Abstract:
A topological dynamical system (i.e. a group acting by homeomorphisms on a compact topological space) is said to be proximal if for any two points p and q we can simultaneously push them together i.e. there is a sequence $g_n$ such that $\lim g_n(p) = \lim g_n(q)$. In his paper introducing the concept of proximality Glasner noted that whenever $\mathbb{Z}$ acts proximally that action will have a fixed point. He termed groups with this fixed point property “strongly amenable” and showed that non-amenable groups are not strongly amenable and virtually nilpotent groups are strongly amenable. In this talk I will discuss recent work precisely characterizing which (countable) groups are strongly amenable.