

# Linear Alexander quandle colorings and finite-fold cyclic covers of $S^3$ branched over knots

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**Abstract.** The Fox-colorings of a knot are interpreted as the group representations from the fundamental groups of the 2-fold cyclic cover of  $S^3$  branched over the knot to  $\mathbb{Z}_p$ . The interpretation is extended for linear Alexander quandle colorings by using some condition.