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Disciplina	516.352
Soggetti	Curves, Algebraic Legendre's functions Rational points (Geometry) Birch-Swinnerton-Dyer conjecture Jacobians Abelian varieties Finite fields (Algebra)
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Note generali	"Forthcoming, volume 266, number 1295."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	The curve, explicit divisors, and relations -- Descent calculations -- Minimal regular model, local invariants, and domination by a product of curves -- Heights and the visible subgroup -- The L-function and the BSD conjecture -- Analysis of J[p] and NS(Xd)tor -- Index of the visible subgroup and the Tate-Shafarevich group -- Monodromy of -torsion and decomposition of the Jacobian.
Sommario/riassunto	"We study the Jacobian J of the smooth projective curve C of genus r-1 with affine model yr = xr-1(x+ 1)(x + t) over the function field Fp(t), when p is prime and r [greater than or equal to] 2 is an integer prime to p. When q is a power of p and d is a positive integer, we compute the L-function of J over Fq(t1/d) and show that the Birch and Swinnerton-Dyer conjecture holds for J over Fq(t1/d). When d is divisible by r and of the form p[nu] + 1, and Kd := Fp([mu]d, t1/d), we write down explicit points in J(Kd), show that they generate a subgroup V of rank (r-1)(d-2) whose index in J(Kd) is finite and a power of p, and show that the order of the Tate-Shafarevich group of J over Kd is [J(Kd) : V]2. When r > 2,

we prove that the "new" part of J is isogenous over Fp(t) to the square of a simple abelian variety of dimension [phi](r)/2 with endomorphism algebra Z[[mu]r]+. For a prime with pr, we prove that J[](L) = {0} for any abelian extension L of Fp(t)"--