

# A Bichromatic View of Matchings

Daniel Johnston, Western Michigan University

A red-blue coloring of a graph  $G$  is an edge coloring of  $G$  in which every edge is colored red or blue. For a connected graph  $H$  of size at least 2, a color frame  $F$  of  $H$  is obtained from a red-blue coloring of  $H$  having at least one edge of each color and in which a blue edge is designated as the root edge. For a color frame  $F$ , an  $F$ -coloring of a graph  $G$  is a red-blue coloring of  $G$  in which every blue edge is the root of some copy of  $F$  in  $G$ . We study  $F$ -colorings of some color frames  $F$  and show that  $F$ -colorings provide a different view of matchings in graphs.