

## ICVS Belém July 2007

The 19<sup>th</sup> Symposium of the International Colour Vision Society (ICVS) will take place from July 27<sup>th</sup>-31<sup>st</sup> 2007 in Belém, State of Pará, Brazil.

The ICVS is an international group of physiologists, psychologists, physicists, geneticists, optometrists, ophthalmologists and other related professionals who have a research interest in the many aspects of colour vision and colour vision deficiencies.

Santa Maria de Belém do Grão Pará is Belém's official name. It was founded in 1616 by the Portuguese Francisco Caldeira. It is located in a strategic position to guard the Amazon River delta to protect the Portuguese from invaders coming from the Atlantic Ocean. Belém's architecture reflects the Portuguese ability to adapt themselves to new environments and different climates. The city has flourished with Amazon forest richness: Brazilian wood, rubber trees, and more recently gold and other minerals. The Amazonian forest biodiversity is high on the list of Brazilian interests. Belém is paved with mango-trees, imported from India during the colonial period, which make arches on the main avenues. The mango-tree shade is a nice refuge on sunny days and

also in the rainy season. However, all the cars in Belém carry the marks of the mangos that fall from the trees!

July in Belém is sunny and warm with temperatures of 35-40°C (90-100°F). Humidity is relatively high, but not excessive compared to the central USA! There can be spectacular afternoon thunderstorms. Hotels and many restaurants usually have air conditioning.

The University of Pará in Belém celebrates its 50<sup>th</sup> anniversary in 2007 with the center of the festivities in July. The Rector and staff of the University welcome ICVS on this occasion.

The Symposium will be held in the [Crowne Plaza Hotel](#). The Crowne Plaza is the most comfortable international standard hotel in Belém at present, and is offering special rates for ICVS guests. The Hilton Hotel is another excellent option which is offering special rates. Other hotels offer prices more consistent with student budgets.

<b>Abstract submission deadline</b>	<b>30<sup>th</sup> April 2007</b>
<b>Early registration (&amp; Membership) deadline</b>	<b>30<sup>th</sup> April 2007</b>
<b>Notification of abstract acceptance</b>	<b>15<sup>th</sup> May 2007</b>
<b>Symposium</b>	<b>27-31<sup>th</sup> July 2007</b>

## Contents

ICVS Belém.....	1	ICVS Belém: Preliminary Program.....	3
Book Review "Light Vision Color".....	2	ICVS Belém: Preliminary Program.....	4
Editorial.....	2	Verriest Medal.....	4
Travel & Accommodation; Social Program.....	5	Author Guidelines.....	7
VISAs; Health & Safety; Travel Grants.....	6	Helpful Links; ICVS Belém Contacts.....	7
ICVS Membership forms.....	8		

# ICVS

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## Book Review

### “LIGHT VISION COLOR”

*Author: Arne Valberg, PhD*

*Publisher: Wiley & Sons*  
*ISBN: 978-0-470-84902-6*

“*Light Vision Color*” takes a well-balanced, interdisciplinary approach to our most important sensory system. The book successfully combines basics in vision sciences with recent developments from different areas such as neuroscience, biophysics, sensory psychology and philosophy. Originally published in 1998 this edition has been extensively revised and updated to include new chapters on clinical problems and eye diseases, low vision rehabilitation and the basic molecular biology and genetics of colour vision.

The book takes a broad interdisciplinary approach combining basics in vision sciences with the most recent developments in the area. It includes an extensive list of technical terms and explanations to encourage student understanding. The Author successfully brings together the most important areas of the subject in to one volume. The Times Higher Education Supplement said it was “...a valuable resource for students and instructors alike...” (2<sup>nd</sup> December 2005)

#### **From the Contents:**

1. Introduction.
2. Optics.
3. The physiology of the eye.
4. Sensitivity and response.
5. Color.
6. Color vision.
7. Neural correlates.
8. Brain processes.

