RESEARCH STATEMENT

VERA FISCHER

My main interests are in infinitary combinatorics and forcing. I have also interests in definability, as well as applications of set theoretic techniques to analysis and topology.

In the last few years, I have been working on obtaining various consistency results, requiring continuum greater than or equal to $\aleph_3$ (see [5], [2], [6]). In more recent work, I consider the existence of various combinatorial objects on the real line in the presence of a projective wellorder of the reals (see [3], [4]). Also, I have interests in non-linear iterations (see [1]), in particular template forcing (see [8]), combinatorics of uncountable cardinals and in some questions concerning large cardinals and forcing.

References

[1] J. Brendle *Mad families and ultrafilters* Acta Universitatis Carolinae, Mathematicae et Physica **49** (2007), 19-35.

[2] J. Brendle, V. Fischer *Mad families, splitting families and large continuum*, Journal of Symbolic Logic, 76, 1, March 2011, pp.198-208.

[3] V. Fischer, S. D. Friedman *Cardinal characteristics and projective well-orders* Annals of Pure and Applied Logic 161 (2010), 916-922.

[4] V. Fischer, S. D. Friedman, L. Zdomskyy *Projective wellordrs and mad families with large continuum* submitted.

[5] V. Fischer, J. Steprāns *The consistency of* $\mathfrak{b} = \kappa < \mathfrak{s} = \kappa^+$ Fundamenta Mathematicae **201** (2008).

[6] V. Fischer, J. Steprāns *Further combinatorial properties of Cohen forcing* RIMS Conference proceedings in Combinatorial and Descriptive Set Theory, Kyoto, 2008.

[7] V. Fischer, A. Törnquist *A co-analytic maximal set of orthogonal measures* Journal of Symbolic Logic, 75, 4, pp. 1403 - 1414.

[8] S. Shelah *Two cardinal invariants of the continuum (*$\mathfrak{d} < \mathfrak{a}$*) and FS linearly ordered iterated forcing* Acta Math. **192** (2004), 187-223.

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