Gallai Ramsey number for K_4

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Given a graph H, the k-coloured Gallai Ramsey number $gr_k(K_3 : H)$ is defined to be the minimum integer n such that every k-colouring (using all k colours) of the complete graph on n vertices contains either a rainbow triangle or a monochromatic copy of H. In 2015, Fox, Grinshpun, and Pach conjectured the value of the Gallai Ramsey numbers for complete graphs. The case when $H = K_3$ was actually verified in 1983 by Chung and Graham. We verify this conjecture for the first open case, when $H = K_4$.
Finally, we will report about proving the conjecture for the next case, when $H = K_5$.

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