## Editorial

*Dingcai Cao, PhD and Andrew J. Zele, PhD*

[d-cao@uchicago.edu](mailto:d-cao@uchicago.edu)

[andrew.zele@qut.edu.au](mailto:andrew.zele@qut.edu.au)

We are grateful to Luiz, Dora, Barry and their team of organizers of the ICVS Belém Symposium for providing the preliminary program and the travel information. Please pay attention to the abstract submission and early registration deadlines (30<sup>th</sup> April 2007). All presenting authors must be paid-up ICVS members when the abstract is submitted – Membership forms and details are provided at the end of Daltoniana. Those persons requiring Tourist Visas for Brazil should initiate the process now. We look forward to seeing you all in Belém! Go jungle!

# ICVS Belém Preliminary Program

All sessions start at 8:30 am and will be held in the *Crowne Plaza Hotel*

Friday, July 27<sup>th</sup> 2007

**Directors' Committee Meeting** (8:30 am – 12:30 pm)

Welcome desk open

**Opening of the Symposium** (2:00 pm)

Dora F. Ventura (Organizer)

Alex Bolonha Fiuza de Mello (Rector of the Federal University of Pará)

**Invited Speaker:** David R. Williams, University of Rochester (60 min)

**Session: "Molecular Biology of Colour Vision"**

**Invited Speaker:** Horacio Schneider, Federal University of Pará (30 min)

Contributors

**Dinner – Crowne Hotel Plaza**

Saturday, July 28<sup>th</sup>

**Session: "Photopigments, Photoreceptors, and Retinal Mechanisms of Colour Vision"** (8:30 am)

Chair: Dora F. Ventura, University of São Paulo

**Invited speaker:** James K. Bowmaker, University College London

**Invited speaker:** Ellis R. Loew, Cornell University (30 min)

Contributors

**Invited speaker:** Heinz Wässle, Max Planck Institute for Brain Research (30 min)

Contributors

**Session: "The Colour Vision of New World Primates"**

Chair: John D. Mollon, University of Cambridge

**Invited Speaker:** Gerald Jacobs, University of California (30 min)

Contributors

**Verriest Medal**

Barry B. Lee, State University of New York (60 min)

**Reception – Nova Luzitânia Complex**

Sunday, July 29<sup>th</sup>

**Session: "Colour and Reality"** (8:30 am)

Chair: Qasim Zaidi, State University of New York

**Invited Speaker:** David H. Brainard, University of Pennsylvania (30 min)

**Invited Speaker:** Shin'ya Nishida, NTT Communication Science Laboratories (30 min)

Contributors

**Lunch, River trip, visit to Mosqueiro Village, back to Belém, sunset at the Estação das Docas**

**Dinner in the Estação das Docas**

Monday, July 30<sup>th</sup>

**Session "Cortical Mechanisms of Colour Vision"** (8:30 am)

Chair: Ricardo Gattass, Federal University of Rio de Janeiro

Contributors

**Session**

Contributors

**Poster Session** (60 min)

**Session**

Contributors

**Business Meeting**

**Banquet – Espaço Chão e Teto**

# ICVS Belém Preliminary Program

Tuesday, July 31<sup>st</sup>

**Session: "Colour Vision Deficiencies" (8:30 am)**

John L. Barbur, City University London (30 min)

**Invited Speaker:** Gordon Plant, University College London (30 min)

Contributors

**Session: "The Nagel Centennial"**

Chair: John D. Mollon, University of Cambridge

Contributors

**Closing of the Meeting**

Luiz Carlos L. Silveira, Federal University of Pará (organizer)

**Lunch – Churrascaria Pavan** (optional)

## Companion Persons Belém Program

We are organizing an interesting program for companion persons that includes visits to:

- Governor's Park
- The Docks, boat trip and Mosqueiro Village
- Feliz Luzitânia Complex: St. Alexandre Church, Museum and Park; first settlements of Belém
- Jewelry Exhibition and Shop
- Emilio Goeldi Museum
- Icoaracy Village – pottery shops
- Nazareth Cathedral

