

Fall 2008      G362 Homological Algebra

Professor Martsinkovsky, Monday and Thursday, 2:50 - 4:20

The course will cover fundamental constructions of homological algebra. The topics include: the functors Ext and Tor, homological methods in local algebra, derived and triangulated categories, and stable (co)homology. Topics suggested by the audience are also welcome.

I will not follow any text, but I find the following books indispensable if you want to learn or use homological methods:

S.I. Gelfand and Yu.I. Manin, *Methods of homological algebra*, 2nd ed. Springer, 2003.

Bourbaki, *Algèbre, Ch. X, Algèbre homologique*, Masson, 1980.

Prerequisites: A 1-year graduate course in algebra.