

**Meeting:** 999, Nashville, Tennessee, SS 14A, Special Session on Graph Theory and Matroid Theory

999-05-109      **Bert L. Hartnell\*** ([Bert.Hartnell@smu.ca](mailto:Bert.Hartnell@smu.ca)), Dept. of Mathematics and Computing Science, Saint Mary's University, Halifax, NovaScotia B3H 3C3, Canada, and **Doug F. Rall** ([Doug.Rall@furman.edu](mailto:Doug.Rall@furman.edu)), Department of Mathematics, Furman University, Greenville, SC 29613.  
*A Game of Edge Removal on Graphs.*

Consider the following game played on a graph. Two players alternate deleting an edge from  $G$  where any edge can be removed as long as it is not the last edge incident with some vertex. That is, one cannot isolate a vertex. For instance, no move can be made on the path on two nodes while one move could be made on the path on four points. The last player able to move wins. At a conference in 2003 a characterization of those graphs of girth at least 6 for which the outcome is determined regardless of how the players move was presented. We extend these results to girth 5 and, if time permits, discuss the situation when the game is played on a path of arbitrary length. (Received August 17, 2004)