

Schedule for Oberwolfach workshop 2413 "Proof Complexity and Beyond"

Time	MONDAY MAR 25	TUESDAY MAR 26	WEDNESDAY MAR 27	THURSDAY MAR 28	FRIDAY MAR 29	Time
08:45	<i>Welcome</i>					08:45
09:00	Robert Robere	Kilian Risse	Pravesh Kothari	Igor Carboni Oliveira	Jakob Nordström	09:00
09:15	TFNP and proof complexity	Clique is hard on average for unary Sherali-Adams	Kikuchi matrix method	Meta-mathematics of complexity theory	Certifying combinatorial solving using cutting planes with strengthening	09:15
09:30						09:30
09:45						09:45
10:00						10:00
10:15						10:15
10:30	Noah Fleming	Jonas Conneryd	Madhur Tulsiani	Emil Jerabek	Aaron Potechin	10:30
10:45	PPP not closed for Turing reductions	Colouring hard on average for PC	Decoding codes via proofs	Theory of exponential integer parts	Nullstellensatz and coefficient size	10:45
11:00	Neil Thapen	Jacobo Toran	Grigoriy Blekherman	Pavel Pudlak	Neil Thapen	11:00
11:15	TFNP intersections & feasible disj.	Pebble games and algebraic proofs	Graph homomorphisms & polys	Quantified propositional calculus	Strength of the dominance rule	11:15
11:30	Pavel Hrubes	Johan Håstad	Nicola Galesi	Martin Grohe	Marco Carmosino	11:30
11:45	A variant of monotone calculus	Small-depth Frege proofs for PHP	Algebraic proof complexity of tensors	Compressing CFI graphs and WL LBs	Provability of circuit size hierarchies	11:45
12:00	<i>Presentation of participants</i>	Dmitry Itsykson	Edward Hirsch	Shuo Pang	<i>Currently free slot to be scheduled later</i>	12:00
12:15		Regular resolution over parities	Tropical proof systems	Supercritical trade-offs for WL		12:15
12:30	<i>LUNCH</i>	<i>LUNCH</i>	<i>LUNCH</i>	<i>LUNCH</i>		12:30
12:45						12:45
13:00						13:00
13:15					<i>LUNCH</i>	13:15
13:30						13:30
13:45						13:45
14:00					<i>WORKSHOP ENDS</i>	14:00
14:15						14:15
14:30						14:30
14:45						14:45
15:00						15:00
15:15						15:15
15:30	<i>Presentation of participants (cont.)</i>					15:30
15:45						15:45
16:00	Susanna de Rezende	Dmitry Sokolov		Meena Mahajan		16:00
16:15	Proof complexity, communication complexity, and lifting	Some applications of sunflowers		Proof complexity & QBF		16:15
16:30				Abhimanyu Choudhury		16:30
16:45				Dependency schemes in CDCL QBF		16:45
17:00						17:00
17:15						17:15
17:30	Theodoros Papamakarios	Mika Göös		Kaspar Kasche		17:30
17:45	Automating bounded-depth Frege	Hardness condensation		Polynomial calculus in QBF		17:45
18:00	Iddo Zameret	Anastasiia Sofronova		Ilario Bonacina		18:00
18:15	Functional LBs in algebraic proofs	Top-down LBs for depth-4 circuits		Proof systems for MaxSAT		18:15
18:30	<i>DINNER</i>	<i>DINNER</i>	<i>DINNER</i>	<i>DINNER</i>		18:30
18:45						18:45
19:00						19:00
19:15						19:15
19:30						19:30
19:45						19:45
20:00		<i>Open problems session</i>		<i>Music evening</i>		20:00

<i>LEGEND</i>
<i>Long talk (50-55 min)</i>
<i>Short talk (20-25 min)</i>
<i>Other</i>