

Introduction to differential geometry

1. Curves

- (a) Curves in plane and space
- (b) Curvature and torsion
- (c) Global theory of curves

2. Surfaces

- (a) Surfaces in \mathbb{R}^3
- (b) First fundamental form
- (c) Curvature of surfaces
- (d) Gauss mapping
- (e) Gauss-Bonnet for surfaces

Literature:

1. Pressley, A: Elementary Differential Geometry, Springer, 2001
2. Kühnel: Differential Geometry, AMS 2002