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I am a Phd student under the direction of professor Moti Gitik. I am mainly interested in cardinal arithmetic and large cardinal forcing. In the last couple of months I am especially intrested in forcing techniques involving short extenders methods ([1]).

Previously I was working on consistency results regarding the splitting number invariant $s(\kappa)$ for regular uncountable cardinals. By the work of Jindrich Zapletal [3], the consistency strength of the existense of a regular uncountable cardinal κ with $s(\kappa) \geq \kappa^{++}$, lies between a measurable α with $o(\alpha) = \alpha^{++}$, and a supercompact cardinal. At first I reduced the upper consistency bound to $o(\alpha) = \alpha^{++} \cdot 2$, by appealing to the extender based Magidor/Radin forcing ([2]). Eventually it became evident that $s(\kappa) = \kappa^{++}$ is equaconsistent to the the minimal strength specified by Zapletal, $o(\alpha) = \alpha^{++}$. The relevant forcing construction is a combination of the extender based Prikry forcing, and the forcing used in [4].
Earlier, I studied the Magidor iteration of Prikry type forcings ([5]) when applied over a core model, with a particular interest in the behavior of normal measures (in the spirit of [6]). It turnes out that the Magidor iteration is well behaved when forcing over core model which does not contain strong cardinals. Whenever such core model exist, there is a natural identification between normal measures in a generic extension to those of the ground model.

I am looking forward to meeting everyone at the workshop.

[1] Moti Gitik, *Short extenders forcings I*, http://www.math.tau.ac.il/gitik.

[2] Carmi Merimovich, *Extender based Magidor-Radin forcing*, Israel Journal of Mathematics, Volume 182 Number 1, April 2011, pages 439-480.

[3] Jindrich Zapletal *Splitting number at uncountable cardinals* , J. Symbolic Logic 62 (1997) pp. 35.

[4] Moti Gitik, *The negation of SCH from* $o(\kappa) = \kappa^{++}$, Ann. Pure Appl. Logic, 43 (1989), pp. 209-234.

[5] Menachem Magidor, *How large is the first strongly compact cardinal? or A study on identity crisis*, Ann. Math. Logic, 10 (1976), 33-57.

[6] Sy-David Friedman and Menachem Magidor, *The number of normal measures*, The Jornal of Symbolic Logic, 74 (2009)