Cut-forcing: vertex cuts, matchings, and zero forcing variants

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Recent work has shown a connection between zero forcing processes and the vertex cuts of a graph. During this talk, we consider this connection and utilize it to introduce a new zero forcing variant, which we call cut-forcing. When considering cut-forcing, we also find a strong connection to matchings. Exploring this connection to matchings we use Hall's Theorem to define graph substructures we call cut-forts, which are analogous to the forts of standard zero forcing. Finally, we show that cut-forcing is incomparable to many common zero forcing variants.