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An anticyclotomic Euler system for Hilbert cuspforms over a real quadratic field

Let g be a Hilbert cuspform of parallel weight over a real quadratic field F and let $\mathrm{As}(V_g)$ denote the Asai representation associated with g. Let χ be a Hecke character of an imaginary quadratic field K for which the G_K-representation $\mathrm{As}(V_g)(\chi)$ is conjugate self-dual. In this talk we will explain how to construct an Euler system for $\mathrm{As}(V_g)(\chi)$. Expected applications include results towards the Bloch-Kato conjecture and towards an Iwasawa Main Conjecture for this representation.

This is joint work in progress with Francesc Castella, Michele Fornea and Óscar Rivero.