Mathematics, Statistics, and Computer Science   **@ UIC**

Logic Seminar

An upper bound for uB-sealing

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Abstract: Woodin showed that, assuming the existence of a supercompact cardinal and a class of Woodin cardinals, after collapsing a supercompact cardinal to be countable, the theory of L(Gamma_{uB}) is sealed. Here, Gamma_{uB} is the collection of the universally Baire sets of reals. We say that the theory of L(Gamma_{uB}) is sealed if for any V-generic g and a V[g]-generic h, there is an elementary embedding j: L(Gamma_uB)^{V[g]}-> L(Gamma_uB)^{V[g*h]}. It has been conjectured by the speaker that sealing has a weak large cardinal strength, and its weakness is the reason why the core model induction becomes so much more complicated after passing the threshold given by sealing. In a very recent work, the speaker and Trang showed that sealing is indeed weak, weaker than a Woodin cardinal that is itself a limit of Woodin cardinals. After stating the relevant theorems we will outline why exactly the core model induction becomes rather difficult after this threshold.

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