1158-03-102   **Valentina Harizanov*** (`harizanv@gwu.edu`), Department of Mathematics, Washington, DC
                   20052. *Orderable quandles.*

We investigate algebraic and computability-theoretic properties of orderable quandles and, more generally, magmas. A magma is an algebraic structure with a single binary operation. Important examples of magmas include groups and semigroups, but also those that come from knot theory and do not necessarily have an associative operation, such as quandles. A magma M is right-orderable (left-orderable) if there is a linear ordering of the domain of M, which is right-invariant (left-invariant) with respect to the magma operation. If M has a right order that is also a left order, then M is bi-orderable. A computable orderable magma does not necessarily have a computable order. There is a natural topology on the set of all (left, right, bi-) orders of M. These spaces are compact, and in some cases homeomorphic to the Cantor set. (Received February 25, 2020)