FANG-TING TU, Louisiana State University
A Geometric Interpretation of a Whipple's $_7F_6$ Formula

This talk is based on a joint work with Wen-Ching Winnie Li and Ling Long. We consider hypergeometric motives corresponding to a formula due to Whipple which relates certain hypergeometric values $_7F_6(1)$ and $_4F_3(1)$. From identities of hypergeometric character sums, we explain a special structure of the Galois representation behind Whipple's formula leading to a decomposition that can be described by Hecke eigenforms. In this talk, I will use an example to demonstrate our approach and relate the hypergeometric values to periods of modular forms.