**Quiz # 3** (ECE 493/593 Telehealthcare Engineering)

x/100

(Oct 31, 2012 Wednesday)

* Only covers topics in Wavelet).
* Closed book & notes.
* 25 minutes in total. Total 100 points. 5% of your final grade.

**Question 1**. What are the problems when applying Fourier Transform for non-stationary signals?

**Question 2**. Use an example to explain why we need to observe both time and frequency domains.

**Question 3**. Give the math model for Short Time Fourier Transform (STFT).

**Question 4**. What is the biggest problem when using STFT?

**Question 5**. Use a XY coordinate t(X-time; Y- Frequency) o show how Wavelet has different time/frequency resolutions in different places .

**Question 6**. Use math model to show Wavelet transform.

**Question 7**. Use filtering theory to explain Discrete Wavelet Transform.

**Question 8**. How does Wavelet achieve compression?