



HACETTEPE ÜNİVERSİTESİ

MATEMATİK BÖLÜMÜ



GENEL SEMİNER



8 NİSAN 2026



15.00



YAŞAR ATAMAN SALONU

Saliha Kıvanç

Hacettepe Üniversitesi, Türkiye

From Classical Knots to Legendrian Non-Simplicity

In classical knot theory, a knot is defined as an embedding of a circle into a 3-dimensional manifold, typically studied up to continuous deformation. However, equipping the ambient space with a contact structure introduces additional geometric rigidity, leading to the rich theory of Legendrian knots. A central problem in this field is classification: whether a Legendrian knot is completely determined by its underlying topological knot type together with its classical invariants, the Thurston–Bennequin number (tb) and the rotation number (rot). Legendrian knots for which this is the case are called Legendrian simple, while those that cannot be distinguished by these invariants alone are referred to as Legendrian non-simple. In this talk, we begin with the basic notions of knot theory and contact geometry. Finally, we will explore this phenomenon by discussing known non-simplicity results in the literature and outline our result on Legendrian non-simplicity for certain classes of knots in the standard contact 3-sphere.



mat.hacettepe.edu.tr