

Homework #11

Computational Microelectronics

Seongpyo Hong

Due on November 19, 2018

1 Results

We have solved the Boltzmann transport equation (BTE) in a 1D system in the lecture 17. We set the relaxation time $\tau = 10^{-6}$ second and change H from 0.1 to 1 with the grid of size 0.01. Fig. 1 shows f_0 and Fig. 2 shows f_1 . f_0 decays to 0 as H increases. f_1 shows some singular behavior at small H .

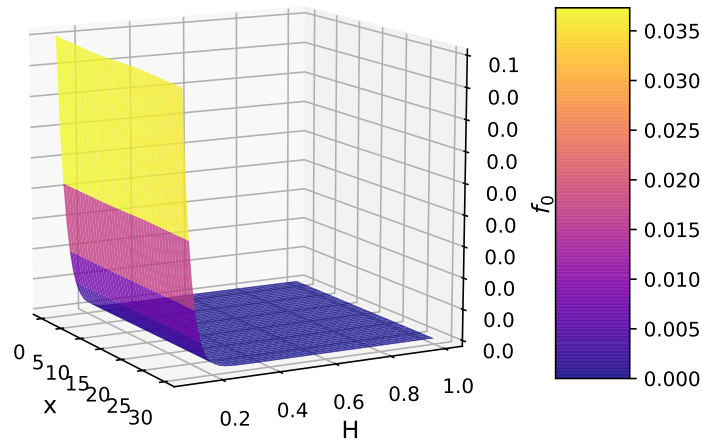


Figure 1: f_0 from the BTE.

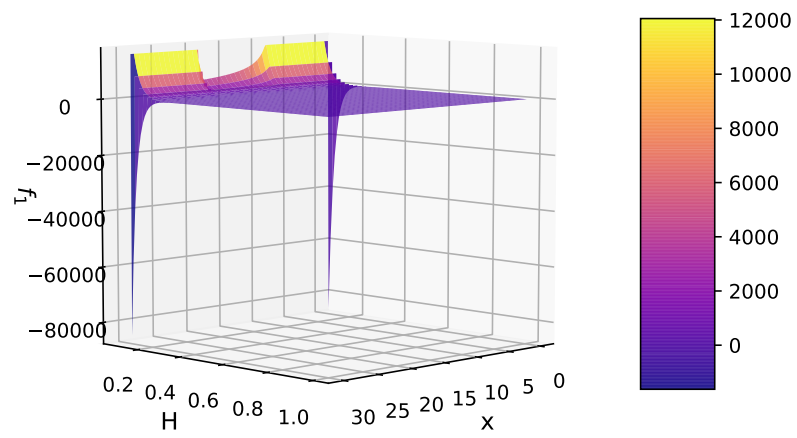


Figure 2: f_1 from the BTE.