Abstract
The recursive least squares (RLS) algorithm is well known for its good convergence property and small mean square error in stationary environments. However, RLS using constant forgetting factor cannot provide satisfactory performance in time varying environments. In this seminar, three variable forgetting factor (VFF) adaptation schemes for RLS are presented in order to improve the tracking performance and mean square error of the RLS algorithm in nonstationary environment. Based on the dynamic equation of the improved mean square error analysis, a gradient based adaptation of forgetting factor is derived. The resulting variable forgetting factor scheme can reduce the forgetting factor when large model error is detected and increase the forgetting factor when the model error becomes small. Simulation results shown that these algorithms can yield fast tracking and small mean square model error in different noise environments.

Brief Biography
Mr. So graduated in BEng(Hon) Computer Engineering in 1999 and continued to pursue a master degree all in Department of Electronic Engineering, City University of Hong Kong. His research interest is on adaptive filter theory, detection and estimation.

Date : March 7, 2002 (Thursday)
Time : 2:30pm - 3:30pm
Venue : G6302, Green Zone, Lift No. 7
City University of Hong Kong

**ALL ARE WELCOME**