

1106-14-593

Turchetti Daniele* (daniele.turchetti@imj-prg.fr). *Lifting Galois covers to characteristic zero with non-Archimedean analytic geometry*. Preliminary report.

Let k be an algebraically closed field of characteristic $p > 0$ and R a complete discrete valuation ring of characteristic zero, with residue field k . The thread of this talk are lifting problems, that ask what algebraic objects defined over k can be obtained by reduction of algebraic objects over R .

We focus on the problem of lifting G -Galois covers of curves explaining how we can get necessary and sufficient conditions when G is cyclic with the use of non-Archimedean analytic methods. Then we discuss how this approach opens new perspectives in the deformation theory of torsors over R , and in the arithmetic of fundamental groups in mixed characteristic. (Received September 03, 2014)