

Department of Mathematics, BGU

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*On Tuesday, November ,15 2022*

*At 12:40 – 13:40*

*In 201*

Utkarsh Agrawal (BGU)

will talk about

## **Central values of degree six L-functions attached to two Hilbert modular newforms**

Abstract: Let  $f, g$  be two Hilbert modular newforms (functions on 'n-copies' of the upper half-plane, satisfying properties similar to usual modular forms). Consider the L-function  $L(s, f \times \mathrm{Sym}^2 g)$  (it is the degree six factor of the triple product L-function  $L(s, f \times g \times g)$ ). In this talk we will give a formula for the central value of this L-function and work out its rationality in some special cases of relationships between weights of  $f$  and  $g$ . We will arrive at our formula via the refined Gan-Gross-Prasad formula for  $SL(2) \times \tilde{SL}(2)$ . Our results on rationality are compatible with Deligne's conjecture on the rationality of critical values of motivic L-functions.

**Please Note the Unusual Place!**