

Zero Forcing TAR Graphs and Polynomials

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Zero forcing models the spread of information in a graph as white vertices become blue by applying a color change rule. The zero forcing sets of a graph are the subsets of vertices that can be colored blue initially so that all vertices in the graph eventually turn blue. Zero forcing reconfiguration graphs model the way zero forcing sets of a given graph can be reconfigured into other zero forcing sets using some specified operations. For instance, the token addition or removal (TAR) rule allows us to reconfigure our zero forcing sets by adding or removing vertices. The zero forcing polynomial has coefficients that count the number of zero forcing sets of each size. This talk will present some recent results on the relationship between zero forcing TAR graphs and zero forcing polynomials.

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