

Research Statement

Jip Veldman
Universität Bonn

January 10, 2008

My PhD Project is about the *Mutual Stationarity Property* as defined by Matt Foreman and Menachem Magidor. The mutual stationarity property can be used to transport some properties of regular cardinals to singular limits of sequences of regular cardinals. I obtained a couple of results, partially in joint work with Arthur Apter and/or Peter Koepke, on the mutual stationarity property; most of them are equiconsistency results on mutual stationarity in models where the axiom of choice fails. These results will be published in my forthcoming PhD-Thesis and in two publications.

The following techniques are the main ingredients in my research: *theory of partition cardinals and indiscernibles, forcing and symmetric model constructions, core model theory*.

In relation with this project I would be very happy if I could discuss some of the following issues at the Workshop:

1. indiscernibles for measurable cardinals of higher Mitchell order,
2. Radin forcing,
3. Laver preparation and related techniques,
4. the link between mutual stationarity, tight stationarity, and PCF-theory,
5. core model theory,
6. applications of core models in equiconsistency proofs.