

# Elliptic Subcovers of Hyperelliptic Curves

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**Abstract** The main result of this paper states that if  $C$  is a hyperelliptic curve of even genus over an arbitrary field  $K$ , then there is a natural bijection between the set of equivalence classes of elliptic subcovers of  $C/K$  and the set of elliptic subgroups of its Jacobian  $J_C/K$ .

**Keywords** Elliptic curves, hyperelliptic curves, curve covers, Jacobian varieties, rationality questions

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