1145-03-1528   **Jana Marikova*** (`j-marikova@wiu.edu`). *Valuations and o-minimality.*
O-minimality provides a common framework for many topologically well-behaved structures, the prototypical example being the semialgebraic sets. Valuations have been quite useful in establishing the o-minimality of certain structures (such as the real exponential field) as well as in determining properties of definable sets within the framework of o-minimality (measures, preparation theorems). On the other hand, an o-minimal structure together with a convex subring (and hence a valuation) yields a generalization of o-minimality which is interesting in its own right.

We shall discuss the relationship between valuations and o-minimal structures as well as more recent results and open questions about valuational weakly o-minimal structures. (Received September 22, 2018)