"Evolution of Surfaces Patched by Principal Patch"

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Abstract:

Abstract In this paper, we study the evolution of certain types of patches, called principal patches. We will derive the evolution equations of frame associated to a general surface and evolution equations of geometric quantities. For applications of the evolution of the surface patches which are parameterized by the lines of curvature, we shall present, examples evolution of the umbilical surface (sphere) and the isothermal surface (catenoid).

Keywords:

Evolution of surfaces, Umbilical surface, Isothermal surface.

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