

Další seminář z algebry se koná 12.11.2020 od 13.00 online na platformě [ZOOM](#). Informace pro připojení a další program semináře je [zde](#).

Marcos Mazari-Armida (Carnegie Mellon University)

Model-theoretic stability and superstability in classes of modules

Abstrakt:

Dividing lines in complete first-order theories were introduced by Shelah in the early seventies. A dividing line is a property such that the classes satisfying such a property have some nice behaviour while those not satisfying it have a bad one. Two of the best understood dividing lines are those of stability and superstability.

In this talk, I will study the notion of stability and superstability in abstract elementary classes of modules with respect to pure embeddings, i.e., classes of the form (K, \leq_p) where K is a class of R -modules for a fixed ring R and \leq_p is the pure submodule relation. In particular, using that the class of p -groups with pure embeddings is a stable AEC, I will present a solution to Problem 5.1 in page 181 of Abelian Groups by Laszlo Fuchs. Moreover, I will show how the notion of superstability can be used to give new characterizations of noetherian rings, pure-semisimple rings, and perfect rings.