

Exposé court

18 *Supersingular abelian surfaces and orthogonal polynomials*

Bogo, Gabriele (TU Darmstadt)

I will consider a family of abelian surfaces arising from Teichmüller curves in genus 2 and its reduction modulo a prime p . I will show that the supersingular fibers of the reduced family are related to the zeros of certain orthogonal polynomials, similarly to the case of supersingular elliptic curves studied by Atkin and Kaneko-Zagier. The main tools are the theory of Hilbert modular forms mod p and modular embeddings. This is a joint work with Yingkun Li.