

1089-05-65

Andrew D King* (adk7@sfu.ca), Department of Mathematics, Simon Fraser University, 8888 University Drive, Burnaby, BC V5A 1S6, Canada. *Getting to the point of Reed's Conjecture: How local can you go?*

Reed's omega, Delta, chi conjecture proposes a bound on the chromatic number based on the two global invariants omega and Delta. It may be very roughly stated, "For a graph to have high chromatic number, it must contain a large clique and a vertex of high degree."

But omega and Delta may be realized in completely different parts of the graph. It therefore seems natural to strengthen this conjecture, and propose that if a graph has high chromatic number, then a large clique and a vertex of high degree must occur in the same local area of the graph. In this talk I will discuss what strengthenings of this type we might reasonably make, and present evidence and counterexamples that narrow the threshold.

This is joint work with Katherine Edwards. (Received January 28, 2013)