

LIMIT MODELS IN CLASSES OF MODULES WITH RESPECT TO PURE EMBEDDINGS

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Limit models were introduced by Shelah 25 years ago as a substitute for saturation in the context of abstract elementary classes. Limit models have proven to be an important concept in tackling Shelah's eventual categoricity conjecture. The key question has been the uniqueness of limit models of the same cardinality. In this talk, we study limit models in certain classes of modules with respect to pure embeddings. We give an algebraic description of limit models in the class of torsion-free abelian groups with respect to pure embeddings. As a by-product of our study of limit models we get a conceptual generalization to a highly computational result of Shelah concerning the existence of universal reduced torsion-free abelian groups with respect to pure embeddings. Several of the results we will present are joint work with T. Kucera.