1083-05-25 **Steven Andrew Schluchter*** (sas71@gwu.edu), 2115 G St. NW, 240, Washington, DC 22201.

Voltage Graphs and Derived Cellular Homology (preliminary report). Preliminary report.

Voltage graph theory has been used to answer questions about regular (branched) coverings of graphs and surfaces. It has also been used as a tool to answer questions in topological graph theory and in the classification of cellular automorphisms of surfaces. Here, we will discuss the initial results of an investigation into homology classes of closed walks in covering spaces over closed walks in the covered spaces using voltage-graph theory. (Received July 18, 2012)