

PART I

THE SINGLE SERVER QUEUE

The close connection between random walks and queueing problems became evident from the work of D. V. Lindley, W. L. Smith, and F. Spitzer more than twenty years ago. The dominant feature of this unexpected connection is the Wiener–Hopf factorization, which has led to considerable simplification of queueing theory. We present here an account of the theory using random walk concepts and Wiener–Hopf techniques.