Abstract:
The shrinking target problem for a dynamical system tries to answer the question of how fast can a sequence of targets shrink, so that a typical orbit will keep hitting them indefinitely. In this talk I will describe some new and old results on this problem for homogenous dynamics, that is, the dynamical systems given by group actions on a homogenous space. I will also discuss the various applications of such results to problems in Diophantine approximations.