



## Conference on Frontiers of Nanoscience 24 August - 1 September 2015, Trieste, Italy

## The Puzzle of Bad Metals

## Lev IOFFE

Department of Physics and Astronomy Rutgers, The State University of New Jersey, USA

## Abstract:

I will overview the theoretical and experimental evidence for the presence of strange states that appear close to many body localization transition in closed disordered or translationally invariant systems. I will show the evidence for non-ergodic behavior appears before full localization. The physical realization of these systems is provided by Josephson junction arrays where these states are characterized by large but finite resistance (bad metal).