

1033-05-111

Ken-ichi Kawarabayashi (k_keniti@nii.ac.jp), 2-1-2 Hitotsubashi, Chiyoda-ku, Tokyo, 101-8430, Japan, and **Michael D. Plummer*** (michael.d.plummer@vanderbilt.edu), Department of Mathematics, Vanderbilt University, Nashville, TN 37240. *Equimatchable graphs in surfaces.*

A graph is said to be *equimatchable* if every matching in G extends to (i.e., is a subset of) a maximum matching in G . In an earlier paper, the present two authors, together with A. Saito, proved that there exist only a finite number of 3-connected planar equimatchable graphs. In the present paper, this result is extended by showing that in a surface of any fixed genus (orientable or non-orientable) there are only a finite number of 3-connected equimatchable graphs having a minimal embedding of representativity at least three. The proof makes use of the Gallai-Edmonds decomposition theorem for matchings. (Received September 06, 2007)