上智大学数学談話会のお知らせ

日時 : ２０１５年１２月１１日（金曜）17:30-18:30

場所 : 市谷本館２０１室

講演者 : Ouamporn Phuksuwan 氏

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講演題目 : Primes in Elliptic Divisibility Sequences

Abstract ：Let E be an elliptic curve in short Weierstrass form,

$$E : Y^2 = X^3 + AX + B$$

where $A, B \in \mathbb{Z}$. The set of rational points on E, denoted by $E(\mathbb{Q})$, forms a group under the chord and tangent methods. Given a non-torsion point $P \in E(\mathbb{Q})$, write, in lowest terms,

$$nP := \underbrace{P + ... + P}_{n \ times} = \left(\frac{A_n}{B_n^2}, \frac{C_n}{B_n^3} \right)$$

The sequence (B_n) satisfies the divisibility property. The Primality conjecture for (B_n) has been studied. Moreover, the study of primes in (B_n) in other sense is also given.

The similar results for the twisted Fermat cubic

$$C : U^3 + V^3 = m,$$

with a cube-free integer m, are provided here.