

Romyar Sharifi: **Modular symbols and arithmetic**

I will describe an explicit conjectural relationship between modular symbols in the homology of modular curves modulo Eisenstein ideals and products of cyclotomic units in the cohomology of cyclotomic integer rings. I intend to survey results and work-in-progress on this conjecture and its refinements, along with the development of higher-dimensional analogues, in particular over function fields. Much of this is joint work with Takako Fukaya and Kazuya Kato..