Title: Heegaard-Floer homology and double branched covers of alternating knots

Abstract:
Given a knot in the 3-sphere there is a very well known construction which yields the double cover of S^3 branched over said knot. From this three dimensional space and its involution one can compute many classic knot invariants. The purpose of this talk is to present what information can be obtained by studying the knot Heegaard Floer homology of the double cover. Very little is known so far. We will focus in the case of alternating knots, present a conjecture and prove it for some special families. This is joint work with Daniele Celoria.