1126-05-27 **Nick Zhao*** (yzhao@mail.ucf.edu), Department of Mathematics, University of Central Florida, Orlando, FL 32816. *Vizing's Planar Graph Conjecture and related problems.*

Vizing's Planar Graph Conjecture states that every planar graph of maximum degree at least 6 is class one. If for a surface Σ, we define $\Delta(\Sigma) = \max\{\Delta(G)|\ G$ is a connected class two graph of maximum degree Δ that is embedded in $\Sigma\}$, then one can claim that for a surface Σ, any connected graph of maximum degree Δ that is embedded in Σ is class one if $\Delta > \Delta(\Sigma)$. Further, Vizing's Planar Graph Conjecture also can be restated as $\Delta(S) = 5$ if S is a sphere. In this talk, we will focus on $\Delta(\Sigma)$ and upper bounds for $\Delta(\Sigma)$ for surfaces of characteristic $\chi \leq 0$. (Received December 08, 2016)