



The NEURON Book

**Nicholas T. Carnevale
and Michael L. Hines**

CAMBRIDGE

**Carnevale
and Hines**

The NEURON Book

NICHOLAS T. CARNEVALE is Senior Research Scientist in the Department of Psychology at Yale University. He also directs the NEURON courses at the annual meetings of the Society of Neuroscience and the NEURON Summer Courses at the University of California, San Diego and University of Minnesota, Minneapolis.

MICHAEL L. HINES is Research Scientist in the Department of Computer Science at Yale University. His work is embodied in a program, NEURON, which enjoys wide use in the experimental and computational neuroscience community.

The authoritative reference on NEURON, the modeling system for the study of biological neurons and neural networks, this guide will show you how to use the NEURON simulation environment to construct and apply empirically-based models. Assuming no previous knowledge of computer programming or numerical methods *The NEURON Book* provides practical advice on how to get the most out of the NEURON program. Written primarily for neuroscientists, teachers, and students; readers with a background in the physical sciences or mathematics and who have some knowledge about brain cells and circuits, and an interest in computational modeling will also find it helpful. Covering details of NEURON's inner workings, to practical considerations involved in specifying the anatomical and biophysical properties to be represented in models, this book uses a problem-solving approach, with many working examples that readers can try for themselves.

CAMBRIDGE
UNIVERSITY PRESS
www.cambridge.org

ISBN 0-521-84321-9



9 780521 843218

CAMBRIDGE