Program for Oberwolfach Workshop (22.10.2023) Mathematical Logic: Proof Theory, Constructive Mathematics

All times are given in local time CET

Monday, November 13

Morning Session

09:00 - 09:10 Opening

09:10 - 09:50 R. Kahle and I. Oitavem: On the shortest proof of $\varphi \to \varphi$

09:50 - 10:20 Coffee break

10:20 - 11:00 M. Baaz: Andrew's Skolemization may shorten proofs non-elemetarily

11:00 - 11:30 Coffee break

11:30 - 12:10 P. Pudlak: Implicit proofs and consistency

Afternoon Session

16:00 - 16:40 T. Powell: New applications of proof theory: Greedy algorithms, probability, and proof assistants

16:40 - 17:10 Coffee break

17:10 - 17:50 N. Thapen: First-order reasoning and semi-algebraic proofs

Tuesday, November 14

Morning Session

09:10 - 09:50 M. Neri: Quantitative Probability from a Logician's Perspective

 $09{:}50$ - $10{:}20$ Coffee break

10:20 - 11:00 M. Müller: On the Consistency of Circuit Lower Bounds for

Non-Deterministic Time 11:00 - 11:30 Coffee break

11:30 - 12:10 S. Negri: Uniform proof systems for logics with strong negation

Afternoon Session

16:00 - 16:40 J. Aguilera: NN

16:40 - 17:10 Coffee break

17:10 - 17:50 N. Pischke: Proof Mining and duality in Banach spaces

Wednesday, November 15

Morning Session

- 09:00 09:40 L. Leuştean: Proof Mining and Asymptotic Regularity
- 09:40 10:00 Coffee break
- 10:00 10:40 I. van der Giessen: A new Version of Gödel-Löb Logic: Box
- and Diamond
- 10:40 11:10 Coffee break
- $11{:}10$ $11{:}50$ S. Sanders: The Biggest Five of Reverse Mathematics
- 11:50 12:30 E. Jeřábek: On the theory of exponential integer parts

Thursday, November 16

Morning Session

09:00 - 09:40 P. Oliva: Quantitative Analysis of Stochastic Approximation Methods

 $09{:}40$ - $10{:}00$ Coffee break

10:00 - 10:40 P. Schuster: Double Negation and Conservation

10:40 - 11:10 Coffee break

11:10 - 11:50 M. Fujiwara: Prenex normalization and the hierarchical classification of formulas

11:50 - 12:30 G. Jäger: Universes in Explicit Mathematics

Afternoon Session

 $16{:}00$ - $16{:}40$ M. E. Maietti: Equiconsistency of the Minimalist Foundation with its classical version

16:40 - 17:10 Coffee break

17:10 - 17:50 A. Sipoş: The computational content of super strongly nonexpansive mappings

Friday, November 17

Morning Session

- 09:10 09:50 P. Pinto: Sunny nonexpansive retractions in nonlinear spaces
- $09{:}50$ $10{:}20$ Coffee break
- 10:20 11:00 M. Zorzi (online): Extensional Proof-Systems for Modal Logics
- 11:00 11:30 Coffee break
- $11{:}30$ $12{:}10$ V. Brattka: Dichotomies in Weihrauch Complexity