RESEARCH STATEMENT

CLARIBET PIÑA

Given X and Y two topological spaces, μ a cardinal, $\lambda < \mu$ and n a positive integer, the affirmation $X \to [top\ Y]^n_{\mu,\lambda}$ means that for all coloring $f : [X]^n \longrightarrow \mu$, there is A a subspace of X such that A is homomorphic to Y and $|f''[A]^n| \le \lambda$. I have been studying some of these partition problems of topological spaces when X and Y are countable ordinal spaces (see [1], [4]).

At present, in my PhD I am trying to determine which is the smallest ordinal space α which verifies the affirmation $\forall l, n \ge 1\ \alpha \to [top\ \omega^n + 1]^2_{l,2n}$. It is known (see [1]) that α is at most ε_0. For this research we are identifying the countable ordinal spaces with families of finite sets and considering oscillation maps (see [2], [3]).

REFERENCES

[1] J. Baumgartner. Partition relations for countable topological spaces. *J. Combin. Theory Ser. A*, 43:178–195, 1986.
[2] S. Todorčević. *Oscillations of sets of integers*. Advances in Applied Mathematics, Volume 20, Issue 2, Pages 220-252, 1998.
[3] S. Todorčević. *Introduction to Ramsey spaces*. Annals of Mathematical Studies 174. Princeton University Press, 2010.
[4] W. Weiss. Partitioning topological spaces. In J. Nešetřil and V. Rödl, editors, *Mathematics of Ramsey Theory*, pages 154–171. Helderman Verlag, 1990.

Université Paris-Diderot UFR de Mathématiques, Site Chevaleret, 75205 Paris cedex 13, France.
cpinarangel@yahoo.com.mx