## CAMBRIDGE – The Future of Visu and Related Topics The Future of Visual Neuroscience

## New edition...

## **Photosensitive Epilepsy**

Second Edition

## Graham F.A. Harding and Peter M. Jeavons

Thoroughly updated to form the most comprehensive review of knowledge on photosensitive epilepsy in humans. It includes details of many recent studies including drug therapy and the genetics of photosensitivity and also looks at the long term prognosis for the condition.

**Clinics in Developmental Medicine 133** 1995 192 pp. 1898-68302-6 Hardback \$59.95

## **Management of Visual Impairment in** Childhood

## Alistair Fielder, Anthony Best, and Martin Bax, Editors

A practical guide to the day-to-day management of children with the difficult problem of visual impairment. It includes the epidemiology of childhood blindness, prevention, and the effects of impairment on development and behavior.

Clinics in Developmental Medicine 128						
1994	223 pp.	45150-7	Hardback	\$64.95		

## **Parallel Computing**

**Principles and Practice** 

## T.J. Fountain

Sets out the principles of parallel computing, explaining why, where, and how parallel computing is used. It is unique in its coverage of both conventional and neural computing and also covers such topics as the fundamental paradigms employed in the field.

1995 360 pp. 45131-0 Hardback \$39.95

## New edition...

## **Scientific Style and Format**

The CBE Manual for Authors, Editors, and Publishers Sixth Edition

## Edward J. Huth

"There is no other book like this for the scientific and technological community. It should be the major desk reference for anyone writing a scientific article or book....Highly recommended."

-Booklist/Reference Books Bulletin

782 pp.

1994

47154-0 Hardback \$34.95

## Available in bookstores or from



## Neural Activity and the Growth of the Brain **Dale Purves**

Explores the hypothesis that neural activity generated by experience modulates the ongoing growth of the brain during maturation, thus sculpting a unique brain anatomy in each of us according to experience in early life.

Photosensitive Epilepsy New Edition

#### Lezioni Lincee Lectures

1994	116 pp.	45496-4	Hardback	\$37.95
		45570-7	Paperback	\$15.95

## **Brain Control of Responses to Trauma**

## Nancy J. Rothwell and Frank Berkenbosch, Editors

Looks in depth at the way the brain responds to trauma and subsequently integrates and influences behavioral, metabolic, neurohumoral, cardiovascular, and immune functions. 1994 352 pp. 41939-5 Hardback \$79.95

## **Blindness and Children**

An Individual Differences Approach

## David H. Warren

Concludes that many aspects of delayed development are not the result of visual impairment itself, but rather of environmental variables that tend to accompany it.

			1 /	
1994	400 pp.	45109-4	Hardback	\$59.95
		45719-X	Paperback	\$22.95

## **Color and Color Perception David Hilbert**

Defends a form of objectivism that identifies color with a physical property of surfaces-their spectral reflectance. This analysis of color is shown to provide a more adequate account of human color vision than its subjectivist rivals. CSLI Lecture Notes

141 pp. 0-937073-16-4 Paperback 1987

## 40 West 20th Street, New York, NY 10011-4211 Call toll-free 800-872-7423. MasterCard/VISA accepted. Prices subject to change.

\$11.95

# V I S U A L <u>NEUROSCIENCE</u>

#### **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 only if they speak directly 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:

James T. McIlwain, Editor Visual Neuroscience Brown University, Box G-M416 Providence, RI 02912, USA

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  $8\frac{1}{2} \times 11^{"}$  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 occurence. Metric system (S1) units should be used. Manu

scripts that do not conform to the style of *Visual Neuros*cience will be returned without review. Authors of accepted manuscripts will be requested to provide the final text both as hard copy and on diskette.

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. <u>Journal of Comparative Neurology</u>, 253, 163-174.

#### Book

Herrick, C.J. (1948). <u>The Brain of the Tiger Salamander</u>. 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 <u>Models of Visual Cortex</u>, 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, 1986<u>a</u>, 1986<u>b</u>) 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  $8 \times 10^{\circ}$  (approx. 200  $\times$  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.

