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the Linear Cable Equation for Branched Structures; 3.3.1 Exact Methods; 3.3.2 Compartmental Modeling; 3.4 Transfer Resistances; 3.4.1 General Definition; 3.4.2 An Example  
3.4.3 Properties of  $K_{ij}$ ; 3.4.4 Transfer Resistances in a Pyramidal Cell; 3.5 Measures of Synaptic Efficiency; 3.5.1 Electrotonic Distance; 3.5.2 Voltage Attenuation; 3.5.3 Charge Attenuation; 3.5.4 Graphical Morphoelectrotonic Transforms; 3.6 Signal Delays in Dendritic Trees; 3.6.1 Experimental Determination of  $T_m$ ; 3.6.2 Local and Propagation Delays in Dendritic Trees; 3.6.3 Dependence of Fast Synaptic Inputs on Cable Parameters; 3.7 Recapitulation; 4 Synaptic Input; 4.1 Neuronal and Synaptic Packing Densities; 4.2 Synaptic Transmission Is Stochastic  
4.2.1 Probability of Synaptic Release  
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5.1.7 Retinal Directional Selectivity and Synaptic Logic

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Sommario/riassunto

In this volume, Koch shows how individual nerve cells can multiply, integrate, or delay synaptic inputs, and how information is encoded in the voltage across the membrane, in the intracellular calcium concentration, or in the timing of individual spikes.

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