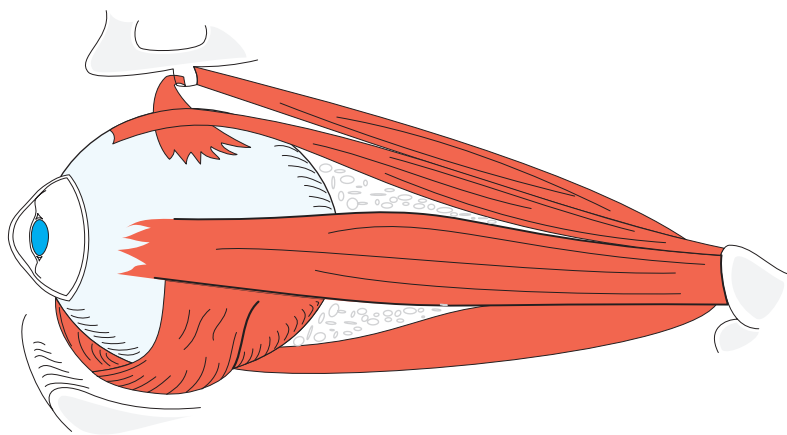


Bulletin of the Applied Vision Association



Meeting report: AVA 99, London
Geoffrey J. Burton award
BCOVS meeting announcement
References on Vision

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*AIM OF THE AVA: TO PROMOTE AND ADVANCE THE APPLICATION
 OF RESEARCH WORK IN ALL AREAS RELATED TO VISION*



Noticeboard



AVA on the Internet

The Applied Vision Association now has its own world wide web pages at:
<http://www.dmu.ac.uk/ava/>

The pages contain details of who is on the committee, contact emails, latest details on forthcoming AVA meetings and links to other vision related pages. There are also archives of abstracts from previous AVA meetings.

There is also an AVA anonymous ftp site at: <ftp://hc.les.dmu.ac.uk>

This site contains:

- a hyperspectral data set of natural scenes produced by Gavin Brelstaff (see <http://www.crs4.it/~gjb/ftpJOSA.html>).
- David Foster's bootstrap program for estimating the accuracy of a statistical estimate derived from a set of experimental data (see <http://www.vs.aston.ac.uk/Research/bootstrap.html>).

If there is anything else you think this archive should contain then let us know.

AVA and OPO Subscriptions

Membership for 1998/1999 will be as follows: ordinary members £18, student members £9. Those members who pay by standing order for the AVA and Ophthalmic and Physiological Optics please check that the correct amount is being paid to the AVA.

Editorial

This issue of the Bulletin contains a report of the successful AVA Annual meeting which was held at the College of Optometrists, London and had the theme of "Visual Search". We announce in this issue the person who has been awarded the Geoffrey J. Burton travel bursery. This issue also includes details of forthcoming meetings with AVA involvement. If you have any comments on the Bulletin of the AVA then do contact me: mscase@dmu.ac.uk

Deadline for copy for the next Bulletin - 16th June 1999

Geoffrey J. Burton Memorial Fund

The fund was established in 1986 with the aim of providing financial assistance to students (postgraduates studying for a higher degree or first-year postdoctoral junior scientists) based in the UK travelling to any conferences or meetings at which they will be presenting a paper or poster. Donations to the fund can be directed to the AVA secretariat and cheques etc. should be made payable to "The Geoffrey J. Burton Memorial Fund".

The maximum award to any one individual is £400.

The AVA Committee has decided that from now on there will be a single award made once a year. The closing date for awards will be the last day in February each year and will be for conferences held from 1st March to the end of the following February (i.e. there will not be retrospective awards). Applicants do not have to be presenting at an AVA conference.

The next closing date for applications is:

29th February 2000

for conferences held between 1st March 2000 and 28th February 2001.

To apply for an award you need to complete an application form which is available from:

The AVA Secretariat,
College of Optometrists,
42 Craven Street,
London,
WC2N 5NG.

A PDF format version of the application form is available on the AVA web site at:

<http://www.dmu.ac.uk/ava/>

Geoffrey J. Burton Memorial Fund

The AVA committee has decided to give the 1999 award to:

Douglas Barrett

from the Department of Psychology, University of Surrey.

Douglas will be presenting at ARVO in Florida this month and has been awarded £400 towards his travel expenses.

Forthcoming AVA meetings

September 1999

**Natural Images Meeting,
University of Bristol**

For more information contact:

Ian Moorhead

I_Moorhead@dera.gov.uk

21st December 1999

**AVA Christmas Meeting,
Aston University**

For more information contact:

Tim Meese

t.s.meese@aston.ac.uk

Andrew Parker sent the following message to CVNet-UK as this issue was going to press:

Richard Eagle

We are sure that members of the vision community will be saddened to learn of the death of Richard Eagle. Richard was a Royal Society Research Fellow who was working in Psychology in Oxford on a wide variety of projects. He is especially known for his contributions to the perception of movement.

