

# An invitation to inner model theory

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## Abstract

Sometime in 1960's Scott showed that the existence of a measurable cardinal implies that  $V \neq L$ .  $L$ , the constructible universe, has a very canonical structure and Scott's theorem makes it impossible not to ask whether large cardinals can coexist with a kind of canonical structure given by  $L$ . Over the years, this vague question has been made precise via the introduction of extender models known as *mice*. Today it is known as the *inner model problem*.

**The inner model problem:** Construct extender models with large cardinals.

In this talk we will outline the progress that has been made on inner model problem and time permitting, we will also outline some of the current developments.