Random Signals

Component
École Nationale Supérieure d'Électrotechnique d'Électronique d'Informatique d'Hydraulique et des Télécommunications

Presentation

Objectives

The objective of this course is to revisit concepts covered in the first year of EEEA concerning the processing of deterministic signals and to see how these concepts can be generalized to random signals (also called random processes). These generalizations make it possible to define the adapted filter (widely used in telecommunications) and the Wiener filter (used in image processing). Part of the course focuses on the study of nonlinear transformations of random signals and Poisson processes.

Description

Spectral analysis (autocorrelation and spectral density), filtering and sampling of random signals with a particular focus on the matched filter and the Wiener filter. Non-linear processing of random signals. Signals constructed using Poisson processes

Non-contractual information.
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