ANTI-RAMSEY NUMBERS IN COMPLETE SPLIT GRAPHS

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A subgraph of an edge-coloured graph is rainbow if all of its edges have different colours. For graphs G and H the anti-Ramsey number ar(G, H) is the maximum number of colours in an edge-colouring of G with no rainbow copy of H. The notion was introduced by Erdős, Simonovits and V. Sós and studied in case $G = K_n$. Afterwards exact values or bounds for anti-Ramsey numbers $ar(K_n, H)$ were established for various H among others by Alon, Jiang & West, Montellano-Ballesteros & Neumann-Lara, Schiermeyer. There are also results concernig bipartite graphs, cubes or product of cycles as G obtained by Axenovich, Li, Montellano-Ballesteros, Schiermeyer and others. In the talk we give the survey of these results and also there will be presented numerous results with a complete split graph $K_n + \overline{K}_m$ as the host graph G.

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