

1145-11-235

Manami Roy* (manami.roy.90@gmail.com). *Some paramodular forms connected with elliptic curves.*

The Langlands program, a unified theory introduced by Robert Langlands, has become prominent in modern mathematics. One of the main features of the Langlands program is that it connects different areas of mathematics namely “automorphic forms”, “Galois representations”, and “geometry”. In my poster, I will explain such a connection between these different “worlds” of mathematics. More precisely, I will discuss a connection between some geometric objects called elliptic curves and some special kind of automorphic forms called paramodular forms.

For an elliptic curve E over \mathbb{Q} with conductor N , there exists a paramodular form of weight 3 associated to E via the “ sym^3 lifting”. We find an explicit formula for the level of this paramodular form, which gives us more information about the paramodular form. In order to find an explicit formula for the level of this paramodular form, one needs to understand the underlying representation theoretic mechanism and Langlands functoriality. (Received August 23, 2018)