficient Generalization for Faster Polyhedral Scheduling - Gianpietro Consolaro, H. Razanajato, N. Lossing, D. Barthou, Z. Zhang, C. Ancourt, C. Bastoul
- Employing polyhedral methods to optimize stencils on FPGAs with stencil-specific caches, data reuse, and wide data bursts - Florian Mayer, J. Brandner, M. Philippsen

15:30 - 16:00 Break

16:00 - 17:10 Session 4: Code Optimization

- An Irredundant Decomposition of Data Flow with Affine Dependences - Corentin Ferry, Steven Derrien and Sanjay Rajopadhye
- Algebraic Tiling facing Loop Skewing - Clément Rossetti, A. Hamon and P. Clauss

17:10 - 17:20 Community news and closing notes
Workshop Chair
• Corinne Ancourt  MINES Paris - PSL University, France
• Jie Zhao  Renmin University of China, China

Program Committee
• Riyadh Baghdadi  New York University, UAE
• Cédric Bastoul  Qualcomm, France
• Jeronimo Castrillon  TU Dresden, Germany
• Lorenzo Chelini  Intel, Switzerland
• Albert Cohen  Google, France
• Tobias Grosser  University of Cambridge, UK
• Paul Kelly  Imperial College London, UK
• Andreas Kloeckner  UIUC, USA
• Michael Kruse  Argonne National Laboratory, USA
• Benoit Meister  Qualcomm, USA
• Harenome Razanajato  Huawei, France
• Claude Tadonki  Mines Paris - PSL University, France
• Ramakrishna Upadrasta  IIT Hyderabad, India
• Sven Verdoolaege  Cerebras Systems, Belgium
Reviewers

- Corinne Ancourt, Riyadh Baghdadi, Cédric Bastoul, George Bisbast, Jeronimo Castrillon, Lorenzo Chelini, Albert Cohen, Tobias Grosser, Paul Kelly, Andreas Kloeckner, Michael Kruse, Benoît Meister, Harenome Razanajato, Maxime Schmit, Edward Stow, Claude Tadonki, Ramakrishna Upadrasta, Sven Verdoolaege, Filip Wojcicki, Jie Zhao
Tobias Grosser is an Associate Professor at the University of Cambridge and an advocate for open-source-first research. Tobias co-founded the Polyhedral loop optimization framework Polly, the FPL Presburger Library for MLIR, the LLHD/CIRCT hardware-design compiler, and is regularly teaching compiler design using the Python-Native xDSL compiler project designed to lower the barrier of entry into the LLVM ecosystem. Tobias worked as a Google PhD Fellow at ENS Paris, an SNSF Ambizione Fellow at ETH Zurich, and a Reader at the University of Edinburgh. He supervises several PhD students who actively contribute to the open-source compiler ecosystem.