



ICVS Officers

John D. Mollon, DSc, FRS
President

John S. Werner, PhD
General secretary

Neil Parry, PhD
Treasurer

Board of Directors

Rigmor Baraas, PhD

Steven L. Buck, PhD

David H. Foster, PhD, DSc

Paul R. Martin, PhD

Yoko Mizokami, PhD

Sérgio Nascimento, PhD

Maureen Neitz, PhD

Thanasis Panorgias, PhD

Arthur Shapiro, PhD

Hannah Smithson, PhD

Michael Webster, PhD

ICVS 2022 Symposium

After a one-year postponement, we are pleased to announce a call for abstracts for the 26th Symposium of the International Colour Vision Society (www.icvs2022.org). The meeting will take place in Heraklion, Greece, from July 1st to July 5th, 2022. The conference will offer invited talks, oral and poster presentations, and social and cultural events to promote networking. At the moment, we are concentrating our efforts on an in-person event. However, we are closely monitoring the impact of the COVID-19 pandemic, and we will make any necessary adjustments if needed.



In the upcoming meeting, the Society will honor Professor Paul Martin (University of Sydney, Australia) with the Verriest Medal for his work on early visual processing in primates. We are also pleased to announce a line-

Contents

ICVS 2022 - Crete	1	<i>JOSA A</i> Feature Issue 2023	3
Membership Renewal	3	Recent Books on Colour	4
Obituary for Anthony Adams	6	Pantone Color of the Year	7

ICVS 2022 – Crete (Friday, 1 July – Tuesday, 5 July)



up of distinguished Invited Speakers that includes Professor Karl Gegenfurtner (Giessen University, Germany), Dr. Stella Katsarou (Hellenic Ministry of Culture, Greece), and Dr. Sophia Sotiropoulou (Foundation for Research and Technology – Hellas, Greece)

The International Colour Vision Society meetings bring together physiologists, psychologists, physicists, geneticists, optometrists, ophthalmologists, and visual scientists who have a research interest in the many aspects of colour vision and colour vision deficiencies.

We invite you to submit an abstract in any of the following topics: Acquired deficiencies of colour vision, chromatic mechanisms, colour cognition, colour in occupational environments, colour induction and constancy, colour in mesopic conditions, colour naming, colour vision assessment, comparative colour vision, congenital colour vision deficiencies, digital reproduction of colour information, ecology of colour vision, effects of aging on colour vision, electrophysiology of colour processing, functional imaging and colour vision, genetics of colour vision, object-surface properties, material perception, peripheral colour vision, physiology of colour vision, unique hues, variability in colour vision. Other topics of interest to the Society are, of course, welcome.

Abstract submission opened on January 10th, 2022, and will remain open until March 15th, 2022. Acceptance notifications will be sent on April 15th, 2022.

Early-bird registration will be available from January 10th until May 1st, 2022. Late registration will be open until June 1st, 2022. Apart from access to the scientific program, the registration fee includes a social program.

We will also offer a social program for accompanying persons for the five days of the conference.

Early-bird regular registration: \$530 (+\$60 after May 1st)

Early-bird student registration: \$430 (+\$60 after May 1st)

Early-bird accompanying person registration: \$440 (+\$60 after May 1st, 2022)

Refund Policy

Refunds requested: before May 1st, 2022: Full refund minus 5% PayPal administration fee; between May 2nd and June 1st, 2022: 50% refund; after June 1st, 2022: No refund

If, due to circumstances beyond our control, the organizers have to cancel the conference, a 100% refund will be issued to all registered participants.

The conference's website (www.icvs2022.org) is updated regularly and offers information about invited speakers, travel, hotel accommodation, etc.

