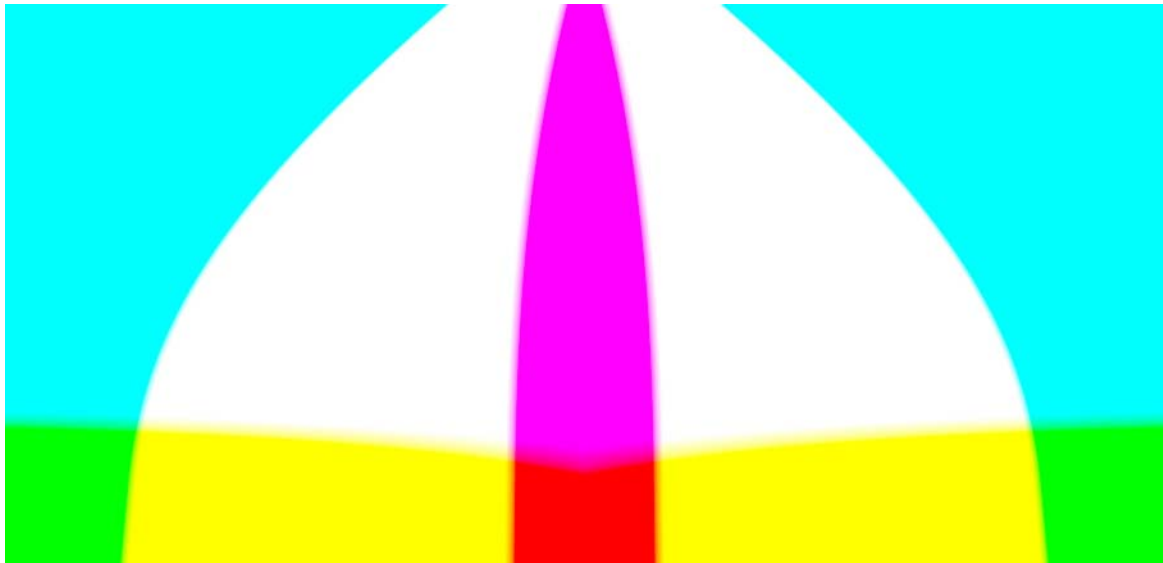




**ASSOCIATION INTERNATIONALE DE LA COULEUR
INTERNATIONALE VEREINIGUNG FÜR DIE FARBE
INTERNATIONAL COLOUR ASSOCIATION**

**NEWSLETTER
2010**



NO. 23

EDITED BY

Lindsay MacDonald

London College of Communication

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AIC 2009 Congress and Sydney – Photographs by Maja Strgar

EDITOR'S NOTES

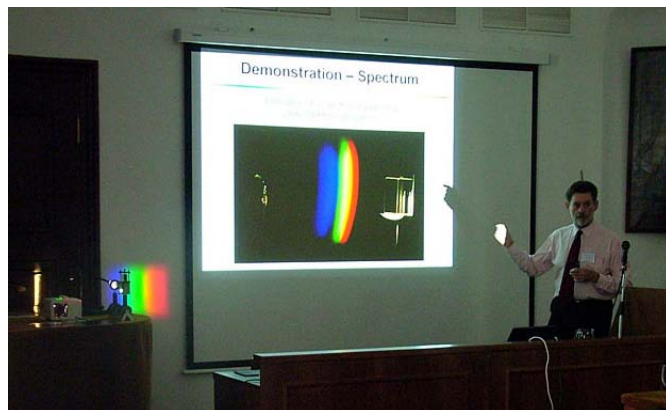
It is a privilege and pleasure to have taken over the editing of this AIC Annual Newsletter from Prof Roy Berns. Roy did a great job during his four-year term as Editor by introducing a more colourful and visual style, with many pictures and a lighter touch to the articles. I have continued this trend, by ensuring that there is at least one colourful picture on every page. I have also tried to minimise the boring lists of committee and administrative details in favour of a more journalistic style, with news snippets and stories about what member organisations have been doing and what is new and interesting in the world of colour.