## Verriest Medal: Professor Barry B. Lee

The International Colour Vision Society is pleased to announce that the Verriest Medal will be awarded at the 2007 biennial symposium in Belém, Brazil to [Barry B. Lee](#), Professor of Biological Sciences at the State University of New York, College of Optometry, New York, NY, USA. This award is bestowed by the Society to honor long-term contributions to the field of color vision. Professor Lee is an innovative multidisciplinary scientist who has had an extraordinary record of productivity. He has made significant contributions to our understanding of basic coding mechanisms in visual processing and is recognized for his efforts at bridging the gap between psychophysics and physiology. In addition, through collaborative efforts, he has been at the center of the great advances that have been made in the last 20 years in unraveling the relations between structure and visual function in the retina. Finally, the Society recognizes his long-term service to the society, as member of the board of directors, meeting organizer and proceedings editor.

# ICVS Belém: Social Program

We are planning some special social events during the meeting. In addition, we would like to encourage the attendees to make trips around the city. There are a number of worthwhile tourist sites in Belém. The old docks and fish market are very picturesque, as is the nearby fortress. There are some very ornate churches, and the Belém opera house ([Theatro da Paz](#)) and surrounding square are attractive. The [Emílio Goeldi Museum](#) is worth a visit; it is an Amazonian zoo with local fauna. There are a number of local trips. A local island provides the nesting site for green parrots, which swarm at dawn to provide a spectacular sight. This requires a very early start. Also, across the river there are islands with primary or secondary growth forests, and tours can be arranged to see local villages and the flora and fauna. Language is a problem since most locals do not speak English. Spanish can help you communicate quite well. It is most convenient to use taxis around Belém. For accompanying persons, there will be transport and trips organized on most days.

There are two interesting side trips. [Marajó island](#) is a very large tropical island about 3-4 hrs by boat from Belém. There are beach resorts with various local villages, boat trips and other excursions. A package deal would last 2-3 days. [Ariaú Amazon Towers Hotel](#) is a convenient stop if flying through Manaus. It is a fascinating, ecologically oriented world renowned hotel in the trees - in July the river will

## TRAVEL & ACCOMMODATION

We suggest all senior scientists to stay in the

[CROWNE PLAZA HOTEL](#)

Avenida Nazaré, 375

Phone: +55 91 3202 2000

E-mail: [vendas@crownebelem.com.br](mailto:vendas@crownebelem.com.br)

Single: US\$100,00; Double: US\$110,00

The ICVS Symposium will be based at this hotel. To be eligible for the special rate one must make explicit on booking that one is attending the ICVS Symposium.

Another good option for senior scientists to stay is the

[HILTON BELÉM](#)

Avenida Presidente Vargas, 882

Phone: +55 91 4006 7000

Single: US\$90,00; Double: US\$102,50\*

\*Special rate, if at least 10 registrants for the ICVS Symposium book accommodation.

<http://www.hotelnovoavenida.com.br/p.php?id=8>\*

Single: US\$30,00; Double: US\$40,00; Triple: US\$50,00

\*Page in Portuguese

Students have two cheaper options to stay. One of them is the

[HOTEL ITAOCA](#)

Avenida Presidente Vargas, 132

Phone: +55 91 4009 2400

Email: [reservas@hotelitaoca.com.br](mailto:reservas@hotelitaoca.com.br)

Single: US\$45,00; Double: US\$45,00; Triple: US\$50,00

The other option is the

[HOTEL NOVO AVENIDA](#)

Avenida Presidente Vargas, 404

Phone: +55 91 3223 8893

Email:

<http://www.hotelnovoavenida.com.br/p.php?id=8>\*

Single: US\$30,00; Double: US\$40,00; Triple: US\$50,00

\*Page in Portuguese

The listed hotels are all within walking distance of the conference venue (Hotel Crowne Plaza). Shuttle transportation between hotel and the symposium and back will be provided (this may be desirable at midday temperatures). All rates above are price per night, including breakfast.

