

# Cycle Partitioning in Hypergraphs

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In 1991 Erdős, Gyárfás and Pyber proved that for every  $r$ -edge-coloured complete graph (on any number of vertices) the vertices can be partitioned into  $O(r^2 \log r)$  monochromatic cycles and conjectured that  $r$  cycles should be enough. In case  $r = 2$ , this conjecture was proved for very large  $n$  by Łuczak, Rödl and Szemerédi, for large  $n$  by Allen and finally for all  $n$  by Bessy and Thomassé. For  $r > 2$ , the conjecture was disproved by Pokrovskiy who proposed an alternative conjecture which is still open. The same problem for loose cycles in hypergraphs was studied by Gyárfás and Sárközy. For tight cycles however, not much is known and we shall investigate them in this talk.