# Schedule

# Monday April 20

09:00-10:20: A tutorial introduction to proof complexity (Paul Beame)
10:20-10:40: Coffee break
10:40-12:00: Tutorial on conflict-driven clause learning (CDCL) SAT solvers (Joao Marques-Silva)
12:15-13:30: Lunch
14:30-15:20: An Introduction to Semialgebraic Proofs: Basic Definitions and Results (Albert Atserias)
15:20-15:50: Presentation of participants
15:50-16:20: Coffee break
16:20-17:10: Handling Pseudo-Boolean constraints in a CDCL solver: a practical survey (Daniel Le Berre)
17:10-18:00: Gröbner bases (Manuel Kauers)
18:00-19:15: Dinner
19:30-20:00: Art exhibit opening
20:00-21:30: Open problem session

# **Tuesday April 21**

09:00-10:20: Tutorial on proof systems connected to SAT solving (Sam Buss)
10:20-10:40: Coffee break
10:40-12:00: Tutorial on preprocessing and inprocessing (Matti Järvisalo)
12:15-13:30: Lunch
15:00-15:30: Towards a Deeper Empirical Understanding of CDCL SAT Solvers (Vijay Ganesh)
15:30-16:00: MaxSAT Solving with SAT Oracles (Joao Marques-Silva)
16:00-16:30: Coffee break
16:30-17:20: SAT-Enabled Verification of State Transition Systems (Karem Sakallah)
17:20-17:50: Machine learning for SAT (Holger Hoos)
18:00-19:15: Dinner

#### Wednesday April 22

09:00-09:50: How SAT Solvers Could (And Do) Prove Lower Bounds (Ryan Williams)
09:50-10:40: (S)ETH and A Survey of Consequences (Ryan Williams)
10:40-11:10: Coffee break
11:10-12:00: A Survey on Parameterized Complexity and SAT (Stefan Szeider)
12:15-13:30: Lunch

18:00–19:15: Dinner 19:30–21:00: Panel discussion

## Thursday April 23

09:00-10:20: From SAT to SMT a tutorial (Nikolaj Bjorner)
10:20-10:40: Coffee break
10:40-11:30: Survey on QBF solving (Nina Narodytska)
11:30-12:00: QBF proof complexity (Olaf Beyersdorff)
12:15-13:30: Lunch
15:00-15:30: Parallel SAT Solving or To Share or Not To Share (Armin Biere)
15:30-16:00: Crowdsourcing Insights into Problem Structure for Scientific Discovery (Bart Selman)
16:00-16:30: Coffee break
16:30-17:00: An Ultimate Trade-Off in Propositional Proof Complexity (Alexander Razborov)
17:00-17:30: Resolution Proofs of Bounded Width (Christoph Berkholz)
17:30-18:00: Narrow Proofs May Be Maximally Long (Massimo Lauria)
18:00-19:15: Dinner

# Friday April 24

09:00–09:50: A Survey of Random Satisfiability (Dimitris Achlioptas)

09:50–10:20: Space and Random CNFs (Ilario Bonacina)

- $10{:}20{-}10{:}40{:}\ Coffee\ Break$
- 10:40-11:10: Linear Temporal Logic Satisfiability Checking (Kristin Yvonne Rozier)

11:10-11:40: Improving and Evaluating a Hybrid Approach to Max-SAT Solving (Jessica Davies)

11:40-12:10: Bit-Vectors: Complexity and Decision Procedures (Andreas Fröhlich)

 $12{:}15{-}13{:}30{:}\ Lunch$