

# CANONICAL CLASS FIELD THEORIES

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Class field theory is an important and well-studied technique in algebraic number theory. This theory allows one to study the maximal abelian (continuous) quotients of any open subgroup  $U$  of a profinite group  $\hat{G}$  in terms of a family of class field modules  $\mathbf{C}_U$ .

There are basically two approaches to define a class field theory which are due to Tate and Neukirch and which - although not unrelated - do not seem to be equivalent. We will show that every infinite profinite group  $\hat{G}$  has *canonical* class field theories in the sense of Tate generalizing a result of Brumer. In order to prove this result we follow an idea of Neukirch, namely, that the natural context in which class field theory lives is the theory of (cohomological) Mackey functors.

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