

to physical limits. This idea is made quantitative through information theory, which Bialek presents in tutorial fashion before exploring examples from such areas as embryogenesis, neural spike train encoding, bacterial growth, and animal learning.

Although *Biophysics* occasionally wanders into such well-trodden biophysical chemistry territory as alpha helices and hemoglobin cooperativity, the book makes no pretense of explaining biology and biochemistry. Even the 20 amino acids are not seen until halfway through the book. Experimental techniques are thinly described. This is not a book about the nuts and bolts. In fact many of the author's diagrams are so abstract or schematic that they bear little relation to the system's chemical or physical function or configuration as conventionally described. The physicist reader will not learn the language of biology. On the other hand, physicists who are seeking an exciting intellectual path through the complexity of biology will deeply appreciate Bialek's clear vision of the big ideas and his expert guidance through their many applications.

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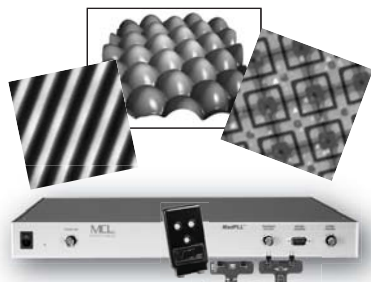
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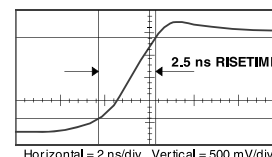
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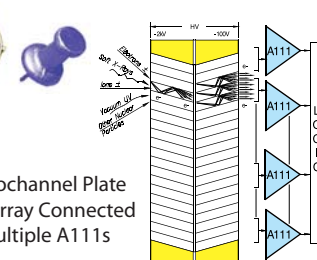
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