

Logic Seminar

Successive cardinals with the tree property

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Abstract: The tree property arises as the generalization of König's infinity lemma to an uncountable cardinal. The existence of an uncountable cardinal with the tree property has axiomatic strength beyond the axioms of ZFC. Indeed a theorem of Mitchell shows that the theory $\text{ZFC} + \text{"}\omega_2 \text{ has the tree property"}$ is consistent if and only if the theory $\text{ZFC} + \text{"There is a weakly compact cardinal"}$ is consistent. In the context of Mitchell's theorem, we can ask an old question in set theory: Is it consistent that every regular cardinal greater than \aleph_1 has the tree property? In this talk we will survey the best known partial results towards a positive answer to this question.

Tuesday, September 16 at 4:00 PM in SEO 427