

Frank

Wagner's book. Simple Theories.
+ various articles.

Nice Paper: From Stability to Simplicity / Kim & Pillay JSL?

Stability = theory of independence + multiplicity.
simplicitytypes over models have
unique extensions.

Framework of FO model theory.

- Organisation:
1. Basic Definitions & Framework
 2. Simplicity & Independence.
 3. Canonical Bases.
 4. "Generic Constructions" - adding random predicate etc.
 5. "Simple" groups.
 6. Lovely Pairs.
- } Basic stuff everyone should know.

Analogue of Monster Model in CAT.Defn: Let \mathcal{L} be a signature, $\Delta \subseteq \mathcal{L}_{\omega, \omega}$ (set of fo formulas).Assume that Δ is closed under positive boolean combinations.
Then Δ is a positive fragment of \mathcal{L} . $\forall \Delta$.We fix a positive fragment Δ . A "formula" always means a formula from Δ .* Work in purely relational language or Δ is closed under substitution of terms for variable.Definition: An \mathcal{L} -structure \mathcal{U} is a κ -universal domain (κ is a cardinal) if it satisfies:

1. Homogeneity: If $A \subseteq \mathcal{U}$ & $|A| < \kappa$ and $f: A \rightarrow \mathcal{U}$ is a mapping st. $\forall \varphi(\bar{x}) \in \Delta \forall \bar{a} \in A$, if $\mathcal{U} \models \varphi(\bar{a}) \Rightarrow \mathcal{U} \models \varphi(f(\bar{a}))$.

[We say that f is a partial Δ -endomorphism of \mathcal{U} .]Then $\exists \tilde{f} \in \text{Aut}(\mathcal{U})$ which extends f .