Richard's funeral will take place on Wednesday morning, 5th May.

Richard and his partner Lara had made the decision to become parents. A trust fund is being set up for Lara's and Richard's child, which is expected in June. The fund will be for the "educational purposes of the child" and this will be at the discretion of the trustees (to be named).

If you wish to donate to that fund, please send cheques payable to R.L.Bromley to:

Lara Steel, c/o R.L.Bromley, 145 Magdalen Road, Oxford, OX4 1RL.

Please include a short note saying "For the child of Richard and Lara".

The trust fund will be open so that anyone wishing to make a standing order can do so, details of this will be given in due course.

Condolences and Cards may be sent to:

Lara Steel, 33 Mill Street, Oxford, OX2 OAJ

Richard's Dad: Tony Eagle, 25 Bushfarm Drive, Downspark, Portslade, BN41 2CY

Richard's Mum: Anna Packham, 97 Parklands Rd, Hassocks, Sussex, BN6 8LE

If you have any questions or suggestions please contact either Ralph (+44 1865 282184/721518, rph@robots.ox.ac.uk) or Simon Prince (+44 1865 272555/721518, simon.prince@physiol.ox.ac.uk).

AVA 99 - Annual Meeting College of Optometrists, London

17 March 1999

Meeting report

The fine surroundings of the College of Optometrists' new home provided the backdrop for the AVA meeting on Visual Search. Held on St. Patrick's day in the middle of a Spring heat wave, the meeting attracted around 50 delegates, with 12 papers presented and the Geoffrey Burton Memorial lecture delivered by Professor John Findlay. The range of approaches to search, and the different aspects of vision addressed, suggested that a methodology explored for over 20 years still has power to provide insight into human perception.

Opening the proceedings on search, Lauren Stewart eloquently presented the work that she and Vincent Walsh have conducted on the mechanisms responsible for subject learning during training on search tasks. By employing Trans-cranial Magnetic Stimulation (TMS) they were able to disrupt learning, leading them to argue that improvements in search performance resulted from sensory changes, rather than changes in cognitive strategies. The moot relationship between the role of cognition and primary sensory processes in Visual Search was further addressed by several other presentations at the meeting.

Three of the papers addressed the use to which the search paradigm has traditionally been applied: as a tool for understanding attentional processes. Amanda Ellison kept the audience entertained as she described her work on the attentional asymmetries between visual fields. She found that search arrays presented to the upper visual field were processed less quickly than those presented to the lower visual field supporting the notion of greater attentional resolution in the lower visual field. Angus Gellatly presented evidence for pre-attentive mechanisms in search, finding that searching amongst new objects is more effective (although not faster) than searching amongst previously presented objects. Ian Thornton further explored the role of attention by described his work using a variation of

the traditional paradigm. Rather than locating a predefined target in a radial array, subjects were instructed to search for a change in the presented array. Having been presented with two brief presentations of the array which were interleaved by a blank screen, they were required to report whether they were aware of a change, and to indicate the location at which it had occurred. Subjects were able to identify the changed item at above chance levels, even if they reported not having consciously perceived the change. He suggested that attentional deployment is not necessary for the perception of change.

John Findlay's lecture, entitled "Searching with the Eyes and the Brain", considered the interaction between the motor demands and the cognitive demands of search and other tasks. He started by describing AI, a subject recently examined in his laboratory, who has no eye movements. She perceives in a normal fashion - compensating for her deficit by scanning a visual scene through a series of head movements that mirror the saccadic movements of the eye. He then described work on visual search conducted using eye-tracking equipment on normal subjects, and argued that the decision about where to move the eyes is not based on the identification of the target item through covert attentional scanning. Rather, he suggested that directing the eyes constitutes the attentional scanning process itself. He further argued that the process of finding a target involves the relatively automatic generation of a first saccade, followed by the evaluation of potential targets through successive fixations. The time to find the target depends on the defining features of the target, with conjunctive feature targets producing more competition between potential fixation locations - leading to more non-target items being fixated.

David Shore from Dalhousie University, Nova Scotia further addressed the topic of eye movements. He discussed the thorny issue of "inhibition of return" during the scanning of a visual scene, suggesting that the recent claim made by Horowitz and Wolfe (1998, *Nature*, 394, 575) that "visual search has no memory" is ill founded. He provided evidence for subjects avoiding previously fixated items, and argued for multiple roles for memory during the scanning of a visual scene.

Not all the papers at the meeting pertained to visual search. Eugene McSorley described his work on the spatio-temporal integration of spatial frequencies, whilst Zhaoping Li described her model of V1 mechanisms

computing the medial axes of shapes and Keith Langley described a computational model of motion perception. Coffee and lunch breaks were accompanied by work reported in poster format, including Joshua Solomon's study which provided strong evidence that attentional mechanisms have access to monocular input.

