

Neurons In Action 2: Tutorials and Simulations using NEURON

By John W. Moore, Anne E. Stuart



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Neurons in Action 2 is the second version of a unique CD-ROM-based learning tool that combines hyperlinked text with NEURON simulations of laboratory experiments in neurophysiology. Version 2 features nine new tutorials introducing new channel types, single-channel simulations, and a redesigned interface. Neurons in Action s moving graphs provide insight into nerve function that is simply not possible with conventional, static text and figure presentations. Students discover how changing parameters such a neuronal geometry, ion concentrations, ion channel densities, and degree of myelination affects the generation of action potentials, synaptic potentials, and the spread or propagation of voltages within a neuron. For instructors, minimovies of NEURON simulations are provided for use in lectures.



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Editorial Review

Review

In this carefully designed book, John Moore and Ann Stuart demystify the basics of nerve function through a series of logical and well-written text-based tutorials with accompanying computer simulations... The computer-based format is ideal for professors and teaching assistants to use in the classroom. The inclusion of classic experimental papers on the CD also makes the experience somewhat of a history lesson as well... The entire simulation environment is contained on the CD, can be easily installed locally on a PC or Mac, and runs quickly using Mozilla Firefox... Overall, Moore and Stuart certainly have created a highly recommendable method for learning and teaching neurophysiology. Readers can now, from the comfort of their own homes, finally vanquish those former physiology demons in a fun and interactive manner and learn a bit of history, too. --Arjun V. Masurkar, Yale Journal of Biology and Medicine

About the Author

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John Solorio:

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