## V I S U A L NEUROSCIENCE

Volume 13

March/April 1996

Number 2

#### CONTENTS

S. Murray Sherman	205	<b>Review Article</b> Dual response modes in lateral geniculate neurons: Mechanisms and functions
Ranjana Srivastava, Daniel Lau, and Timothy H. Goldsmith	215	<b>Research Articles</b> Formation and storage of ll- <i>cis</i> retinol in the eyes of lobster ( <i>Homarus</i> ) and crayfish ( <i>Procambarus</i> )
STEWART H.C. HENDRY AND KAREN L. MILLER	223	Selective expression and rapid regulation of GABA <sub>A</sub> receptor subunits in geniculocortical neurons of macaque dorsal lateral geniculate nucleus
YI ZHANG, RICHARD D. MOONEY, CAROL A. BENNETT-CLARKE, AND ROBERT W. RHOADES	237	Effects of neurotensin on visual neurons in the superficial laminae of the hamster's superior colliculus
E.R. LOEW, V.I. GOVARDOVSKII, P. RÖHLICH, AND Á. SZÉL	247	Microspectrophotometric and immunocytochemical identification of ultraviolet photoreceptors in geckos
Cornelia A. Hofstee and Doekele G. Stavenga	257	Calcium homeostasis in photoreceptor cells of <i>Drosophila</i> mutants <i>inaC</i> and <i>trp</i> studied with the pupil mechanism
MITCHELL BRIGELL, ANTONIO STRAFELLA, Lucio Parmeggiani, Paul J. DeMarco, Jr., and Gastone G. Celesia	265	The effects of luminance and chromatic background flicker on the human visual evoked potential
LAURENCE R. HARRIS AND LORI A. LOTT	277	Sensitivity to full-field visual movement compatible with head rotation: Variations with eye-in-head position
Hermes H. Yeh, Elena V. Grigorenko, and Margaret L. Veruki	283	Correlation between a bicuculline-resistant response to GABA and GABA <sub>A</sub> receptor $\rho$ 1 subunit expression in single rat retinal bipolar cells
Michael McAvoy, Martin A. Smith, and Joanne T. Fujii	293	Agrin mRNA expression in the developing chick Edinger-Westphal nucleus
FRANKLIN R. AMTHOR, Norberto M. Grzywacz, and David K. Merwine	303	Extra receptive field motion facilitation in on-off directionally selective ganglion cells of the rabbit retina
Salvador Borges, Evanna Gleason, Matthew Frerking, and Martin Wilson	311	Neurotensin induces calcium oscillations in cultured amacrine cells
Donald G. Puro, Joseph P. Yuan, and Nikolaus J. Sucher	319	Activation of NMDA receptor-channels in human retinal Müller glial cells inhibits inward-rectifying potassium currents
Gigliola Fontanesi, Rosita Siciliano, Vittorio Porciatti, and Paola Bagnoli	327	Cysteamine-induced depletion of somatostatinergic systems alters potentials evoked from the rat visual cortex
Heath D. Wilder, Ulrike Grünert, Barry B. Lee, and Paul R. Martin	335	Topography of ganglion cells and photoreceptors in the retina of a New World monkey: The marmoset <i>Callithrix jacchus</i>
MICHAEL R. CHASE, RUTH R. BENNETT, AND RICHARD H. WHITE	353	Expression of opsin mRNA in normal and vitamin A deficient retinas of the sphingid moth <i>Manduca sexta</i>
SONAL JHAVERI, REHA S. ERZURUMLU, AND GERALD E. SCHNEIDER	359	The optic tract in embryonic hamsters: Fasciculation, defasciculation, and other rearrangements of retinal axons
Alexander F. Rosenberg and Michael Ariel	375	A model for optokinetic eye movements in turtles that incorporates properties of retinal-slip neurons
S. Squatrito and M.G. Maioli	385	Gaze field properties of eye position neurones in areas MST and 7a of the macaque monkey



CAMBRIDGE

UNIVERSITY PRESS