Those flying to Belém from the U.S. may find it convenient to fly through Miami. There are daily American Airlines/TAM flights to Belém, with a brief stopover in Manaus. They land in Belém very late at night. Those wishing to visit elsewhere in Brazil may want to go through São Paulo or Rio de Janeiro. Those coming from Europe may wish to assess the Miami alternative, which involves U.S. transit, or come through São Paulo or Rio de Janeiro.

# VISA Information

United States Citizens must apply for Tourist Visas from [Brazilian consulates in the United States](#). More information, including prices and forms can be found at [Entry Visa general information for US Citizens](#).

Citizens of most Western European countries do not require Visas. This is a partial list of countries whose nationals are waived of Tourist Visa requirements:

- ANDORRA, ARGENTINA, AUSTRIA;
- BAHAMAS, BARBADOS, BELGIUM, BOLIVIA, BULGARIA;
- CHILE, COLOMBIA, COSTA RICA, CROATIA, CZECH REPUBLIC;
- DENMARK;
- ECUADOR;
- FINLAND, FRANCE;
- GERMANY, GREECE, GUYANA, GUATEMALA;
- HONDURAS, HUNGARY;
- ICELAND, IRELAND, ISRAEL, ITALY;
- LIECHTENSTEIN, LUXEMBOURG;
- MACAU, MALAYSIA, MALTA, MOROCCO, MONACO;
- NAMIBIA, NETHERLANDS, NEW ZEALAND, NORWAY;
- PANAMA, PARAGUAY, PERU, PHILIPPINES, POLAND, PORTUGAL;
- REPUBLIC OF KOREA;
- SAN MARINO, SLOVAKIA, SLOVENIA, SOUTH AFRICA, SPAIN, SURINAME, SWEDEN, SWITZERLAND;
- THAILAND, TRINIDAD AND TOBAGO, TURKEY;
- UNITED KINGDOM, URUGUAY;
- VATICAN, VENEZUELA.

Citizens of countries not listed above please check the bottom of [Brazilian Consular Offices in the USA and around the world](#) page.

# Health & Safety

The WHO states that malaria and yellow fever are present in Brazil, but there have been no cases in the Belém urban area for many decades. If you are planning on a jungle vacation upriver, malaria prophylaxis may be wise. Also, the Amazon has many unusual foods, so tourists sometimes experience gastric problems - most tourists stick to bottled or filtered water. Belém is not a high risk city, but there are numerous pickpockets, so it is unwise to walk the streets with jewelry or visible cameras. Find below some links related to health and safety in Brazil.

- [Australian Department of Foreign Affairs and Trade](#)
- [Foreign & Commonwealth Office Travel Advice](#)
- [Travel Report for Brazil](#)
- [U.S. Department of State - Brazil](#)
- [World Health Organization - Brazil](#)

## A STOP IN SÃO PAULO

For those who want to spend a few days in São Paulo, information on what to see can be found at:

- [Official tourism web site of São Paulo city](#)
- [A world called São Paulo](#)
- [São Paulo Museums and Culture](#)

### MAIN UNIVERSITIES

- [University of São Paulo](#)
- [Federal University of São Paulo](#)
- [Unicamp](#)

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## Travel Grants

The International Colour Vision Society will award a number of travel grants to attend its bi-annual meeting, to assist students and/or colleagues to whom the cost of meeting attendance is prohibitive. Individuals submitting papers to the meeting (as first authors) who would like to be considered should contact [Barry Lee](#) at the time of abstract submission with a letter describing their situation and, for students, a letter from their advisor, verifying their student status and that no other funds are available for their attendance at the meeting. All first authors must be members of the ICVS by the time of the meeting.

