

Preparation guide for Quiz 04

As usual, you need to go over your homework problems first. When you are done, check if you have reached the following:

1. Understand the formula of Hermite interpolation. For example, what is the degree of Hermite polynomials? How to derive the 'basis functions', H and \hat{H} ?
2. Be able to implement the Hermite interpolation.
3. What are the continuity conditions for cubic splines? Why do they give rise to piecewise cubic polynomials? Why need two more conditions on the boundary?
What are 'free', 'clamped' and 'not-a-knot' boundary conditions, respectively?
4. Know how to use cubic splines of existing packages such as those in matlab and octave (i.e. read the corresponding 'help' documents and make sure you understand them).