



## SIGNAL PROCESSING ADVANCES IN WIRELESS AND MOBILE COMMUNICATIONS

A licentiate seminar on Communications Signal Processing will take place during fall semester 2001. The official language of the seminar is english. Each student is required to give an oral presentation as well as complete a Matlab assignment.

The text books for the seminar are: *G. B. Giannakis, Y. Hua, P. Stoica and L. Tong (Eds.) (2000), "Signal Processing Advances in Wireless and Mobile Communications" , Volumes I and II, Prentice-Hall.*

The topics of the seminar include:

- Channel Equalization and Estimation using HOS
- Blind Channel Identification and Equalization
- Subspace-based Identification
- Identification of FIR-MIMO systems
- Semi-Blind methods
- Linear precoding for estimation and equalization of frequency selective channels
- Time-varying fading channels
- Space-time diversity
- Multipath mitigation
- Interference cancellation for CDMA signals
- Exploiting antenna arrays in synchronization

The seminar will be organized by Prof. Visa Koivunen (S building, room G 408, phone 2453, [visa.koivunen@hut.fi](mailto:visa.koivunen@hut.fi)) from Signal Processing Laboratory and SMARAD center of excellence in research.

The time and location of the first meeting are September 27, 2001 at 4 pm, Dept. of Electrical and Communications Engineering (S-building), Room # G419 (Signal processing laboratory, meeting room). The suggested # of credit units is 2-4 depending how demanding matlab-assignment is done.