

1154-12-2837      **Lucian Miti Ionescu\*** (lmiones@ilstu.edu), Illinois State University, Fell Street, Bloomington, IL 61790-4520. *Arithmetic Galois Theory*. Preliminary report.

Arithmetic Galois Theory (AGT) is a Galois connection on cyclic groups which corresponds to classical Galois correspondents between subfields and subgroups in the cyclotomic case (Abelian Class Field Theory).

It is instructive to see how  $\mathbb{Z}$ -module theory point of view in AGT explains the decomposition of primes in Abelian Galois extensions.

This arithmetic-algebraic correspondence has an interpretation in Grothendieck's Anabelian Geometry, beyond the abelian case of algebraic de Rham cohomology. (Received September 18, 2019)