

AUSLANDER-REITEN GRAPH DISTANCE AS A BOTTLENECK METRIC

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In collaboration with David Meyer.

This project investigates the potential of quiver theoretic bottleneck metrics for use over non-totally-ordered posets. The classical bottleneck metric on persistence diagrams is discussed as a diagonal interleaving metric, as are various modifications to these familiar notions for the \mathbb{A}_n quiver (zig-zag) setting. Following this, stability results for the quiver theoretic bottleneck metrics are presented relative to their classical counterparts.

Central to our construction is the use of the Auslander-Reiten (AR) quiver for arbitrary orientations of \mathbb{A}_n . I present a formulaic representation of the AR quiver in this setting, derived from the Knitting Algorithm, but with the advantage that it conveys the full structure without the sequential construction required by the Knitting Algorithm.

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