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My main interests are Logic and Set Theory, including Forcing and Semantics for Higher Order Logics. In the past couple of years, I have been thinking/reading/studying about Shelah's solution to Whitehead problem, as well as the new set-theoretical problems and questions that solution gave rise to, such as weak diamonds, generalizations to modules over rings of several cardinalities, etc. During that same period I also spent some time analyzing several results concerning the infinite symmetric group (the group of permutations of  $\omega$ ) and a couple of cardinal invariants defined from this group, focusing on upper and lower bounds for these cardinals.

More as a hobby, I like to look at alternative axiomatizations of set theory, such as *NFU*, or the ill-founded sets universe of Peter Aczel. I haven't still been serious about this, but I'm planning to really get into it.

Recently my supervisor, Juris Steprāns, suggested to look for some problems concerning the Borel conjecture and the notion of a Strong Measure Zero set, so I am starting to familiarize myself with the needed notions and main results on that particular topic.

Finally, I just started looking at a paper on Infinite Time Turing machines. I am really excited about this, which seems really interesting to me, and I guess I will think a great deal about this. I am trying to find a problem to work on regarding this particular topic.