IMBM Model Theory Meetings

14.30-16.00: Amador Martin-Pizarro (Université Lyon 1) *Pairs of fields and definable groups*
Several theories of pairs of fields have been historically considered, based on work by Robinson, Keisler, Macintyre, Poizat and van den Dries, among others. In particular, the theory of a proper pair of algebraically closed fields of a given characteristic is complete and coincides with the theory of belles paires of models of algebraically closed fields, as introduced by Poizat. This theory shares many similarities with a certain unstable not o-minimal theory, consisting of a real closed field with a distinguished predicate for a dense proper real subfield, first studied by van den Dries, which will appear in Ayhan Günaydın's talk. We will introduce the basic notions of the theory of such pairs in order to understand types, as well as provide a characterisation of definable groups in a belle pair (K, E) of algebraically closed fields: Up to isogeny, every definable group projects onto the subgroup of E-rational points of some algebraic group defined over E with kernel an algebraic group. If time permits, we will discuss the characterisation of imaginaries and interpretable groups.

16.20-17.50: Ayhan Günaydın (Mimar Sinan Fine Arts University) *Tame Expansions of o-minimal Structures*
As a counterpart of the study of generalizations of stable theories, the study of tame expansions of o-minimal structures has been a theme for some time. In this talk, after going through the history, we introduce a new and more detailed investigation of definable sets in such expansions. The ideas are combinations of methods of stability theory and semi-bounded o-minimality. At the end we also mention a local study of groups definable in these tame expansions. This is joint work with P. Hieronymi and P. Eleftheriou.

Date : May 16, 2016
Place : IMBM Seminar Room, Boğaziçi University South Campus