On behalf of the Organizing Committee,
Thanasis Panorgias, PhD

Organizing Committee

Maria Makridaki, Ph.D., Foundation for Research and Technology Hellas, GR

Dimitris Mylonas, Ph.D., University College London & Goldsmiths, University of London, UK

Thanasis Panorgias, Ph.D., New England College of Optometry, USA

Neil Parry, Ph.D., Manchester Royal Eye Hospital, University of Manchester, UK

Sotiris Plainis, Ph.D., University of Crete, GR

John S. Werner, Ph.D., University of California Davis, USA

Scientific Committee

Claudia Feitosa-Santana, Ph.D., Neuroscience for Human Development, Brazil

Jasna Martinovic, Ph.D., University of Aberdeen, UK

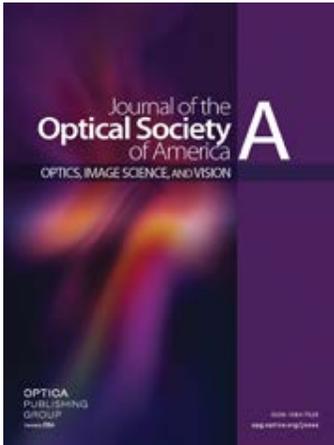
Maureen Neitz, Ph.D., University of Washington, USA

Thanasis Panorgias, Ph.D., New England College of Optometry, USA

Miltiadis Tsilibaris, MD, University of Crete, Greece

Michael Webster, Ph.D., University of Nevada Reno, US

JOSA A Feature Issue: Color 2023



This feature issue will span basic-science and applied approaches to the study of color vision, including perception and psychophysics, physiology and anatomy, functional imaging, genetics, and color-vision deficiencies. The issue is intended to attract submissions based on presentations at the 2022

Symposium of the International Colour Vision Society (ICVS) to be held in Crete, Greece 1-5 July 2022 (<https://www.icvs2022.org/>). While meeting participants are particularly encouraged to submit their work, the feature is open to all researchers in related areas.

All papers need to present original, previously unpublished work, and will be subject to the normal standards and peer-review process of the journal. To be eligible for publication, papers need to be expanded,

revised and/or refined to add value to the original conference summary. See Optica Publishing Group's policy on expanded conference papers [here](#).

Manuscripts must be prepared according to the usual [guidelines for submission to JOSA A](#) and must be submitted through the [Prism submission system](#). When submitting, authors should specify that the manuscript is for the "Color Vision 2023" feature issue (choose from the drop-down menu). Submissions will be open from 1 August 2022 until 1 October 2022.

Feature Issue Editors

John S. Werner, *University of California-Davis, USA*
(Lead Editor)

Jenny Bosten, *University of Sussex, UK*

David Brainard, *University of Pennsylvania, USA*

Marina Danilova, *Russian Academy of Sciences, Russia*

Anya Hurlbert, *Newcastle University, UK*

Thanasis Panorgias, *New England College of Optometry, UK*

Neil Parry, *Manchester Royal Eye Hospital, UK*

Time to Renew Your Membership

As 2021 drew to a close, all ICVS memberships expired. Honorary memberships have automatically been renewed. I've re-opened the membership page on the website (<https://www.icvs.info/index.php/membership>) and look forward to seeing your forms flood in. The Directorial Board decided to keep the rates as they are:

Regular membership: €150

Students: €32

Retired members: €32

Your new membership will run from 1/1/22 to 31/12/24. We are keeping the same guidelines for student membership so that it includes recent post-docs. If you received your doctorate during the last membership cycle, then you get one more go at the student rates. Because we extended the last cycle to 3 years, this means that anyone who received their doctorate on or after 1/1/19 is entitled to student membership.

Wishing you all the best for 2022.

Neil Parry, Treasurer

Recent Books on Colour

The World According to Colour: A Cultural History

James Fox

Allen Lane, 2021.

Reviewed by John Mollon

This new work by the art historian James Fox competes in a crowded field – the field of collections of anecdotes and observations that are organised according to a palette of colours. The sub-genre includes Derek Jarman's *Chroma* (1994), Alexander Theroux's *Primary Colours* (1994), Victoria Finlay's *Color: A Natural History of the Palette* (2002) and Kassia St Clair's *Secret Lives of Colours* (2016). Yet, by his scholarship, his elegant style and his discerning eye, Fox creates a fresh and attractive work. His chosen palette is: Black; Red; Yellow; Blue; White; Purple; Green. His chapters proceed in that order after an Introduction inspired by the seven pavilions built by the Persian prince Bahrām Gûr for his seven brides, as recounted in Ganjavî's 12th century masterpiece *Seven Beauties*.

