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Categorical Quandles and Knots.

Categorical quandles are defined as a category object in the category of quandles, following the construction called internalization, and the resulting category is called a strict 2-quandle. The definition is motivated by that of a strict 2-group, which is well-known to be equivalent to a crossed module. Taking conjugation is shown to induce a functor from strict 2-groups to strict 2-quandles. Other explicit and interesting examples are presented. (Received February 11, 2010)