

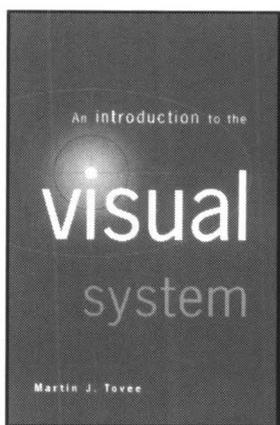
Cambridge: A Vision of Scientific Excellence

An Introduction to the Visual System

Martin J. Tovee

In recent years there has been a host of new advances in our understanding of how we see. This text provides a current, well-balanced account of the workings of the visual system, addressing such topics as image formation, visual development and object recognition.

1996 216 pp.
48290-9 Hardback \$59.95
48339-5 Paperback \$22.95



The Eye and Visual Optical Instruments

George Smith and David A. Atchison

A wide variety of optical instruments exists in which the human eye forms an integral part of the system. This book provides a detailed description of the visual ergonomics of such instruments. There are separate sections devoted to ophthalmic instruments and aberration theory.

1996 700 pp. 47252-0 Hardback \$130.00
47820-0 Paperback \$54.95

Ion Channels

Molecules in Action

David J. Aidley and Peter R. Stanfield

Ion channels are crucial components of living cells. This overview of ion channel study includes up-to-date coverage of the permeability and selectivity of channels, their gating and modulation, their response to drugs and toxins, and the human diseases that result from channel malfunction.

1996 319 pp. 49531-8 Hardback \$74.95
49882-1 Paperback \$29.95

Language, Learning, and Behavior Disorders

Developmental, Biological, and Clinical Perspectives

Joseph H. Beitchman, Nancy J. Cohen, M. Mary Konstantareas, and Rosemary Tannock, Editors

Language as a connecting bridge between learning disability and psychiatric disorder is the unifying theme of this wide-ranging book. Particular prominence is given to attention deficit hyperactivity disorder, dyslexia, and autistic disorder. Explanations for the comorbidity of psychiatric and language disorder are sought in developmental, cognitive and biological fields, and implications for etiology, treatment and rehabilitation are explored.

1996 616 pp. 47229-6 Hardback \$120.00

Perception as Bayesian Inference

David C. Knill and Whitman Richards, Editors

The book describes an exciting new paradigm for building and testing theories of human visual perception based on Bayesian probability theory. Leading researchers in computer vision and experimental vision science describe theoretical frameworks for modeling vision, applications to specific problems, and implications for experimental studies of human perception. All chapters draw on insights from experimental and computational work. Commentaries by the contributors on each others' work provide a dialogue among the different perspectives.

1996 527 pp. 46109-X Hardback \$69.95

Colour

Art and Science

Trevor Lamb and Janine Bourriau, Editors

To answer our questions on the nature of color, eight experts from different fields of study provide their views. From the humanities, we read about color in art (David Bomford and Bridget Riley), in culture and language (John Gage and John Lyons). On the scientific side, we learn what color means to the physicist (Malcolm Longair), the psychologist (John Mollon), the physiologist (Denis Baylor), and the naturalist (Peter Parks). Written in nontechnical language, this book is a unique blending of fine arts with hard science concerning a subject that affects us all. Readers from both sides of the spectrum should enjoy this accessible and rewarding account.

"Colour: Art and Science tells the story of colour wonderfully well. I cannot recommend this beautifully produced and eclectic book too highly."

—Michael J. Morgan, *Nature*

"...jam-packed with fascinating information...."

—Choice

The Darwin College Lectures

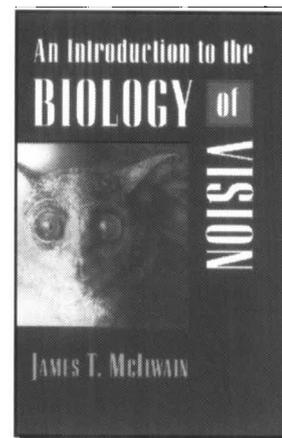
1995 243 pp. 49645-4 Hardback \$60.00
49963-1 Paperback \$24.95

An Introduction to the Biology of Vision

James T. McIlwain

This text's main goals are to provide undergraduates with a working vocabulary and knowledge of the biology of vision and to acquaint students with the major themes in biological vision research. It is ideal for use in a course for undergraduates in biology, neuroscience, or psychology.

