



Minisymposium 18 - Hypergraphen

Hereditary Discrepancy in Different Numbers of Colors

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We examine the hereditary discrepancy problem of hypergraphs in different numbers of colors. We show that the hereditary discrepancies for a hypergraph in different numbers of colors differ only by factors depending linearly on the respective numbers of colors, i.e., for any hypergraph \mathcal{H} and arbitrary numbers $a, b \in \mathbb{N}_{\geq 2}$ of colors, we have

$$\text{herdisc}(\mathcal{H}, b) \leq O(a)\text{herdisc}(\mathcal{H}, a).$$

Furthermore, this bound is proven to be almost tight.