1135-03-851   **Nam Trang*** (`ntrang@uci.edu`), University of California, Irvine, Irvine, CA 92697. *Models of the Axiom of Determinacy and Their Generic Extensions.* Preliminary report.

Forcing and elementary embeddings are central topics in set theory. Most of what set theorists have focused on are the study of forcing and elementary embeddings over models of ZFC.

In this talk, we focus on forcing and elementary embeddings over models of the Axiom of Determinacy (AD). In particular, we focus on answering the following questions: work in V which models AD. Let $\mathbb{P}$ be a forcing poset and $g \subseteq \mathbb{P}$ be V-generic.

1) Does $V[g]$ model AD?

2) Is there an elementary embedding from V to $V[g]$?

Regarding question 1, we want to classify what forcings preserve AD. We show that forcings that add Cohen reals, random reals, and many other well-known forcings do not preserve AD.

Regarding question 2, an analogous statement to the famous Kunen's theorem for models of ZFC, can be shown: suppose $V = L(X)$ for some set X and V models AD, then there is no elementary embedding from V to itself. We conjecture that there are no elementary embeddings from V to itself.

We present some of the results discussed above. There is still much work to do to completely answer questions 1 and 2. This is an ongoing joint work with D. Ikegami. (Received September 15, 2017)