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*A characterization of central extensions in the variety of quandles*

During the last years some categorical properties of the category  $\mathbf{Qnd}$  of *quandles* have been investigated [1, 2, 3]. We shall first recall some of these results that will be useful for the present work [4], and then consider the subvariety  $\mathbf{SymQnd}$  of  $\mathbf{Qnd}$  consisting in *symmetric quandles*. This latter is a Mal'tsev variety, whose subvariety  $\mathbf{AbSymQnd}$  of abelian symmetric quandles turns out to be an admissible subcategory (in the sense of categorical Galois theory) in the larger category  $\mathbf{Qnd}$ . We shall give an algebraic description of the quandle extensions that are central for the adjunction between the variety of quandles and its subvariety of abelian symmetric quandles.

## References

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- [2] D. Bourn, A structural aspect of the category of quandles, *J. Knot Theory Ramifications* 24 (2015) 1550060.
- [3] V. Even and M. Gran, Closure operators in the category of quandles, *Topology and its Applications* 200 (2016) 237–250.
- [4] V. Even, M. Gran and A. Montoli, A characterization of central extensions in the variety of quandles, *Theory Appl. Categories* 31 (2016) 201–216.

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