Logic and Computation

On the Nominal Semantics of Nominal Algebra with Fixed-Point Constraints.

Ali Khăn Caires Ribeiro Santos
(UNB - Brazil)

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15h - 16h

Math Department- Mini Auditorium

Abstract.

Nominal algebra is a framework for interpreting and reasoning about systems with binding, using nominal terms as its term language. Its derivation rules are subject to freshness conditions and extend first-order terms with object-level variables, meta-level variables, and constructs for binding, alphaequivalence, and capture avoidance. The semantics of nominal algebra are in the class of nominal sets, which have a rich structure for involving names, permutation, and name binding. Previous work has proven the soundness and completeness of nominal algebra, with applications including interpreting solutions to nominal (dis)unification problems. However, recent investigations show that the intentional semantics of nominal algebra with fixed-point constraints is not sound. This talk presents a counterexample and proposes solutions by exploring a subclass of nominal sets called strong nominal sets and necessary modifications in derivation rules.

References

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