Thank you to the twenty-five member societies of the AIC who contributed such interesting content to this Newsletter. I exercised my editorial prerogative to prune and paraphrase, crafting the raw material of every article into the standard one-page format. I also introduced the member society logos, thereby adding to the general effect of colourful activity.

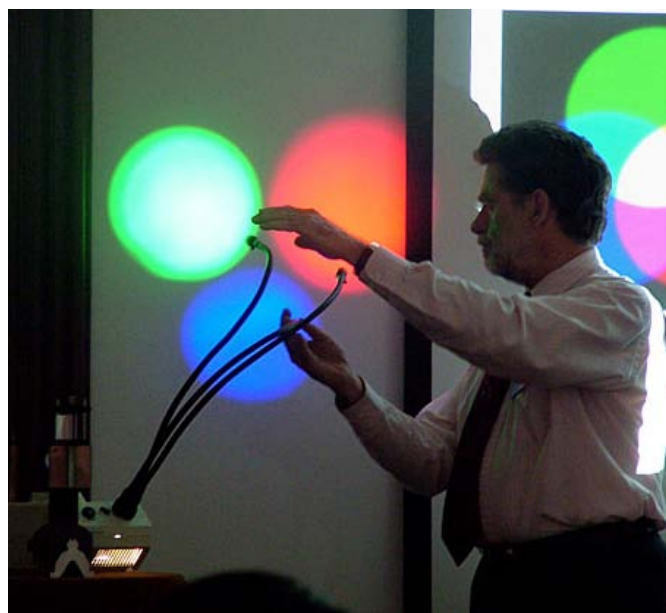
One of the highlights during 2009 for me was attending the CREATE Research Workshop in Veszprém, Hungary, in May. The Colour Research for European Advanced Technology Employment (CREATE) Network was funded under the Marie Curie programme. This memorable event was organised at the University of Pannonia by Prof János Schanda for the benefit of doctoral students and post-doctoral researchers in fields related to colour. I gave a talk on 'Colour Communication' with a number of practical demonstrations, including the spectrum and additive mixing of lights.

The AIC Congress in Sydney (my home town) in September was wonderful, and demonstrated the range and strength of colour research and application throughout the world. It bodes well for the future of the AIC.

Lindsay MacDonald, July 2010



Lecturing on colour at the CREATE Workshop in Veszprém.



Members of the new and old AIC Executive Committees, following the election at the Congress in Sydney, September 2009. From left to right: Verena M Schindler, Shoji Tominaga, Lindsay MacDonald, Nick Harkness, Javier Romero, Berit Bergström, José Luis Caivano, Roy Berns and Guanrong Ye. (Absent: Maria Musso and Osvaldo da Pos).

This is my first AIC Newsletter and I would like to start by expressing my gratitude to the previous AIC Executive Committee. It has been a real pleasure working with you during these four years and I have learnt a lot from you all. Thank you José for your excellent leadership: you have done a tremendously good job in forwarding AIC into a new period. I am very proud of having worked together with you. Thank you Guanrong Ye for a successful AIC 2007, Roy Berns for editing the AIC Newsletter and Osvaldo da Pos for your liaison with CIE and all your enthusiasm and engagement in AIC activities.

To the remaining members Javier Romero and Nick Harkness, thank you for all efforts working for AIC, handling the bank account, finance and general correspondence and for a successful AIC 11th Congress. Now I am welcoming you to your new duties within AIC: Javier as vice-president and Nick as secretary-treasurer. Javier will act as Chair of the Judd Award 2011 and 2013 Committees and he also coordinates our five study groups. Nick handles the bank account and finances, sends general correspondence and keeps AIC members and observer's data and contacts updated.

I warmly welcome our new EC members Lindsay MacDonald, Verena M. Schindler, Shoji Tominaga and Maria Musso whose duties are as follows: Lindsay has taken over the editing of the AIC Newsletter and the organizing of the 12th Congress in 2013 in Newcastle, UK; Verena is responsible for the AIC Website, chairs the Study Group on Environmental Colour Design and will organize the Midterm Meeting 2011 in Zurich; Shoji will be the liaison to CIE Division 1; and Maria will have responsibility for the AIC wiki.

