

Algebra/Topology Seminar

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THE UNIVERSAL ℓ^p -METRIC ON MERGE TREES

Thursday, October 27, 2022

3:00 p.m. in ES-143

ABSTRACT. Adapting a definition given by Bjerkevik and Lesnick for multiparameter persistence modules, we introduce an ℓ^p -type extension of the interleaving distance on merge trees. We show that our distance is a metric, and that it upper-bounds the p -Wasserstein distance between the associated barcodes. For each $p \in [1, \infty]$, we prove that this distance is stable with respect to cellular sublevel filtrations and that it is universal.