The meeting provided a range of perspectives on the topic of visual search, with scientific discussions during the breaks facilitated through the provision of excellent catering, and an ample supply of good wine to end the meeting. It was a shame that after hearing so much about visual search during the day, we were able to loose half our dining party in the crowds of Charing Cross.

Thanks to Mark Bradshaw and David Simmons for organising the meeting, and The College of Optometrists for being excellent hosts.

Andrew Welchman

Neural Systems Group
University of Newcastle

British Congress on Optometry and Vision Science (BCOVS), Glasgow

In 1999 the congress will be held from 6th-8th September in Glasgow, hosted by Vision Sciences in Glasgow Caledonian University. Please note that the deadline for abstracts is 1st July.

The plenary lecturers for this years meeting are: Professor Semir Zeki (UCL), Dr Chris Harris (Gt. Ormond St), Dr John Wann (Reading) and Dr John Lawrenson (City).

Members of the College of Optometrists should note that we have applied for CE credit for the meeting. BCOVS are also pleased to announce that thanks to the generous support of the Applied Vision Association, AVA members are entitled to a reduction of £5 in the registration fee.

Advance Registration £35
On Site Registration £40
Student £20

Abstracts will be published in Ophthalmic & Physiological Optics (eg see Ophth. Physiol. Opt. 17:540-543) and should be no more than 250 words in length.

BCOVS5, Vision Sciences,
Glasgow Caledonian University,
Cowcaddens Road,
Glasgow G4 0BA

Email: P.C.Knox@gcal.ac.uk
<http://fhis.gcal.ac.uk/VS/BCOVS/home.htm>

Abstract deadline 1st July 1999

AVA books for sale

The AVA still has a number of new books for sale from conferences that it has organised over the years.

Payment can be by cheque or postal order in UK pounds (sorry, no credit cards) to “Applied Vision Association”. Send your payment with the order to:

AVA Secretariat,
Applied Vision Association,
College of Optometrists,
42 Craven Street,
London WC2N 5NG.

Books available:

The cost for each book is £15 (including postage in the UK) for AVA members or £20 for non-AVA members. If you are outside the UK then add £5 per book to each of the prices above.

Gale, A.S., Astley, S.M., Dance, D.R. and Cairns, A.Y. (1994) **Digital Mammography**. Elsevier (424 pages).

Gale, A.S., Brown, I.D., Haslegrave, C.M., Krusysse, H.W. and Taylor, S.P. (1993) **Vision in Vehicles IV**. North Holland (355 pages).

Brogan, D., Gale, A. and Carr, K. (1993) **Visual Search 2**. Taylor and Francis (477 pages).

The cost of the Dalton conference book is £43 (including postage in the UK) for AVA members or £48 for non-AVA members. If you are outside the UK then add £5 per book.

Dickinson, C., Murray, I. and Carden, D. (1996) **John Dalton’s Colour Vision Legacy**. Taylor and Francis (784 pages).



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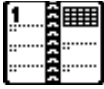
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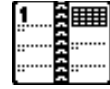
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References supplied (as usual!) by:

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Meetings Calendar



1999

- May 7-8 Pre-Attentive and Attentive Mechanisms in Vision
Ft Lauderdale, USA
<http://www.elsevier.nl/locate/vision99>
- May 9-14 ARVO, Ft Lauderdale, USA
<http://www.faseb.org/arvo/>
- July 23-27 International Colour Vision Society 15th Meeting
Götting, Germany
<http://www.mpibpc.gwdg.de/abteilungen/141/>
ICVS99/
Email: blee@gwdg.de
- August 10-14 23rd Pupil Colloquium, Nottingham
<http://www.mailbase.ac.uk/lists/pupil/files/>
- August 22-26 ECVP99, Trieste, Italy
Email: ecvp99@psicoserver.univ.trieste.it
<http://psicoserver.univ.trieste.it/ecvp99.html>
- August 22-25 Vision in Vehicles 8, Boston, MA, USA
Email: S.Rivington@derby.ac.uk
<http://ibs.derby.ac.uk/viv8>
- September 6-8 British Congress on Optometry and Vision Science
Glasgow (BCOVS)
Email: P.C.Knox@gcal.ac.uk
<http://fhis.gcal.ac.uk/VS/BCOVS/home.htm>
Abstract deadline 1st July 1999
- September 13-16 British Machine Vision Conference, Nottingham
Email: Tony.Pridmore@nottingham.ac.uk
<http://www.nott.ac.uk/meom/bmvc99.html>
- September AVA Natual Images meeting, Bristol
Email: I_Moorhead@dera.gov.uk
- December 21 AVA Christmas meeting, Aston
Email: t.s.meese@aston.ac.uk