1996 256 pp. 49548-2 Hardback \$64.95
49890-2 Paperback \$24.95



Available in
bookstores or from

CAMBRIDGE
UNIVERSITY PRESS

40 West 20th Street, New York, NY 10011-4211
Call toll-free 800-872-7423. Web site: <http://www.cup.org>
MasterCard/VISA accepted. Prices subject to change.

V I S U A L N E U R O S C I E N C E

DETAILED INFORMATION FOR CONTRIBUTORS

AIMS AND SCOPE. *Visual Neuroscience* publishes papers based on original experimental or theoretical work concerned explicitly with the biological substrates of vision, including the neural mechanisms involved in visually guided behavior and perception. Studies based exclusively on clinical, psychophysical, or behavioral methods will be considered if they are related to issues of neural mechanisms. The journal features full-length research reports and review articles as well as short communications.

ORIGINALITY AND COPYRIGHT. To be considered for publication in *Visual Neuroscience* a manuscript cannot have been published previously, nor can it be under review for publication elsewhere. Papers with multiple authors are reviewed with the assumption that all authors have approved the submitted manuscript and concur in its submission to *Visual Neuroscience*. A Transfer of Copyright Agreement must be executed before an article can be published. Government authors whose articles were created in the course of their employment must so certify in lieu of copyright transfer. Authors are responsible for obtaining written permission from the copyright owners to reprint any previously published material included in their article.

MANUSCRIPT SUBMISSION AND REVIEW. An original and three high quality photocopies should be submitted to:

Peter D. Spear, Editor
Visual Neuroscience
University of Colorado at Boulder
Old Main 1-43, Campus Box 275
Boulder, CO 80309-0275, USA.

In addition, one high quality manuscript should be sent to an Associate Editor (see inside front cover). Subsequent correspondence should refer to the Manuscript Reference Number, which will appear on the Acknowledgment Card sent to the corresponding author. Each manuscript will normally be reviewed by at least two referees with relevant scientific experience. Authors may suggest appropriate reviewers, but final selection of referees will be made by the Editor. Reviewers are asked to evaluate manuscripts for their scientific merit and clarity of presentation and to voice any concerns related to the welfare of animal and human subjects. Every effort will be made to notify authors of the reviewers' recommendations within six weeks of receipt of a manuscript.

MANUSCRIPT LENGTH AND EXCESS PAGE CHARGES. Due to space limitations, concisely written papers are more likely to receive favorable review than those judged to be excessively long. Page charges are not levied for articles occupying fewer than 12 printed pages (i.e. double-spaced manuscripts of approximately 40 pages or less, using standard, uniformly spaced typefaces, and including figures), but authors will be asked to pay \$100 for each printed page beyond 12. Editorial review and publication of a paper are not contingent upon the payment of page charges.

Manuscripts submitted as Short Communications should normally occupy no more than 4 printed pages, figures included (approximately 13 manuscript pages).

MANUSCRIPT PREPARATION AND STYLE. Manuscripts must be in English and typed double-spaced on one side only of 8½ × 11" or A4 size good quality paper. Allow margins of at least 1" (20 mm); use a 5-space paragraph indent; do not hyphenate words at the end of lines and do not justify right margins. Minor corrections to the manuscript may be typed or neatly printed in ink; retyping is required for significant changes. Numbers should be spelled out when they occur at the beginning of a sentence; use Arabic numerals elsewhere. Abbreviations should be used sparingly and nonstandard abbreviations should be defined at their first occurrence. Metric system (SI) units should be used. Manuscripts that do not conform to the style of *Visual Neuroscience* will be

returned without review. Authors of accepted manuscripts will be requested to provide the final text both as hard copy and on diskette. The diskette should be formatted in Word or WordPerfect for Macintosh or IBM compatible computers.

MANUSCRIPT ELEMENTS AND ORDER. Unless there are obvious and compelling reasons for variation (e.g. review articles, short communications), manuscripts should be organized as follows:

Title page. This is page 1. The title should be concise, informative, and free of abbreviations, chemical formulae, technical jargon, and esoteric terms. This page should include (a) the article's full title, (b) names and affiliations of all authors, (c) the name, mailing address, and telephone number of the corresponding author, (d) the address for reprint requests if different from that of the corresponding author, (e) a short title of 50 characters or less, and (f) a list of the number of manuscript pages, number of tables, and number of figures.

