ON ÉTALE COVERS OF THE GENERALIZED SUZUKI CURVE

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(JOINT WORK WITH HERIVELTO BORGES)

For p an odd prime number, $q_0 = p^t$, and $q = p^{2t-1}$, let $\mathcal{X}_{\mathcal{G}_S}$ be the generalized Suzuki curve, which is the nonsingular model of

$$Y^q - Y = X^{q_0}(X^q - X).$$

In this work, the number of $\mathbb{F}_{q^n}$-rational points on the Jacobian $J_{\mathcal{X}_{\mathcal{G}_S}}$ is used to construct étale covers of $\mathcal{X}_{\mathcal{G}_S}$, some with many rational points.

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