MATH COLLOQUIUM

Dynamics of Polynomial Automorphisms of C^2

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Time : 15:00
Place : TB 250, Boğaziçi Üniversitesi

Abstract: In [FM] Friedland and Milnor classified polynomial automorphisms of C^2 up to conjugation by a polynomial diffeomorphism of C^2. It was proved that there are two classes. The mappings in the first class have relatively simple dynamics, that is they have zero topological entropy. The second class contains compositions of finitely many complex Hénon maps. In this talk, we will survey the results obtained by Bedford&Smillie and Fornaess&Sibony in the early nineties. Namely, given a polynomial automorphism in the second class there exist stable and unstable currents. These currents provide information about the dynamics of the map and allow us to construct an invariant measure which is mixing, the unique measure of maximal entropy and describing the distribution of the saddle periodic points. If the time allows we will mention some of the open problems in this area.

Tea and coffee will be served at 15:00