Michael Tait* (michael.tait@villanova.edu). Large monochromatic components in 3-colored Steiner triple systems.

We consider Ramsey problems on Steiner triple systems. Given a 3-coloring of the blocks of a Steiner triple system, what is that largest monochromatic component that is guaranteed? Perhaps not surprisingly, it depends on the Steiner triple system. We discuss an independence number like parameter which Gyarfas used to show that $2/3$ the number of points is an absolute lower bound for any Steiner triple system. On the other hand, we show that a randomly chosen Steiner triple system will have a monochromatic component spanning almost all of the points with probability tending to 1. We end with some natural open Ramsey-type problems in this setting.

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