MODULAR KNOTS, AUTOMORPHIC FORMS, AND THE RADEMACHER SYMBOLS

TOSHIKI MATSUSAKA

In a celebrated paper ``Knots and dynamics", \'{E}tienne Ghys proved that the linking numbers of modular knots and the missing trefoil $K_{2,3}$ in S^3 coincide with the values of a highly ubiquitous function called the Rademacher symbol. In this talk, we explore two generalizations of this result. One direction focuses on the linking numbers of two modular knots, while the other involves replacing the trefoil knot with any torus knot. In both cases, we apply the theory of harmonic Maass forms.