11 - geodesics and geodesic curvature

August 21, 2022

1 geodesic curvature and normal curvature

- curvature on a general surface can be broken up into two parts, one that is part of the surface, and thus invisible to the inabitants, and another part which is perpendicular to the surface, which the inhabitants can see.

- geodesic curvature $= \kappa_g =$ visibile to an inhabitant... normal curvature $= \kappa_n =$ invisible to an inhabitant

2 meusnier's theorem

- Gauss

3 geodesics are straight

- Gauss

4 intrinsic measurement of geodesic curvature

- Gauss

5 a simple way to measure geodesic curvature

- Gauss

6 new explanation of sticky tape construction of geodesics

- Gauss

7 geodesics on surfaces of revolution

- Gauss