Transformations.

Transformations of curves and surfaces may be used to generate new shapes from known ones - while preserving key properties of the original shape. On the other hand, transformations and their permutability relations may serve to obtain integrable discretizations.

We shall discuss the sphere geometric zoo of transformations of curves and surfaces (i.e., by Ribaucour, Darboux, Christoffel, etc) and how they play a role in discretization and shape generation.