Title: On double shifted convolution sum of $SL(2,\mathbb{Z})$ Hecke eigen forms

Abstract: Let $\lambda_i(n)$ $i = 1, 2, 3$ denote the normalised Fourier coefficients of holomorphic eigenform or Maass cusp form. In this paper we shall consider the sum:

$$S := \frac{1}{H} \sum_{h \leq H} V\left(\frac{h}{H}\right) \sum_{n \leq N} \lambda_1(n)\lambda_2(n+h)\lambda_3(n+2h) W\left(\frac{n}{N}\right),$$

where V and W are smooth bump functions, supported on $[1, 2]$. We shall prove a nontrivial upper bound, under the assumption that $H \geq N^{1/2+\epsilon}$.