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Finding Order in Metric Structures

In continuous logic, there are plenty of examples of interesting stable metric structures. On the other side of the SOP line, there are only a few metric structures where order is relevant, and order appears in a different way in each of them. In this talk, joint work with Aaron Anderson, we present a unified approach to linear orders in continuous logic. We axiomatize these theories, and find generic completions in the ultrametric case, analogous to the complete theory DLO. We study some expansions of these theories, including real closed metric valued fields, from this perspective, and characterize which expansions of metric linear orders should be considered o-minimal.