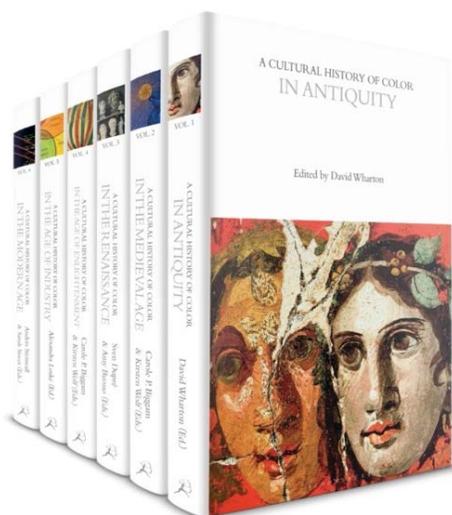
Fox gets off to a bad start. In the Preface, describing how, as a boy of twelve, he discovered pressure phosphenes, he writes: "I later learned that these mysterious forms were called phosphenes – tiny photons of light emitted by cells in the retina." But, on the whole, there is not too much in the book that will irritate members of ICVS. The reader is spared 'red', 'green' and 'blue' cones, although cones do 'fire' and although we are given the tired mid-C20 story of red-green and yellow-blue post-receptoral processes.

In each chapter, Fox embroiders an engaging tapestry of art, perceptual theory, etymology, science, world history, cultural symbolism and literature. Take black, the colour favoured by Bahrām's raven-haired bride from India. Fox begins in the primaeva darkness with which so many creation-myths begin and continues on to modern cosmology, telling us that it 'took 380,000 years for the universe to slacken enough for the first photons to escape'. Thence we pass onwards to the dualism of light and dark; the origins of scotophobia; the paradoxical etymology of 'black' (its Proto-Indo-European root meant 'gleam' or 'shine'); the substitution by the early Church Fathers of black for red as the colour of sin and evil; the visual science of black and the Gelb experiment; Shakespeare's colour vocabulary ('his soul may be damn'd and black', *Hamlet*; 'hell-black night', *King Lear*); Stroop tests; and the symbolism of films (although there's no mention of the reversal of the symbolism in Eisenstein's version of the Battle of the Ice). Turning to art, Fox covers the manufacture of ink and the inkwash painting of Sesshū Tōyō. He goes on to describe Manet's bewitching portrait of Berthe Baudelaire (right) as 'an object lesson in black's infinite versatility ... it is used wet and thick to simulate velvet, fur and satin, and dry and thin to evoke the crisp edge of the taffeta bundle, mixed with brown and white, to represent the fabrics in the light, and with synthetic ultramarine to depict them in the shadows. It acts as an outline, and as the calligraphic residue of the artist's gestures. It frames and sets off the delicate flesh tones of Morisot's face, is used, in tiny, almost invisible, quantities to modulate skin, eyes and background..

With similar richness, James Fox works through his palette. A section of the chapter on White is given over to a sensitively handled discussion of 'white' and 'black' as racial terms. The chapter on Green offers a comprehensive list of the dates of foundation of Green Parties in different countries.

Sources are identified throughout in extensive back notes. There's a useful index and a fairly generous set of colour plates. In his introduction Fox says that he thinks of the book as 'a history of the world, according to colour'. That is over-ambitious. It's a pastiche. But it's a scholarly pastiche. And the borrowed feathers are artfully arranged in a masterly composition. For a colour scientist by the fireside on a winter's night, seeking respite from line-elements and SNPs, it's just the thing to animate the grey matter.





