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In Part I the authors restrict themselves to the study of random walks on finite networks, establishing the connection between the electrical concepts of current and voltage and corresponding descriptive quantities of random walks regarded as finite state Markov chains. Part II deals with the idea of random walks on infinite networks.

## Table of Contents

### Part I: Random Walks on Finite Networks

Random Walks in One Dimension Random Walks in Two Dimensions Random Walks on More General Networks Rayleigh's Monotonicity Law

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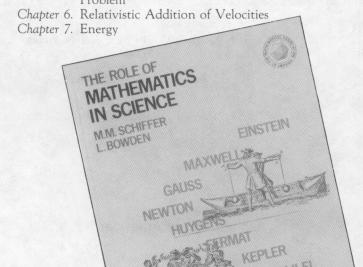
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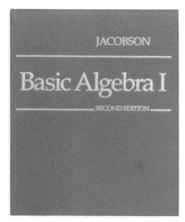
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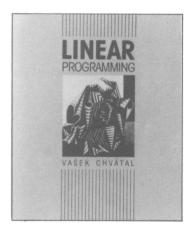
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