

# Rainbow cycles and trees in properly edge-colored complete graphs

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A rainbow subgraph of a properly edge-colored complete graph is a subgraph all of whose edges have different colors. One reason to study such subgraphs arises from the canonical version of Ramsey's theorem, proved by Erdős and Rado. Another motivation comes from problems in design theory. In this talk we discuss several old conjectures about finding spanning rainbow cycles and trees in properly edge-colored complete graphs and present some recent progress on these problems.

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