A Cultural History of Color (6 Volumes)
Carole P. Biggam and Kirsten Wolf (Anthology Editors)

Bloomsbury Publishing
11 Feb.2021 | ISBN 9781474273732

From the Publisher: *A Cultural History of Color* presents a history of 5000 years of color in western culture. The first systematic and comprehensive history, the work examines how color has been perceived, developed, produced and traded, and how it has been used in all aspects of performance - from the political to the religious to the artistic - and how it shapes all we see, from food and nature to interiors and architecture, to objects and art, to fashion and adornment, to the color of the naked human body, and to the way our minds work and our languages are created.

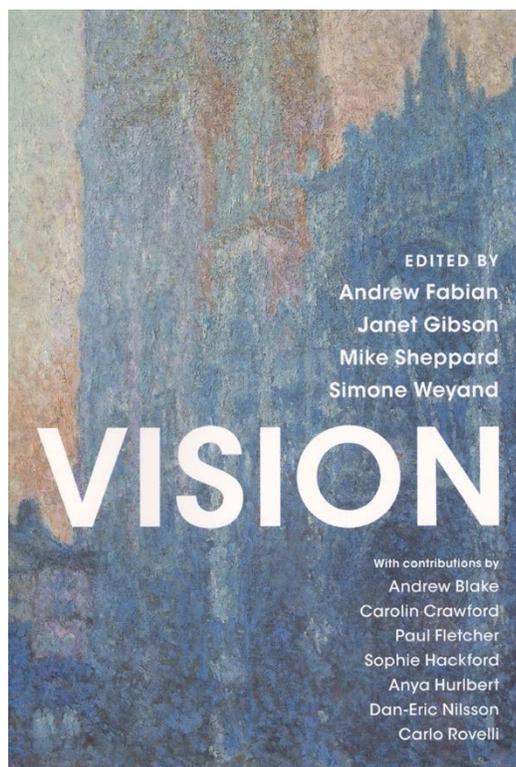
Chapter titles are identical across each of the volumes. This gives the choice of reading about a specific period in one of the volumes, or following a theme across history by reading the relevant chapter in each of the six. The themes (and chapter titles) are: Color Philosophy and Science; Color Technology and Trade; Power and Identity; Religion and Ritual; Body and Clothing; Language and Psychology; Literature and the Performing Arts; Art; Architecture and Interiors; Artefacts.

The six volumes cover: 1 – Antiquity (3,000 BCE to 500 CE); 2 – Medieval Age (500 to 1400); 3 – Renaissance (1400 to 1650); 4 – Age of Enlightenment (1650 to 1800); 5 – Age of Industry (1800 to 1920); 6 – Modern Age (1920 to the present). *Added Note: Volume 6 contains a chapter by Galina V. Paramei and David L. Bimler on “Language and Psychology.”*

Vision. The 2019 Darwin Lectures
Adrian Fabian, Janet Gibson, Mike Sheppard and Simone Weyland (Editors)
Cambridge University Press

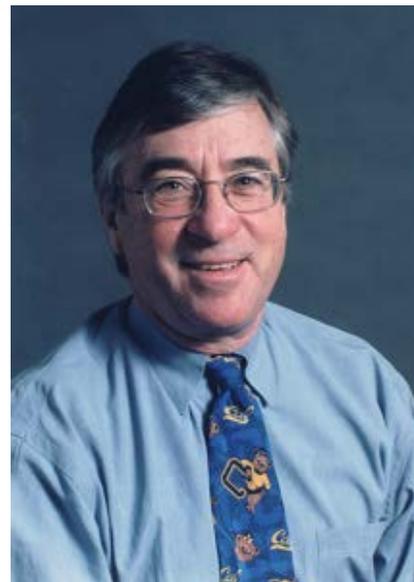
August 2021 | ISBN 9781108931021. Paperback. This new collection of essays includes a detailed and generously illustrated chapter by Anya Hurlbert, covering sensory and perceptual aspects of colour vision, with especial reference to colour constancy and the use of colour in art.

Other chapters of interest to members of ICVS are those by Dan-Eric Nilsson on the evolution of eyes, by Carlo Rovelli on the role of imagery and perspective in scientific understanding, and by Andrew Blake on computer vision.



