

Some Characterizations in NIP Theories

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We give several characterizations for NIP theories in terms of properties of action of certain groups. More precisely, we study some dynamical aspects of the action of the automorphism groups and definable groups on certain model theoretic objects, such as spaces of types, models, etc, in particular in the presence of invariant measures. Note that in papers such as [3], some dynamical aspects of model theoretic objects were studied. Also application of measures in stability theory were extensively studied in several papers such as [1].

Based on [2], we consider characterization of stability theoretic notions in terms of combinatorial and dynamical properties of the actions mentioned above. For example we give some characterizations for NIP theories in terms of notions such as compact systems, entropy of systems and measure algebras. Moreover, we study the concept of symbolic representation for models and using this, we give some characterizations for dividing lines and combinatorial configurations such as independence property, order property and strict order property.

References

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