

**ECE 6453 Spring 2008
Homework 7**

Due Date: April 24, 2008 (Thursday)

No late homework will be accepted

Problems 1 ~ 3 are referred to the problem sets that are attached to the end of each chapter in the William Liu's book.

1. Chapter 3, Problem # 3
2. Chapter 3, Problem # 6
3. Chapter 3, Problem # 14
4. How does the intrinsic base resistance affect the DC current gain and RF performance of an HBT?
5. From band alignment point of view, can you identify the advantages or disadvantages of choosing $\text{In}_{0.49}\text{Ga}_{0.51}\text{P}/\text{GaAs}$ HBT over $\text{Al}_{0.2}\text{Ga}_{0.8}\text{As}/\text{GaAs}$ HBT?