Logic for metric structures and the number of universal sofic and hyperlinear groups

January 20th, 2012 Set Theory Seminar (Fields Institute, Toronto)

I will present a proof, obtained by means of logic for metric structures, that if the Continuum Hypothesis fails there are power of the continuum many pairwise non isomorphic sofic and hyperlinear groups. This answers a question from 2010 of Simon Thomas, who proved this statement for universal sofic groups with an ad hoc algebraic argument, and asked is the same was true for universal hyperlinear groups