Abstract and keywords page. This is page 2 and should include (a) the article's full title, (b) an abstract of no more than 300 words, and (c) up to 5 keywords or phrases that reflect the content and major thrust of the article. The abstract should give a succinct account of the objective, methods, results, and significance of the research.

Introduction. This section begins on page 3 and should clearly state the objective of the research in the context of previous work bearing directly on the subject. An extensive review of the literature is not usually appropriate.

Methods. This section should be brief but provide sufficient information to permit others to replicate the study. Pertinent details of species, apparatus and equipment, procedures and experimental design should be described.

All experiments involving human subjects must be conducted in accordance with principles embodied in the Declaration of Helsinki (Code of Ethics of the World Medical Association). Experiments involving animal subjects must conform to the principles regarding the care and use of animals adopted by the American Physiological Society and the Society for Neuroscience. The editor may refuse papers that provide insufficient evidence of adherence to these principles.

Results. The results should be presented clearly and concisely, using figures and tables to summarize or illustrate the important findings. Quantitative observations are often more effectively displayed in graphs than in tables.

Discussion. The discussion should summarize the major findings and explain their significance in terms of the study's objectives and relationship to previous, relevant work. This section should present compact, clearly developed arguments rather than wide-ranging speculation or uncritical collation of earlier reports.

Acknowledgments. Use a separate page to recognize the contributions of individuals and supporting institutions.

References. *Visual Neuroscience* uses the author-date reference style of the *Journal of Physiology*. In the text, references should be cited as follows:

as shown by Herrick (1948)
(Gordon et al., 1973)
(Buhl & Peichl, 1986; Gordon et al., 1987)

The alphabetical list of references begins a new page, and must be typed double-spaced. Each in-text citation must have a corresponding reference and vice versa. List works by different authors who are cited within the same parentheses in chronological order, beginning with the earlier work. Journal titles should not be abbreviated. Only published articles and articles in press should appear in this list. Responsibility for the accuracy of references cited lies with the authors. Brief examples:

Journal article

Buhl, E.H. & Peichl, L. (1986). Morphology of rabbit retinal ganglion cells projecting to the medial terminal nucleus of the accessory optic system. *Journal of Comparative Neurology*, *253*, 163-174.

Book

Herrick, C.J. (1948). *The Brain of the Tiger Salamander*. Chicago: University of Chicago Press.

Chapter in an edited book

Bonds, A.B. & DeBruyn, E.J. (1986). Inhibition and spatial selectivity in the visual cortex: The cooperative neuronal network revisited. In *Models of Visual Cortex*, ed. Rose, D. & Dobson, V.G., pp. 292-300. Chichester, England: John Wiley & Sons.

For more than one work by the same author(s) published in the same year, use (Jones, 1986a,b) in text and likewise in the reference section.

Tables. Tables should be numbered consecutively with Arabic numerals and each should be typed double-spaced on a separate sheet. All tables are to be grouped together after the references. A short explanatory title and column headings should make the table intelligible without reference to the text. All tables must be cited and their approximate positions indicated in the text.

Figures and legends. The number of figures should be the minimum necessary to make the essential points of the paper. Figures should be supplied no larger than 8 × 10" (approx. 200 × 250 mm) and must be camera-ready. Photographs for halftone reproduction must be on white glossy paper. Figures should be composed to occupy a single column (8.3 cm) or two columns (17 cm) after reduction. Diagrams and illustrations must have a professional appearance and be typed or drawn with sharp, black lettering to permit reduction. To assure legibility, letters, numbers, and symbols on figures should have a minimum height of 1 mm when reduced. Photomicrographs must include a calibration bar; if symbols are used on micrographs, they must contrast sufficiently with the background to be clearly visible when printed. Photocopies of micrographs are not acceptable for review purposes.

