FALL 2018, MATH 80510, Topics in Mathematical Logic, MWF, 9.25 – 10.15 am.

STABILITY THEORY

Anand Pillay

This will be a self-contained course in stability theory (assuming the material in semester one of the graduate basic logic course, plus a bit more which will be summarized at the beginning of the course).

I will try to include key theorems and results of both the classical and “geometric” theory, including stable group theory.

If I have time I will discuss generalizations of the machinery beyond stable theories, as well as applications in algebraic-geometric and combinatorial contexts.

I will not follow any specific text, but the following could be useful references:

Anand Pillay, An introduction to stability theory, Dover publications, 2008 (originally Oxford University Press, 1983).

Anand Pillay, Geometric Stability Theory, Oxford University Press, 1996.

Anand Pillay, Lecture notes: <https://www3.nd.edu/~apillay/pdf/lecturenotes.stability.pdf>

Katrin Tent and Martin Ziegler, A course in model theory, Cambridge University Press, 2012.