

Links with binary relations

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We define homology of binary relations, and we merge it with quandle homology, to obtain homology for partial quandles with binary relations. It can be used for analyzing link diagrams with binary relations on the set of components with the condition that a component C_2 can move over a component C_1 if $C_1 R C_2$, where R is a relation. We also discuss some other conditional theories.