

Gaspar Monge used the sweeping operation in the 18th Century, as a method for generating curves and surfaces by moving a point or a curve, respectively. When sweeping is applied to space curves or surfaces, it produces space surfaces or solids, respectively. Sweeping, extrude, and revolve operations are largely used in CAD systems (see, e.g., Pegna [50] and Weld [64]). In this section we analyze the translational extrusion of a polyhedron, which can be considered a basic operation to generate higher-dimensional polyhedra.