1093-51-383   **Hwankyu Song*** (`hwankyusong@gmail.com`), 29 Washington St., Tenafly, NJ 07670, and **Richard Kyung** (`nycrick@gmail.com`), 29 Washington St., Tenafly, NJ 07670. *Application of a Sequence to Building Construction.*

A valence sequence is a geometrical term used for a group of numbers that each represents the number of edges that meet at each vertex. It is possible to triangulate a given solid by connecting vertices with lines that don't already meet.

The purpose of this experiment is to find patterns between a triangulated Polyhedron and its valence sequence. Finally, this paper shows that there is a clear pattern in the valence sequences for polygons and polyhedrons, and the presented theory is applied to the building structures with truss elements.

This project can help find a new property of a shape. Finding a pattern in the valence sequences could help architects build buildings, bridges with truss elements with more stability. (Received August 20, 2013)