

1 Exercise 1. Building a 1D planar Finite-Volume Hydrodynamics Code

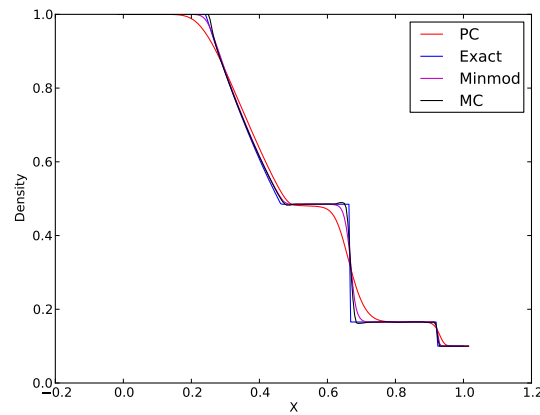


Figure 1: Plot of the solution of riemann problem with PC, Minmod, and MC method + exact solution.

Figure 1 shows solution of riemann problem with PC, Minmod, and MC method with compare to the exact solution, and 2 shows the relative error of PC, Minmod, and MC method. It shows that MC method is the best one and then Minmod is the good one and the PC method is the worst.

It seems that for this specific problem MC method is much more better than the other ones, because first of all it converge to real answer much more faster than the other one.

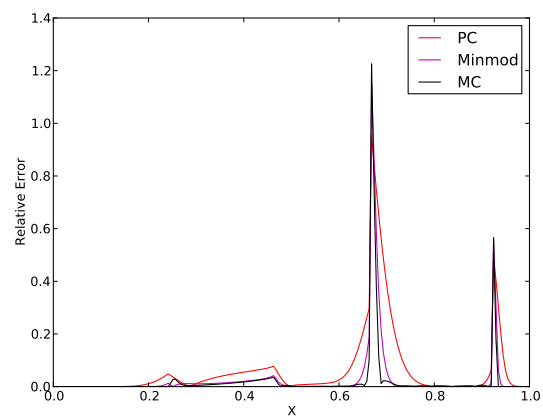


Figure 2: Plot of the relative error of PC, Minmod, and MC methods.