1154-15-820 **Hein van der Holst*** (hvanderholst@gsu.edu), **Marina Arav** and **Scott Dahlgren**. *Colin de Verdiere invariants and antipodal mappings.*

The Colin de Verdière graph invariant μ characterizes disjoint unions of paths, outerplanar graphs, and planar graphs as those graphs G for which $\mu(G) \leq 1$, $\mu(G) \leq 2$, and $\mu(G) \leq 3$, respectively. Arav, Hall, van der Holst, and Li introduced the signed graph invariant ν. For $k \in \{1, 2, 3\}$, the graphs G such that $\mu(G) \leq k$ can be described as those graphs G such that there exists an antipodal mapping of a certain cell complex associated with G into S^{k-1}. Surprisingly, a similar situation holds for the class of signed graphs (G, Σ) with $\nu(G, \Sigma) \leq 1$ and for the class of signed graphs (G, Σ) with $\nu(G, \Sigma) \leq 2$. In this talk, we will discuss this and give some results on signed graphs with $\nu(G, \Sigma) \leq 3$. (Received September 11, 2019)

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