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On generalized Alexander quandles arising from finite groups

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Abstract

The contents of this talk is based on a joint work Akihiro Higashitani. Quandle is an algebraic system with one binary operation, but it is quite different from a group. Quandle has its origin in the knot theory and good relationships with the theory of symmetric spaces, so it is well-studied from points of view of both areas.

In this talk, we investigate a special kind of quandles, called generalized Alexander quandles. We develop the quandle invariants for generalized Alexander quandles using “connected components” of quandles. As a results, we can solve some classification problems.