Artwork should normally be in black and white; if authors have color figures, the publisher will provide a price quotation for the additional production costs. All figures must be identified on the back with the short title of the paper, figure number, and figure orientation (top or bottom). Preferably, figures should be mounted on heavy sheets of the same size as the manuscript. Four complete sets of figures should be carefully packaged in protective envelopes, one to accompany each copy of the manuscript. Each figure must be cited and its approximate position clearly indicated within the text.

Figures must be numbered consecutively with Arabic numerals and be accompanied by a descriptive caption typed double-spaced on a separate sheet. The captions, collected at the end of the manuscript, should concisely describe the figure and identify any symbols and/or calibration bars.

COPYEDITING AND PAGE PROOFS. The publisher reserves the right to copyedit manuscripts to conform to the style of *Visual Neuroscience*. The corresponding author will receive page proofs for final proofreading. No rewriting of the final accepted manuscript is permitted at the proof stage, and substantial changes may be charged to the authors.

OFFPRINTS. The corresponding author will receive 25 free article offprints. A form will accompany the page proofs allowing orders for complete copies of the issue and for the purchase of additional offprints. Offprint requirements of all coauthors should be included on this form. Orders received after issue printing will be subject to a 50% reprint surcharge. For airmail delivery, add 25% to the total cost.

V I S U A L N E U R O S C I E N C E

Volume 14

May/June 1997

Number 3

CONTENTS

Research Articles

- HUGH R. WILSON 403 A neural model of foveal light adaptation and afterimage formation
- T.C. NAG AND S. WADHWA 425 Expression of GABA in the fetal, postnatal, and adult human retinas: An immunohistochemical study
- T. FITZGIBBON 433 The human fetal retinal nerve fiber layer and optic nerve head: A DiI and DiA tracing study
- PATRICIA A. FLEMING, ALISON M. HARMAN, AND LYN D. BEAZLEY 449 Changing topography of the RPE resulting from experimentally induced rapid eye growth
- PETER F. HITCHCOCK 463 Tracer coupling among regenerated amacrine cells in the retina of the goldfish
- LAYNE L. WRIGHT, COLIN L. MACQUEEN, GUY N. ELSTON, HEATHER M. YOUNG, DAVID V. POW, AND DAVID I. VANEY 473 The DAPI-3 amacrine cells of the rabbit retina
- SIBYLLE OHNGEMACH, GABI HAGEL, AND FRANK SCHAEFFEL 493 Concentrations of biogenic amines in fundal layers in chickens with normal visual experience, deprivation, and after reserpine application
- DONNA K. STAFFORD AND DENNIS M. DACEY 507 Physiology of the A1 amacrine: A spiking, axon-bearing interneuron of the macaque monkey retina
- RUTH R. BENNETT, RICHARD H. WHITE, AND JEFFREY MEADOWS 523 Regional specialization in the eye of the sphingid moth *Manduca sexta*: Blue sensitivity of the ventral retina
- WOLFGANG SKRANDIES 527 Depth perception and evoked brain activity: The influence of horizontal disparity and visual field location
- DONALD C. HOOD, WILLIAM SEIPLE, KAREN HOLOPIGIAN, AND VIVIENNE GREENSTEIN 533 A comparison of the components of the multifocal and full-field ERGs
- J. NGUYEN-LEGROS, A. SIMON, I. CAILLÉ, AND B. BLOCH 545 Immunocytochemical localization of dopamine D₁ receptors in the retina of mammals
- JIAN ZHANG, CHANG-SUB JUNG, AND MALCOLM M. SLAUGHTER 553 Serial inhibitory synapses in retina
- STEWART A. BLOOMFIELD, DAIYAN XIN, AND TRISTAN OSBORNE 565 Light-induced modulation of coupling between AII amacrine cells in the rabbit retina
- JONATHAN D. VICTOR, MARY M. CONTE, AND KEITH P. PURPURA 577 Dynamic shifts of the contrast-response function
- DONALD M. ALLEN AND TED E. HALLOWS 589 Solar pruning of retinal rods in albino rainbow trout
- ANN H. MILAM, DANIEL E. POSSIN, JING HUANG, ROBERT N. FARISS, JOHN G. FLANNERY, AND JOHN C. SAARI 601 Characterization of aldehyde dehydrogenase-positive amacrine cells restricted in distribution to the dorsal retina

CAMBRIDGE
UNIVERSITY PRESS



0952-5238(199705)14:3;1-6