The Hessian of elliptic curves

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In this talk, the dynamics of the Hessian action on elliptic curves will be discussed, presenting new results about its global symmetries. In particular, it will be shown that the Hessian is not only a rational function, but also a Lattés map over any field of characteristic greater than 3. This finer interpretation allows for the description of the global symmetries of the Hessian dynamics in terms of those arising from group endomorphisms of prime kernel. The presented results fully describe the functional graphs arising from the Hessian transformation over finite fields $\mathbb{F}_q$, whose regular structure notably depends on q mod 3.