25th Static Analysis Symposium - Conference Program

Tuesday, August 28th		
Workshops	SASB 2018	TAPAS 2018
18:00	Welcome Reception on the roof terrace of the conference venue	
Wednesday, August 29th		
09:00 - 10:00	Invited Talk	
	Fairness: A Formal-Methods Perspective Aws Albarghouthi	
10:00 - 10:30	Coffee Break	
10:30 - 12:00	Session 1	
	Modular Software Fault Isolation as Abstract Interpretation Frédéric Besson, Thomas Jensen and Julien Lepiller **A Reduced Product of Absolute and Relative Error Bounds for Floating-point Analysis** Maxime Jacquemin, Sylvie Putot and Franck Védrine **Invertible Linear Transforms of Numerical Abstract Domains** Francesco Ranzato and Marco Zanella	
12:30 - 13:30	Lunch	
13:30 - 14:30	Invited Talk	
	New Applications of Software Synthesis: Verification of Configuration Files and Firewall Repair Ruzica Piskac	
14:30 - 15:00	Coffee Break	
15:00 - 16:30	Session 2	
	Block-Size Independence for GPU Programs Rajeev Alur, Joseph Devietti and Nimit Singhania **The Impact of Program Transformations on Static Program Analysis** Kedar Namjoshi and Zvonimir Pavlinovic **Abstract Interpretation of Stateful Networks** Kalev Alpernas, Roman Manevich, Aurojit Panda, Mooly Sagiv, Scott Shenker, Sharon Shoham and Yaron Velner	
16:30 - 17:00	Coffee Break	
17:00 - 18:00	Invited Tutorial	
	The MISRA C Coding Standard and its Role in the Development and Analysis of Safety- and Security-Critical Embedded Software Roberto Bagnara	
18:30	Reception and Banquet at Schlossbergrestaurant Dattler*	

* *Schlossbergrestaurant Dattler* is located on the hill next to the conference venue (*Schlossberg* means "castle hill"). It's a short walk (10-15 min). The path starts right next to the building, on the right if you face the building. There are a few stairs in the beginning. You'll be able to see the restaurant after a few turns. You will also see the (impressively steep) rails of a train that goes to the restaurant. The train functions like an elevator for the restaurant. You can take the train if you don't want to walk. It starts in the park across the street from the conference venue and ends at the restaurant (you don't have to pay; just show the conference badge when you enter the train).

	Thursday, August 30th	
09:00 - 10:00	Invited Talk	
	Interactive Verification of Distributed Protocols Using Decidable Logic	
	Sharon Shoham	
10:00 - 10:30	Coffee Break	
10:30 - 12:00	Session 3	
	Volume-Based Merge Heuristics for Disjunctive Numeric Domains	
	Andrew Ruef, Kesha Hietala and Arlen Cox	
	Extending Constraint-Only Representation of Polyhedra with Boolean Constraints	
	Alexey Bakhirkin and David Monniaux	
	Verifying Bounded Subset-Closed Hyperproperties	
	Isabella Mastroeni and Michele Pasqua	
12:00 - 13:30	Lunch	
13:30 - 15:00	Session 4	
	Efficiently Learning Safety Proofs from Appearance as well as Behaviours	
	Sumanth Prabhu, Kumar Madhukar and Venkatesh R.	
	Abstract Interpretation of CTL Properties	
	Caterina Urban, Samuel Ueltschi and Peter Müller	
	An Efficient Abstract Domain for Not Necessarily Closed Polyhedra	
	Anna Becchi and Enea Zaffanella	
15:00 - 15:30	Coffee Break	
15:30 - 17:00	Session 5	
	Process-Local Static Analysis of Synchronous Processes	
	Jan Midtgaard, Flemming Nielson and Hanne Riis Nielson	
	Modular Static Analysis of String Manipulations in C Programs	
	Matthieu Journault, Antoine Miné and Abdelraouf Ouadjaout	
	Closing the Performance Gap between Doubles and Rationals for Octagons	
	Aziem Chawdhary and Andy King	
17:00 - 17:30	Coffee Break	
17:30 - 18:30	Invited Tutorial	
	Deductive Verification in Decidable Fragments with Ivy	
	Kenneth L. McMillan and Oded Padon	
	Friday, August 31st	
09:00 - 10:00	Invited Talk	
	Numerical Invariants via Abstract Machines	
	Zachary Kincaid	
10:00 - 10:30	Coffee Break	
10:30 - 12:00	Session 6	
	Verifying Properties of Differentiable Programs	
	Jan Hueckelheim, Ziqing Luo, Sri Hari Krishna Narayanan, Stephen F. Siegel and Paul Hovland	
	Incremental Verification Using Trace Abstraction	
	Bat-Chen Rothenberg, Daniel Dietsch and Matthias Heizmann	
	Inductive Termination Proofs with Transition Invariants and their relationship to the Size-Change Abstraction	
	Florian Zuleger	
12:00 - 13:30	Lunch	
13:30 - 14:30	Invited Tutorial	
	Experience Developing and Deploying Concurrency Analysis at Facebook	
	Peter O'Hearn	
14:30 - 15:00	Coffee Break	
17:00	Food & Wine Tour *Flying Dinner***

In your bag you will find an item which is unique for Freiburg: a *Bächleboot* (literally "small-creek boat"). The Bächleboot is a handmade wooden toy boat intended for the *Bächle.* The Bächle are the gutters running through the streets of Freiburg (you won't find the word Bächle in the dictionary; it is derived from Bach, the German word for creek, and the Allemanic diminutive ending "–le"). There is a spell: each visitor who trips into the Bächle is bound to marry a person from Freiburg. We wish you a lot of fun with your Bächleboot.

** Experience the beautiful historic city of Freiburg and enjoy local food and local wine in three different places. The food and wine tour starts at the *Rathausplatz*. We will meet next to the fountain.