

# Cyclotomic Units and Class Groups

Filippo A. E. Nuccio

Already at the end of the XIX<sup>th</sup> century Kummer, discovered a connection between the class number of real cyclotomic fields and a certain submodule of the units of these fields. After introducing the module  $Cyc_F$  of the so-called Cyclotomic Units for an arbitrary real abelian number field  $F$ , I will discuss some condition under which there is actually an isomorphism (or almost...) between the class group  $Cl_F$  and the quotient  $\mathcal{O}_F^\times/Cyc_F$ .