SUMMARY


These are a few examples of the chapter titles in this new book by Bernard Widrow and Samuel D. Stearns. The authors designed the book as a basic text on adaptive signal processing covering a wide range of subject matter.

A background in engineering and mathematics plus an ability to write and run computer programs is assumed.

Among its many features, the book:

· introduces the concept of adaptation as a property or characteristic of certain engineering systems
· describes a geometric "performance surface" for the analysis of all adaptive systems contains a statistical analysis of gradient estimation on the performance surface, and a comparison of search methods
· discusses the least mean squares (LMS) algorithm
· provides an introduction to adaptive algorithms and structures other than the LMS algorithm and the adaptive linear combiner, including a sequential regression algorithm and the adaptive lattice structure
· covers the major applications of adaptive signal processing
· introduces forward and inverse adaptive modeling, including applications to communications and control
· covers adaptive interference canceling
· introduces adaptive arrays and beamforming

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