

Hilbert modular forms, elliptic curves and the Hodge conjecture

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Abstract

A standard conjecture identifies the L-function of every Hilbert modular form of weight $(2, \dots, 2)$ with that of a suitable abelian variety. We show how this conjecture follows from the Hodge conjecture, and discuss other applications of the method, e.g. to proving unconditionally the Ramanujan conjecture for such forms.