

RESEARCH STATEMENT

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I am interested in any set-theoretical topic that finds its motivation from a philosophical, foundational or metamathematical issue. Last year I spent three months at Cambridge learning about Quine's *NF* (*New Foundations*) with Thomas Forster and the University of Cambridge Set Theory Group.

The problem of the consistency of *NF* relatively to *ZF* (or even to its stronger extensions) is still open. After Quine's seminal paper, several attempts to prove the consistency of *NF* have produced partial results by starting with models of Type Theory or of *NFU* (the version of *NF* with urelements that was proved consistent by Jensen) or by building inductively a membership relation that satisfies a subset of the axioms of *NF* (see references below).

My research interest in this area is about the possibility of extracting, from this scattered results, general knowledge and techniques about extensional models of fragments of the Axiom Schema of Comprehension and, in particular, about fragments of *NF*.

Currently, my focus is on Beneš' construction and on the possibility of merging this approach with the method of definition provided by the Revision Theory of Truth (a topic I met working at my PhD thesis) and that, in some sense, can be understood as a generalization of the inductive method of definition.

References

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