

A B S T R A C T

A gentle introduction into Cogalois Theory

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Roughly speaking, *Cogalois Theory* investigates field extensions, finite or not, that possess a Cogalois correspondence. This theory is somewhat dual to the very classical *Galois Theory* dealing with field extensions possessing a Galois correspondence. An important part of *Galois Theory* is the classical *Kummer Theory* investigating Galois field extensions, not necessarily finite, having an Abelian Galois group of finite exponent; these extensions possess both a Galois and Cogalois correspondence, and their theory can be completely and easily deduced from *Cogalois Theory*.

The aim of the talk is to present to a general audience some of the basic concepts, results, and applications of this fairly new theory, born about 25 years ago.