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Leibniz
Universität
Hannover

Oberseminar zur Algebra und Algebraischen Kombinatorik

Stefan Keil
(Leibniz Universität Hannover)

"On non-square order Tate-Shafarevich groups of non-simple abelian surfaces over the rationals"

For an elliptic curve (over a number field) it is known that the order of its Tate-Shafarevich group is a square, provided it is finite. In higher dimensions this no longer holds true. A non-simple abelian surface B comes with an isogeny $\varphi: E_1 \times E_2 \rightarrow B$, where E_1 and E_2 are elliptic curves. We will classify all occurring non-square parts of orders of Tate-Shafarevich groups of such B in case φ is a cyclic isogeny and the ground field is the rationals. We will prove that only the cardinalities $k=1,2,3,5,6,7,10,13$ are possible, and in all cases we are able to construct an explicit example.

Montag, 18.11.2013

ab 16:15 Uhr, Raum a410

Hauptgebäude der Leibniz Universität Hannover

Alle Interessierten sind herzlich eingeladen.

gez. Prof. Dr. C. Bessenrodt

Institut für Algebra, Zahlentheorie
und Diskrete Mathematik