

## CHAPTER OVERVIEW

### 2: The Estimation of Mean and Covariances

In this brief second chapter, some results concerning asymptotic properties of the sample mean and the sample ACVF are collected. Throughout,  $(X_t: t \in \mathbb{Z})$  denotes a weakly stationary stochastic process with mean  $\mu$  and ACVF  $\gamma$ . In Section 1.2 it was shown that such a process is completely characterized by these two quantities. The mean  $\mu$  was estimated by the sample mean  $\bar{x}$ , and the ACVF  $\gamma$  by the sample ACVF  $\hat{\gamma}$  defined in (1.2.1). In the following, some properties of these estimators are discussed in more detail.

[2.1: Estimation of the Mean](#)

[2.2: Estimation of the Autocovariance Function](#)

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