# Author Guidelines

First authors presenting an abstract at ICVS 2007 must be a paid-up member of the International Colour Vision Society;

The ICVS 2007 symposium will contain both paper and poster presentations in all fields related to colour vision;

Paper - Talks should be of 15 minutes length leaving 5 minutes for questions;

Poster - The poster format must be A0 portrait (approximately 0.84 x 1.19 m or 33.1 x 46.8 in);

Abstracts must have a title, authors, and affiliations. Please do not subdivide the text into 'Purpose', 'Methods', etc. The font should be Times New Roman, size 12, and single spaced;

We are negotiating to publish ICVS proceedings from the 2007 meeting in Visual Neuroscience. Articles will be treated according to their normal reviewing procedures and standards.

An example of an abstract is given below:

## Normal and dichromatic colour discrimination measured with transient visual evoked potential

L.C.L. Silveira<sup>1,2</sup>, B.D. Gomes<sup>1</sup>, G.S. Souza<sup>1</sup>, A.R. Rodrigues<sup>1</sup>, C.A. Saito<sup>1</sup>, M. da Silva Filho<sup>1</sup>

<sup>1</sup>Dep. Fisiologia, Universidade Federal do Pará, Belém, Brazil

<sup>2</sup>Núcleo de Medicina Tropical, Universidade Federal do Pará, Belém, Brazil

It would be informative to have an electrophysiological method to study, in an objective way, the effects of mercury exposure and other neurotoxics on human colour vision performance. The purpose of the present work was to study human colour discrimination by measuring chromatic difference thresholds with visual evoked potential (VEP). Six young normal trichromats ( $24 \pm 1$  years old) and one deutan (26 years old) were tested. The stimuli consisted of sinusoidal isoluminant chromatic gratings made from chromaticity pairs located along four different colour directions centered on two reference points. Heterochromatic flicker photometry (HFP) protocol was used to obtain the isoluminance condition for every subject and for all chromaticity pairs. Spatial frequency was 2 cycles/deg. Presentation mode comprised onset (300 ms)/offset (700 ms) periods. As previously described, we found a negative deflection in the VEP which was related to the chromatic difference: as chromatic difference increased, amplitude increased and latency decreased. VEP response amplitude was plotted against distance in the CIE 1976 colour space between the grating chromaticities and fitted with a regression line. We found colour thresholds by extrapolating the fitting to null amplitude values. The thresholds were plotted in the CIE 1976 colour space as MacAdam ellipses. In normal trichromats the ellipses had small sizes, low ellipticity, and were vertically oriented. In the deutan subject, the ellipses had large size, high ellipticity, and were oriented towards the deutan copunctal locus. The VEP thresholds were similar to those obtained using grating stimuli and psychophysical procedures, however smaller than those obtained using pseudoisochromatic stimuli (Mollon-Reffin method). We concluded that transient VEP amplitude as a function of contrast can be reliably used in objective studies of chromatic discrimination performance in normal and altered human subjects.

Supported by CNPq and CAPES.

## ICVS Belém: Contact Information

### Helpful Links

[ICVS home page](#)

[2001 ICVS Symposium – Chairman John Mollon](#)

[2003 ICVS Symposium – Chairman Steve Buck](#)

[2005 ICVS Symposium – Chairman Kenneth](#)

[Knoblauch](#)

[Universidade Federal do Pará,](#)

official home page from Pará main university.

[National Primate Center,](#)

lot of platyrrhines as well as some catarrhines.

[São José Liberto,](#)

regional jewelry and handicraft.

[Mangal das garças,](#)

a nice place to eat, talk and relax.

