2.57 HOMEWORK 3

Due: 2:30 pm, Wednesday
September 29, 2004

Problem 1. Read and write a one page report on the following paper (this paper is often considered as the starting point for artificial quantum structures).

L. Esaki and R. Tsu, "Superlattice and Negative Differential Conductivity," IBM of Research and Development, January, 1970, pp. 61-65. You may not understand the section in transport properties in this paper but you can see how they are using a Kronig-Penney type of model to start an important direction in research.

I found the following talk by Esaki gives some interesting background. Please check it: http://www.jspsusa.org/FORUM1996/esaki.html.

Problems from the course textbook : 2.9, 2.11, 2.12, 3.7