

Subcovers of generalized GK curves and their automorphism groups

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Abstract

Two generalizations of the GK maximal curve are known, one by Garcia, Güneri and Stichtenoth, and one by Beelen and Montanucci. We consider some known subcovers X_1 of the first one, and define analogous subcovers X_2 of the second one. We determine the full automorphism groups of X_1 and X_2 . This provides a new characterization of the GK curve. As a byproduct, we obtain new maximal curves not covered by the Hermitian curve.

This is a joint work with G. Tizziotti and M. Montanucci.