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*Explicit point on elliptic curves over function fields.*

Let  $E$  be the elliptic curve  $y^2 = x(x+1)(x+t)$  over the field  $\mathbb{F}_p(t)$  where  $p$  is an odd prime. In this talk, we discuss the arithmetic of  $E$  over extensions  $K_d = \mathbb{F}_q(t^{1/d})$  where  $q$  is a power of  $p$  and  $d$  is an integer prime to  $p$ . In particular, we present a formula for the rank  $r_d$  of  $E(K_d)$  given in terms of an elementary property of the subgroup of  $(\mathbb{Z}/d\mathbb{Z})^\times$  generated by  $p$ . It turns out that  $r_d$  is large for many values of  $d$  and that for two families of values of  $d$  we are able to exhibit explicit points generating a subgroup of  $E(K_d)$  of finite index. This talk is based on a joint work with C. Hall and D. Ulmer. (Received July 08, 2014)