Advance Image Synthesis:
Exercises 05.05.2011

Technische Universität Berlin

Sommersemester 2011

1. Quadrature

a.) Compute the quadrature weights for Gauss-Legendre quadrature using Matlab and verify your computation by consulting a reference text.

b.) Compute a quadrature rule for the space spanned by Legendre polynomials using arbitrary sampling locations. What are the advantages and disadvantages of arbitrary locations?

2. Basis projection and approximation

In class we consider the approximation of the test signal in `signal.m` using bases formed by Legendre and characteristic functions. Compare the approximations to those in the discrete Fourier basis.