

Hints to the package eudiffgeov2.zip

Content

The interactive files are the notebooks

EuCurvesv2.nb (Euclidean differential geometry of curves)

euklsfv2.nb (Euclidean differential geometry of surfaces)

lessrank.nb (Subnotebook of EuCurvesv2.nb)

Before starting the first two notebooks first time read the Section Initialization of the notebooks and follow the hints you will find there!

The needed Mathematica Packages are

eudiffgeov2.m

euvec.m

tensalg.m

CURVES.m

SURFS.m

Recommendation. Save all the files of the package eudiffgeov2.zip in an archive directory and leave them unchanged.

Copy this directory in your working directory. Rename the notebook you want to work with and save it under the changed name.

WARNING. Be careful if you change or complete the downloaded Mathematica packages (files `***.m`); small errors can make them unusable!

eudiffgeov2.zip versus eudiffgeo.zip

eudiffgeov2.zip is the second version of eudiffgeo.zip. The newly in the notebook euklidsf.nb developed programs are now embedded into the package eudiffgeov2.m which is an extension of the package eudiffgeo.m. The package eudiffgeov2.m together with the four accompanying packages mentioned above give an almost complete collection of tools for working with Mathematica in elementary Euclidean differential geometry. The notebooks show applications of these tools to curve and surface theory in dimensions two and three. In particular, the notebook eudiffgeov2.nb being the second version of eudiffgeo.nb contains many simplifications, corrections, and some new parts. I recommend to use the second version eudiffgeov2.zip instead of eudiffgeo.zip. Both versions are tested with Mathematica v. 9.0.1.0 and with Mathematica v. 10.01.0.

WARNING. Do not mix the files of eudiffgeov2.zip with those of eudiffgeo.zip. Loading the package eudiffgeov2.m into the notebooks of eudiffgeo.zip leads to many error messages, and using the notebook euklidsfv2.nb with the package eudiffgeo.m can't work correctly since many functions used in this notebook are defined in eudiffgeov2.m only, and not in eudiffgeo.m,

Hints.

For new users of Mathematica it may helpful to read the hints on my homepage:

<http://www-irm.mathematik.hu-berlin.de/~sulanke/hints.html>

Comments and critics are wanted. I will be grateful for all feedback. Please write to sulanke@mathematik.hu-berlin.de