SOME VANISHING RESULTS FOR RATIONAL COMPLETED COHOMOLOGY OF SHIMURA VARIETIES

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Let p be a prime number. Emerton introduced the p-adically completed cohomology, which admits a representation of some p-adic group and can be thought of as some spaces of p-adic automorphic forms. In this talk, I want to explain that for Shimura varieties, sufficiently regular infinitesimal characters of the p-adic group can only show up in the middle degree of the completed cohomology. The proof is based on a very recent result of Bhatt on Kodaira vanishing in mixed characteristic and an old idea of using translation functors. This is joint work in progress with Kai-Wen Lan.