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**Fangyang Tian\*** ([mattf@nus.edu.sg](mailto:mattf@nus.edu.sg)), National University of Singapore, Level 4, Block S17, 10 Lower Kent Ridge Road, Singapore, 119076, Singapore. *Period Relations of Standard L-Functions of Symplectic Type.*

A classical result of Euler says that the value of the Riemann-Zeta function at a positive even integer  $2k$  is a rational multiple of  $\pi^{2k}$ . This type of result, conjectured by D. Blasius for general linear groups, is called period relation of a certain automorphic  $L$ -function, which is closely related to a celebrated conjecture of P. Deligne.

In this talk, I will discuss my work joint with Dihua Jiang and Binyong Sun on the period relation for the twisted standard L-function  $L(s, \Pi \otimes \chi)$ , where  $\Pi$  is an irreducible cuspidal automorphic representation of  $GL_{2n}(\mathbb{A})$  which is regular algebraic and of symplectic type. Along this talk, I will discuss the key point of attacking this type of problem - the existence of uniform cohomological test vector, which provides the most precise information at archimedean local places. Such an existence will further lead to the unusually precise period relations that we obtained, compared to the work of our predecessors'. (Received January 18, 2021)