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Decomposition of bounded degree graphs into C_4 -free subgraphs

We prove that every graph with maximum degree Δ admits a partition of its edges into $O(\sqrt{\Delta})$ parts (as $\Delta \rightarrow \infty$) none of which contains C_4 as a subgraph. The bound is sharp up to a constant factor and settles a conjecture of Jiang, Milans and West. This is a joint work with Ross Kang.