1145-11-1439　　　　**Manami Roy*** (`manami.roy.90@gmail.com`). *Elliptic Curves and Paramodular Forms.*
In my talk, I will discuss a connection between elliptic curves and paramodular forms. For an elliptic curve E over $\mathbb{Q}$ with conductor N, there exists a paramodular form (Siegel modular form with respect to the paramodular subgroup) F of weight 3 such that $L(s, F) = L(s, E, \text{sym}^3)$. Moreover, the level of this paramodular form F can be determined in an explicit and elementary way in terms of the coefficients of the Weierstrass equation of E. To find an explicit formula for the level of the paramodular form F, one needs to find an exact description of the underlying local representations of $\text{GL}(2, \mathbb{Q}_p)$ attached to E, and understand Langlands functoriality for sym^3. I will explain these phenomena without going into much technical detail. Also, we will see some computational aspects of this problem as well. (Received September 21, 2018)