

On the non-ordinary locus of curves in Hilbert modular varieties

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I will describe two methods for explicitly computing the non-ordinary locus of curves in Hilbert modular varieties. In the case of dimension two, these methods provide information about the supersingular locus. The first method involves truncating power series solutions to (Picard-Fuchs) differential equations, while the second method generalizes Kaneko-Zagier's work on Atkin orthogonal polynomials and supersingular elliptic curves