

# On Galois structures in algebraic categories

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New examples of categorical Galois structures [6] have been discovered and studied in various algebraic contexts in the last years.

In this talk we first place ourselves in the general context of *factor permutable categories* [4], and show how the nice centrality properties of these categories allow one to describe the corresponding Galois coverings.

In the second part we restrict ourselves to *homological categories* [1]. The Galois structures arising from various kinds of fibered reflections [2] will be considered, and examples of coverings will be given in the categories of groups, topological groups [5] and crossed modules.

Finally, we shall focus our attention on *semi-abelian categories* [7]. By building a sequence of Galois structures from any Birkhoff subcategory of a semi-abelian category, we shall explain how useful the characterization of the coverings is to get higher Hopf formulae for homology (joint work with T. Everaert and T. Van der Linden [3]).

## REFERENCES

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