Point cloud classification has received tremendous attention in recent years with the adoption of LiDAR scanners and commodity RGB-D sensors for robotics, augmented reality, and urban planning applications. In this work, we explore the possibility of learning the global and local shape information through multiple topological representations of point clouds. To this end, we propose "Node Spiked Reeb Graph (NSRG)" a modification to the standard Reeb graph that has potentials to capture the local as well as global features of the underlying shape. Aimed at capturing the surface geometry, we utilize alpha complex of the point cloud. A two-stream graph neural network (GNN) combining NSRG, and alpha complex has been designed and developed for point cloud classification. The proposed GNN has been compared and analyzed with the state-of-the-art. The performance of the proposed GNN has been evaluated using benchmark datasets such as ModelNet10, ModelNet40 and ScanObjectNN. The presentation will focus on the motivation and challenges of the point cloud classification, NSRG and alpha complex construction, GNN architecture and the experimental results.