Due Wednesday, May 30, in class.

Problem 1.

Using the optimal coefficient vector from Eq. (5.13) in the text, show that Eq. (5.3) can be written as

$$\varepsilon_{min}(N) = R(0) - A^T C$$

Problem 2.

Using Cramer's Rule expressions for the components of A, show that

$\varepsilon_{min}(N) = |R_{N+1}| / |R_N|$ where R_N denotes the Nth order autocorrelation matrix for the

speech sequence.