

1145-46-443

Igor V. Nikolaev* (igor.v.nikolaev@gmail.com), Department of Mathematics, St. John's University, 8000 Utopia Parkway, New York, NY 11439. *Quantum dynamics of elliptic curves.*

We calculate the K -theory of a crossed product C^* -algebra $\mathcal{A}_{RM} \rtimes \mathcal{E}(K)$, where \mathcal{A}_{RM} is the noncommutative torus with real multiplication and $\mathcal{E}(K)$ is an elliptic curve over the number field K . We use this result to evaluate the rank and the Shafarevich-Tate group of $\mathcal{E}(K)$. Reference: arXiv:1808.03493 (Received September 06, 2018)