1145-11-1852 **Dmitry Kleinbock*** (kleinboc@brandeis.edu), Department of Mathematics, Waltham, MA 02454. *Is one-dimensional Diophantine approximation all about continued fractions?*

Our experience seems to suggest an affirmative answer to the question in the title. In the first half of the talk I will describe recent work with Nick Wadleigh where we, capitalizing on results of Davenport and Schmidt, define ψ-Dirichlet real numbers α (those which satisfy an improvement of Dirichlet's theorem with ψ in the right hand side) and express this property via the continued fraction expansion of α. This implies a precise condition for the set of ψ-Dirichlet numbers to have zero or full measure.

In the second part however I will describe a simple modification of the ψ-Dirichlet property which does not reduce to continued fractions – yet it still can be understood using dynamics of the geodesic flow on the unit tangent bundle to the modular surface. A corresponding zero-one law can be deduced from a dynamical Borel-Cantelli lemma due to Maucourant. This is work in progress joint with Anurag Rao. (Received September 24, 2018)