[Some pictures taken in Belém](#)

[PARATUR - Pará touristic informations](#)

[Brazilink – Brazil Travel](#)

[Friends of the Earth – Brazilian Amazonia](#)

[BR Online Travel \(BROL\)](#)

### LUIZ CARLOS DE LIMA SILVEIRA

Núcleo de Medicina Tropical

Universidade Federal do Pará

Av. Generalíssimo Deodoro, 92

66055-240 Belém, Pará, Brazil

[luiz@ufpa.br](mailto:luiz@ufpa.br)

### DORA FIX VENTURA

Universidade de São Paulo

Instituto de Psicologia

Caixa postal 11454

Av. Prof. Mello Moraes, No. 1721 (Cidade Universitária)

05508-900 São Paulo, São Paulo, Brazil

[dventura@usp.br](mailto:dventura@usp.br) [luiz@ufpa.br](mailto:luiz@ufpa.br)

### BARRY B. LEE

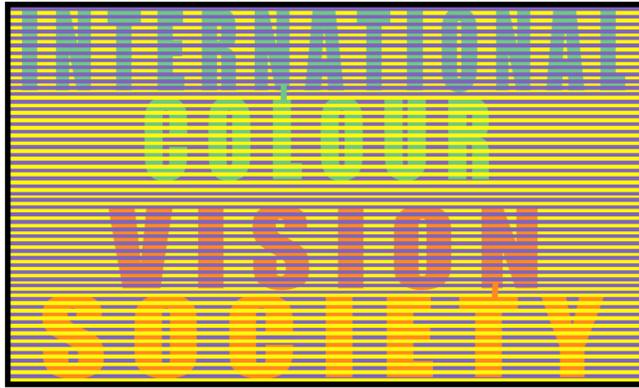
State University of New York - State College of Optometry

Biological Sciences

33 West 42nd Street

10036 New York, New York, USA

[blee@sunyopt.edu](mailto:blee@sunyopt.edu)



# ICVS

## Postal Membership Application

**2007-2008**

Membership of the International Colour Vision Society is in 2-year cycles. For the period 1/1/07 to 31/12/08, the subscription is €128 (regular members) or €27 (retired and student members). These fees include all our transaction processing charges. All members are entitled to receive a copy of the proceedings of the two-yearly conference, held in Belem, Brazil in July 2007.

***Credit card payments*** are now processed on-line. Please go to the membership page of the ICVS website ([www.icvs.info](http://www.icvs.info)) and follow the appropriate links. If the online payment link is not active, please email me and I will send you a message with a link in it. **If you are paying on line you do not need to complete this paper form as well.**

***For cheque payments***, please complete the enclosed form and mail it with a cheque either in euros or in your own currency. You can perform the currency conversion by visiting [www.xe.com](http://www.xe.com), or as a google search

For example  or .

If you have any questions about your payment or other membership issues, please contact me.

Dr Neil Parry,  
ICVS Membership Secretary & Treasurer,  
Vision Science Centre,  
Manchester Royal Eye Hospital,  
Oxford Road,  
Manchester M13 9WH,  
UK

Tel           +44 161 276 5571  
Email       Neil.Parry@manchester.ac.uk



# ICVS Postal Membership Application 2007-2008

## Section 1 *All postal applicants should complete sections 1 and 3*

Title	First name	Last name	Renewing	New
<input type="text"/>				
Institution				
<input type="text"/>				

## Section 2 *Only for new members or existing members with change of address*

Address		Postcode/zip	
<input type="text"/>		<input type="text"/>	
		Country	
		<input type="text"/>	
Tel		Fax	
<input type="text"/>		<input type="text"/>	
Email address			
<input type="text"/>			

## Section 3 *Payment details*

<i>Check 1 box</i>		Cost €	Your currency	Your payment*
<input type="checkbox"/>	Regular	128	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	Retired	27	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	Student	27	<input type="text"/>	<input type="text"/>

**\*Cheques should be made payable to "International Colour Vision Society"**

*Please send this form  
with your cheque to:*

Dr Neil Parry,  
ICVS Membership Secretary,  
Vision Science Centre,  
Manchester Royal Eye Hospital,  
Oxford Road,  
Manchester M13 9WH,  
UK