

Course number: MSI 30516 Geometric Modelling Study Level: Master / Graduate

Prof. Dr. Georg Umlauf Language of instruction: English ECTS Credits: 5

For artistic, industrial, and technical applications, such as the movie or the automotive industry, geometric objects need to be represented in the computer. For these representations it is irrelevant if the designed objects do exists physically (e.g. a car body) or if the designed objects are purely virtual (e.g. the characters in a computer animated film). Thus, these representations need to be designed to handle objects of arbitrary shape, dimension, and topology.

In this module up-to-date techniques and algorithms of CAD, CAGD, and computer graphics for the representation of free form geometry in artistic, industrial, and technical applications are presented. In the accompanying lab-assignments examples and case studies for these techniques will implemented by the students.