

SPRING, 1999
GRADUATE COURSE ANNOUNCEMENT

**Topics in Mathematical Logic:
Geometric Model Theory 189-704B**

The purpose of the course is to study Anand Pillay's recent book on geometric stability theory [3].

Geometric model theory was developed in the 1980's by the school of E. Hrushovski (based on S. Shelah's seminal development of classification theory) and is now one of the most active areas of model theory. Particular attention has been attracted by Hrushovski's spectacular applications of the methods to be presented in the course to classical mathematics.

The level of the course will be accommodated to the background of the audience. The minimal prerequisite is familiarity with the compactness theorem from logic. The standard prerequisite is the material covered in a basic model theory course (e.g., the first four chapters of [2]). However depending on the specific background of the participants, the essential prerequisites from model theory can be presented in the first weeks of the semester. This material is presented in compact form in the first two chapters of [1].

The course will have the format of a graduate seminar. However, the participants are expected to lecture on the material, and the evaluation will be based on the lectures.

Reviews Pillay's book can be found in Mathematical Reviews 98a:03049 and in the September, 1998 issue of the Bulletin of Symbolic Logic.

References

- [1] Steven Buechler. *Essential stability theory*. Springer-Verlag, Berlin, 1996.
- [2] C. C. Chang and H. J. Keisler. *Model theory*, volume 73 of *Studies in Logic and the Foundations of Mathematics*. North-Holland Publishing Co., Amsterdam, third edition, 1990.
- [3] Anand Pillay. *Geometric stability theory*. The Clarendon Press Oxford University Press, New York, 1996. Oxford Science Publications.

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