Geometric Logic, Constructivisation, and Automated Theorem Proving

Information & preliminary programme

Catering hours:
Breakfast 7:30 - 8:45
Coffee from 10:00
Lunch 12:15
Afternoon tea 15:30
Dinner 18:00
Evening snacks 20:00

Time slots below include discussion (10 min)

Monday

8:50 Welcome

9:00 - 9:40
Rathjen: No speedup for geometric theories (online)

9:40 - 10:20
Caramello: Deductive systems and Grothendieck topologies (online)

10:50 - 11:30
Rogers: Geometric theories classified by supercompactly generated toposes

16:15 - 16:45
Hutzler: Gluing classifying toposes along open subtoposes

16:45 - 17:25
Lombardi: Geometric theories versus Grothendieck toposes, questions w.r.t. a possible constructive elementary approach

Tuesday

9:00 - 9:40
Coquand: A constructive approach to the theory of central simple algebras (online)

9:40 - 10:20
Neuwirth: Constructiveness and lattices in Lorenzen's work

10:50 - 11:30
Blechschmidt: Bridging the foundational gap: updating algebraic geometry in face of current challenges regarding formalizability, constructivity and predicativity

16:15 - 16:55
Iemhoff: Negative results in universal proof theory

16:55 - 17:35
Petrakis: The distributivity of the category of dependent objects over the Grothendieck category

Wednesday

9:00 - 9:30
Stojanovic Djurdjevic: Coherent logic in representation and proving of informal proofs (online)

9:30 - 10:00
Marinkovic: Verifiable solving of geometric construction problems in the framework of coherent logic (online)

10:30 - 11:00
Narboux: Theorem proving as constrained solving with coherent logic (jww Janicic)

11:00 - 11:30
Buriola: An automated method for reasoning about differentiable functions

Free afternoon/open programme

Thursday

9:00 - 9:40
Bezem: Loop-checking and the uniform word problem for join-semilattices with an inflationary endomorphism

9:40 - 10:20
Fellin: A general Glivenko–Gödel theorem for nuclei

10:50 - 11:30
Fujiwara: Conservation theorems on semi-classical arithmetic (jww Kurahashi) (online)

11:30 - 12:10
Tesi: Terminating sequent calculi for a class of intermediate logics

16:15-16:45
Buchholtz: Choice for families of finite sets in homotopy type theory

Discussion rounds/working groups/spontaneous talks

Friday

9:00 - 9:40
Kohlenbach: Proof mining in nonconvex optimization

9:40 - 10:20
Freund: Proof mining a nonlinear ergodic theorem for Banach spaces (jww Kohlenbach)

10:40 - 11:20
Köpp & Schwichtenberg: Proofs and computation with infinite data

11:20 - 12:00
Berger: Progress and challenges in program extraction