

Part I

Preliminaries

This first part of the book provides four different sorts of background material as a prelude to our study of quantitative system performance.

In Chapter 1 we survey queueing network modelling, discussing some example applications and comparing it to more traditional approaches to computer system analysis with which the reader may be familiar.

In Chapter 2 we use case studies to explore various aspects of conducting a modelling study. Our objective is to provide some perspective on the “pieces” of the process that will be studied in the remainder of the book.

In Chapter 3 we provide a technical foundation for our work by defining a number of quantities of interest, introducing the notation that we will use in referring to these quantities, and deriving various relationships among these quantities.

In Chapter 4 we describe the inputs and the outputs of queueing network models.