Upper bounds for $\Delta(\Sigma)$ where $-53 \leq \chi(\Sigma) \leq -8$.

Vizing’s Planar Graph Conjecture states that every planar graph of maximum degree at least 6 is class one. If for a surface $\Sigma$, we define $\Delta(\Sigma) = \max\{\Delta(G) : G$ is a connected class two graph of maximum degree $\Delta$ that is embedded in $\Sigma\}$, then one can claim that for a surface $\Sigma$, any connected graph of maximum degree $\Delta$ that is embedded in $\Sigma$ 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 $\Sigma$ of characteristic $-53 \leq \chi(\Sigma) \leq -8$. (Received January 24, 2019)