

Algebra/Topology Seminar

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PERSISTENCE MODULES FOR ARBITRARY ORIENTATIONS OF A_n

Thursday, October 18, 2018
1:15 p.m. in ES-143

ABSTRACT. The isometry theorem says that two seemingly different metrics placed on the collection of persistence modules are equal. A persistence module which comes from data always admits the structure of a representation of a finite totally ordered set. Such posets are exactly the ones whose Hasse quiver will be the equioriented A_n -quiver. Since any orientation on A_n corresponds to the Hasse quiver of a finite poset, from the perspective of representation theory it's natural to wonder whether one can prove a similar theorem for persistence modules for these posets. In this talk we compare the interleaving metric with a bottleneck metric which makes use of the Auslander-Reiten quiver of the module category of the poset.