

Sparse hypergraph blow-up lemma

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The blow-up lemma is a powerful tool for embedding bounded degree spanning subgraphs with wide-ranging applications in extremal graph theory. We prove a sparse hypergraph analogue of the blow-up lemma, showing that large sparse partite complexes with sufficiently regular small subcomplex counts and no atypical vertices behave as if they were complete for the purpose of embedding complexes with bounded degree and bounded partite structure.