

1163-11-1430 **Marc Hindry*** (marc.hindry@imj-prg.fr), UFR Mathematiques, Universite de Paris (Paris Diderot), 5 rue Thomas Mann, 75013 Paris, France. *Analogues of Brauer-Siegel theorem for surfaces over finite fields*. Preliminary report.

We will explain analogies between the classical Brauer-Siegel theorem, a statement relating asymptotically the class number, regulator of units and discriminant of a number field, and similar statement involving arithmetic invariants of algebraic varieties over a finite or global field. We present precisely the analogy for surfaces over a finite field and for abelian varieties over a global field (i.e. a number field or the function field of a curve over a finite field), surveying some recent results. The proof of Brauer-Siegel theorem relies on the class number formula and analytical estimates for the Dedekind zeta function, the analogy draws on formulae predicted by the Birch & Swinnerton-Dyer conjecture, (resp. Artin-Tate conjecture) and analytical estimates for the relevant L-series. (Received September 15, 2020)