Aspheric Orientations of Simplicial Complexes

Richard Stanley showed that the chromatic polynomial of a graph when evaluated at negative integers counts the number of compatible pairs of colorings and acyclic orientations of the graph. In particular, if the chromatic polynomial of a graph is evaluated at negative one, then we get the number of acyclic orientations (up to sign) of the graph. In this talk we will extend the ideas of vertex colorings and acyclic orientations of graphs to abstract simplicial complexes and give a similar result to that of Stanley's theorem.