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Multiparameter persistence modules in the large scale

A persistence module with m discrete parameters is a diagram of vector spaces indexed by the poset \mathbb{N}^m . If we are only interested in the large scale behavior of such a diagram, then we can consider two diagrams equivalent if they agree outside of a “negligeable” region. In the 2-dimensional case, we classify the indecomposable diagrams up to finitely supported diagrams. In higher dimension, we partially classify the indecomposable diagrams up to suitably finite diagrams. We also relate the decomposition to the rank invariant. This is joint work with Don Stanley.