

The Impact of Visualization on Differential Geometry and Topology

Ulrich Pinkall, TU Berlin

Many advances in Differential Geometry would not have been possible without the help of Computer Graphics, which became available in the 1970's. Moreover, there was a strong desire to advance the theory up to the point that is powerful enough to enable visualization. In many cases this desire was the driving motivation behind important progress on the theoretical side. In this talk I will give several examples, including the history of surfaces with constant mean curvature and the classification of surface immersions up to regular homotopy.