1070-37-127 **Lior Fishman*** (lfishman@brandeis.edu), 415 South St, Waltham, MA 02454. *Schmidt's game, friendly measures and exceptional sets on fractals.*

In this talk I shall describe new results regarding properties of certain sets on fractals.

In particular, a question we addressed in a recent joint paper with R. Broderick, Y. Bugeaud, D. Kleinbock and B. Weiss was the following: what is the Hausdorff dimension of numbers normal to no base on the Cantor ternary set?

As it turns out, this and other related questions, arising from number theory, dynamics and Diophantine approximation theory, can be solved utilizing Schmidt's game and properties of the class of friendly measures.

In order to highlight the main ideas in many of these proofs, I shall first introduce this game and reprove a slight modification of Schmidt's original result regarding badly approximable numbers, pointing out where generalizations have been made using modern ideas and techniques. (Received February 06, 2011)