1077-94-1810 **Martianus Frederic Ezerman** (frederic.ezerman@gmail.com), Laboratoire d'Information Quantique, CP 225, Université Libre de Bruxelles, Av. F. D. Roosevelt 50, B-1050, Bruxelles, Belgium, and **Radoslav M Kirov*** (rkirov@gmail.com). *Asymmetric Quantum Codes from Two-Point Divisors on Algebraic Curves.* Preliminary report.

It is known that codes from two-point divisors can be used to construct classical error-correcting codes with strictly better parameters than the one-point codes. The Duursma-Kirov method provides the currently best known lower bounds on the minimum distances of algebraic geometric (AG) codes.

In the theory of quantum error-correction, the observed presence of asymmetry in many binary quantum channels led to the mathematical study of asymmetric quantum codes (AQCs) where we no longer assume that the different types of errors are equiprobable.

AG codes are well suited to constructing AQCs with good parameters. We show that, similarly to the classical case, two-point divisors give us better AQCs than those derived from their one-point counterparts. Theoretical and numerical results on the gains in the parameters will be presented.

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