

Publicationes Mathematicae Debrecen **Year: 2023** **Vol.: 102** **Fasc.: 3-4**

Title: Big prime factors in orders of elliptic curves over finite fields

Author(s): Yuri Bilu, Haojie Hong and Florian Luca

Let E be an elliptic curve over the finite field \mathbb{F}_q . We prove that, when n is a sufficiently large positive integer, $\#E(\mathbb{F}_{q^n})$ has a prime factor exceeding $n \exp(c \log n / \log \log n)$.

Address:

Yuri Bilu
Institut de Mathématiques
de Bordeaux
Université de Bordeaux & CNRS
France

Address:

Haojie Hong
Institut de Mathématiques
de Bordeaux
Université de Bordeaux & CNRS
France

Address:

Florian Luca
School of Maths
Wits University
South Africa
and
IMB
Université de Bordeaux
France
and
Centro de Ciencias Matematicas
UNAM
Morelia
Mexico