

In this thesis we present an elementary introduction to the Discrete differential geometry. We will work with both discrete curves and discrete surfaces. Firstly some basic definitions and theorems from classic Differential geometry will be mentioned and then we will translate these concepts to the discrete setting, so that some important global structures are still preserved. At the end we implement mean curvature flow defined on discrete surfaces and run it on two meshes, that show its area-minimizing feature. This can be used for denoising the discrete surfaces.