1135-05-1788 **Peter Doyle**, **Jay Pantone*** (jaypantone@dartmouth.edu) and **Everett Sullivan**. *Patterns and Colorability in Chord Diagrams.*

A chord diagram with n chords is a set of $2n$ points in a line connected in n pairs. Chord diagrams, sometimes called matchings, play an important role in mathematical biology, knot theory, and combinatorics, and as a result they have been intensely studied by mathematicians, computer scientists, and biologists alike. In this talk we'll examine two interesting families: 2-colorable chord diagrams, and chord diagrams without short chords. Using a combination of symbolic, analytic, and experimental methods we find counting sequences, generating functions, and asymptotics for each family. (Received September 24, 2017)