ANTI-RAMSEY NUMBERS IN COMPLETE SPLIT GRAPHS

IZOLDA GORGOL

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 concerning 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 $K_n + K_m$ as the host graph $G$.

Department of Applied Mathematics, Lublin University of Technology, Nadbystrzycka 38D, 20-618 Lublin, Poland
E-mail address: I.Gorgol@pollub.pl

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