Towers of Function Fields over Non-prime Finite Fields - DTU Orbit (08/11/2017)

Towers of Function Fields over Non-prime Finite Fields

Over all non-prime finite fields, we construct some recursive towers of function fields with many rational places. Thus we obtain a substantial improvement on all known lower bounds for Ihara's quantity $A(\ell)$, for $\ell = p^n$ with p prime and n > 3 odd. We relate the explicit equations to Drinfeld modular varieties.

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