Obituary for Anthony J. Adams (1940 - 2021)

Tony Adams was an active member of the IRGCVD/ICVS, and an author on more than a dozen papers in the Society's published symposia proceedings. In the first class of students at Victorian College of Optometry, University of Melbourne, his life-long interest in colour vision developed under the tutelage of Barry L. Cole, an early member of the IRGCVD and the only full-time faculty member of the inaugural class at Victorian College. There were just seven students in that first optometry class which included not only Tony but also Ian Bailey and Donald Mitchell, who themselves also rose to prominence in vision science.



After six months as an itinerant optometrist travelling to small towns in Australia, he moved to Indiana University for the PhD program in optometry, where he was supervised by Gordon Heath and received guidance on electrophysiological recordings from Russell DeValois. From 1968 to 2009 Tony was a faculty member in the School of Optometry at UC Berkeley. He held numerous administrative posts including Dean of the School of Optometry at UC Berkeley, and several national leadership roles serving on the Executive Council of the American Academy of Optometry and the National Academy of Sciences Committee on Vision. Tony received numerous academic accolades, including honorary doctorates from the State University of New York and the Pennsylvania College of Optometry, and the Lifetime Achievement Award from UC Berkeley.



Three versions of the Panel D-15 test. The original Farnsworth Dichotomous test is in the middle row; the top row shows the Lanthony Test 15 Hue Désaturé and the bottom row shows the Adams Desaturated D-15 Panel.

Tony Adams made important contributions to our field in both basic and applied colour vision, often in collaboration with members of this Society. One of his first papers was on adaptation of goldfish retinal ganglion cells (*Nature*, 1974). A central theme of his work concerned changes in S-cone sensitivity associated with glaucoma, maculopathy and diabetes. To that end, he described a desaturated version of the Panel D-15 test in *Colour Vision Deficiencies VI* (1982) and the use of two-colour increment thresholds (*Clinical Vision Sciences*, 1991) to study congenital and acquired deficiencies of colour vision. With Chris Johnson, he pioneered the development and validation of short-wave automated perimetry (SWAP; *Archives of Ophthalmology*, 1993). He went on to apply SWAP to electrophysiological diagnosis of diabetic retinopathy (*Archives of Ophthalmology*, 2004). With Nancy Coletta and Gunilla Haegerstrom-Portnoy, he conducted studies on rod and cone interactions in the parafovea (*Vision Research*, 1986). He and his colleagues also studied rod - cone interactions in achromats with residual cone functioning (*Vision Research*, 1986, 1990).

Tony was a person who worked hard and played hard. He was an avid tennis player, challenging Russell DeValois and many others at UC Berkeley. Tony will be missed for his sense of humor, his friendly welcoming smile, and his kind, always constructive, mentorship and collaboration.

Vicki Volbrecht and Jack Werner

Pantone Colour of the Year

The Pantone Colour of the Year is Very Peri (PANTONE 17-3938 Very Peri) described as “a dynamic periwinkle blue hue with a vivifying violet red undertone. Blending the faithfulness and constancy of blue with the energy and excitement of red, this happiest and warmest of all the blue hues introduces an empowering mix of newness.”

<https://www.pantone.com/uk/en/articles/press-releases/introducing-pantone-17-3938-very-peri-pantone-color-of-the-year-2022>

The British satirical magazine, *Private Eye* recently included it in their column of quotes from pretentious and pompous sources: “Displaying a carefree confidence and a daring curiosity that animates our creative spirit, inquisitive and intriguing PANTONE 17-3938 Very Peri helps us to embrace this altered landscape of possibilities, opening us up to a new vision as we rewrite our lives. Rekindling gratitude for some of the qualities that blue represents complemented by a new perspective that resonates today, PANTONE 17-3938 Very Peri places the future ahead in a new light.”

All members are welcome to contribute to *Daltoniana*. Past issues can be accessed via www.icvs.info. Along with the Society’s published Proceedings, they provide an historical record of many major advances in the field of colour vision.