Recent developments of star-critical Ramsey numbers

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The star-critical Ramsey number $r_*(G, H)$ is the smallest integer k such that every 2-coloring of the edges of $K_r - K_{1,r-1-k}$ contains either a red copy of G or a blue copy of H where $r = r(G, H)$ the graph Ramsey number. Since the introduction of star-critical Ramsey numbers in 2010, there have been a significant number of values discovered as well as numerous classifications of critical graphs. A critical graph for a Ramsey number avoids the Ramsey property. A number of variants to the star-critical Ramsey number have been recently introduced in an attempt to further analyze when the Ramsey property is forced and to make progress on unknown Ramsey numbers. This talk will discuss recent developments of the star-critical Ramsey number including those for cycles versus complete graphs. A survey will be provided for all known star-critical Ramsey numbers.

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