1167-05-98 **Lowell Abrams*** (labrams@gwu.edu) and **Lindsey-Kay Lauderdale**. *The Wiener Ratio for Embedded Graphs – Density and Voltages.* Preliminary report.

The Wiener index of a graph is the sum of all distances between pairs of vertices. For a graph G embedded in a surface, we consider the ratio formed between the Wiener index of G and the Wiener index of its dual, taking the reciprocal, if necessary, to ensure the ratio is in $[0, 1]$. We obtain a density result for $(1/2, 1)$, and demonstrate how to use a voltage graph construction to bound the limiting value of the Wiener ratios of a one-parameter family. (Received February 22, 2021)