1113-05-130   **Robert E.L. Aldred**, **Quili Li**, **Michael D. Plummer***
(`michael.d.plummer@vanderbilt.edu`), **Dong Ye** and **Heping Zhang**. *Matching Extension in Toroidal Quadrangulations: the 3-extendable Case.*

A graph G containing a perfect matching is said to be m-extendable if $m \leq (|V(G)| - 2)/2$ and for every matching M in G with $|M| = m$, there is a perfect matching F in G such that $M \subseteq F$. In an earlier paper, four of the present five authors characterized those quadrangulations of the torus which are 2-extendable. In this talk a characterization of those which are 3-extendable will be presented. Since no quadrangulation of the torus can be m-extendable for any $m \geq 4$, this completes the classification of m-extendable toroidal quadrangulations. Moreover, by a previous result of the third author, it then follows that we have therefore characterized all 3-extendable toroidal graphs. (Received August 17, 2015)