Blake Mellor* (blake.mellor@lmu.edu). \textit{Finite quandles of knots, links and spatial graphs}. Preliminary report.

The \textit{fundamental quandle} of a knot is a complete invariant for tame, unoriented knots. However, the structure of the quandle can be extremely complex, so it can be useful to consider quotients of the quandle. The \textit{n-quandle} of a knot, link or spatial graph is the result of adding relations $x^y^n = x$ to the fundamental quandle, where $x$ and $y$ are any elements of the fundamental quandle. For some knots and links, the $n$-quandle is finite; Hoste and Shanahan provided a complete list of these links, proving a conjecture of Przytycki. In this talk, we will review the progress on providing explicit descriptions of the finite $n$-quandles for these links. We will also look at possible extensions to identify finite quandles associated to spatial graphs. (Received August 22, 2019)