Logic Seminar

Topological partition calculus of countable ordinals Andrés Caicedo (Mathematical Reviews)

Abstract: This is joint work with Jacob Hilton. We considered the topological version of the partition calculus in the setting of countable ordinals: Given ordinals α , β_0 , β_1 , we say that $\alpha \rightarrow_{top} (\beta_0, \beta_1)^2$ iff for any 2-coloring of the edges of the complete graph on α vertices, for some color i, there is a complete monochromatic graph in color i whose set of vertices is homeomorphic to β_i . If we insist that α , β_0 are countable and that $\beta_0 > \omega$, then β_1 must be finite (even without the topological requirement). On the other hand, we have proved that for any countable β_0 and finite β_1 , we can find a countable α such that $\alpha \rightarrow_{top} (\beta_0, \beta_1)^2$. This is a topological version of the Erdős-Milner theorem. Our arguments provide explicit bounds. I will discuss some of these results.

Thursday, April 7 at 4:00 PM in SEO 427