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" Quasi-Orderings: a uniform approach to orderings
and valuations "**

Abstract:

In the note "Quasi-Ordered Fields" by S. M. Fakhruddin [JPAA 45 (1987) 207-210] the author introduces the notion of a quasi-ordered field and shows that such a field is either an ordered field or a Krull valued field.

In this talk we take this approach further to exhibit a theory of (quasi-order) convex valuations.

Classical results on (order) convex valuations such as: the characterization of order convexity via the residue field, the Theorem of Baer Krull, etc, can be reformulated for quasi order convex valuations in a natural way.

In particular, this provides an elegant and uniform treatment of lifting of orderings, coarsening and composition of valuations.