As for myself, in addition to the normal duties of the presidency, I am responsible for the AIC e-news. What I see as an important task for AIC is to attract young researchers to contribute to the AIC meetings with good quality paper presentations. We have to persuade young students of the possibilities for an interesting career in the fields of colour science and colour design. Because of its interdisciplinary nature, colour science is treated from many different angles and according to different disciplines, which makes it all the more fascinating. To strengthen the global position of AIC we also have to recruit additional member countries.

The number of AIC Study Groups has increased from four to five. The new Study Group is named The Language of Color (LC). The Chair is Jin Sook Lee, Korea, and the Co-chair is Paul Green-Armytage, Australia. Various authors have been developing the perspective of colour as a language, as shown in the papers presented at AIC meetings and congresses. By considering the increasing modern interest for colour communication and colour language, it might be worthwhile to focus the attention of the AIC community on the basic facts of the language of colour. Fields such as linguistics, semiotics and cognitive science, and topics such as colour naming and categorization, coloured synaesthesia, semantic studies on colour, colour grammar and syntax, are all within the remit of this study group. I also would like to welcome a new Chair for the Study Group on Colour Education (CE), Robert Hirschler from Hungary, who has long experience of colour education.



The AIC Wiki is a new workspace for AIC members which will include public information, member lists, glossaries, book reviews, links to digital books on colour, working groups etc. AIC Wiki is built by Leonhard Oberascher and Helmut Leitner. Please contribute to this workspace.

We are happy to welcome two new regular members: Asociación Chilena del Color from Chile, and The Color Association of Taiwan (CAT). We will all be invited to Taipei since they are the organizer of AIC 2012. The AIC now has 26 regular members in the five continents. We have also incorporated three new individual members: Péter Paizs from Hungary, Ingrid Calvo Ivanovic from Chile, and Fulvio Mario Beretta from Italy. Welcome all to AIC!

After the very successful and memorable 11th AIC Congress in Sydney, we are now working on the coming meetings. Next will be the AIC Interim Meeting 2010 in Mar del Plata, Argentina in October 12-15. The subsequent meetings will be: 2011 AIC Midterm Meeting in Zurich; 2012 AIC Interim Meeting in Taipei, Taiwan; 2013 AIC 12th Congress in Newcastle, Great Britain; 2014 AIC Interim Meeting in Mexico; and 2015 AIC Midterm Meeting in Tokyo, Japan.

Finally I would like to strongly encourage you all to contribute with news, information and ideas to the AIC Executive Committee and to our AIC website, AIC e-news, AIC wiki workspace and AIC yearly Newsletter. Then we can be that important world community of people all fascinated and linked by colour! See you in Mar del Plata!

A handwritten signature in black ink, which appears to read 'Berit Bergström'. The signature is fluid and cursive, with a long horizontal line extending to the right.

Berit Bergström, AIC President

EXECUTIVE COMMITTEE 2010 – 2013



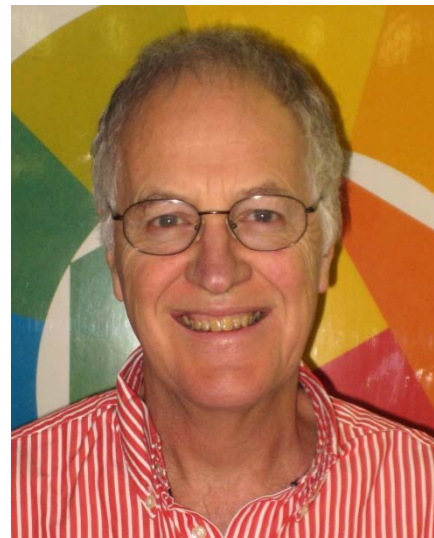
PRESIDENT

Mrs Berit Bergström
Swedish Colour Centre Foundation
P.O. Box 49022
S-10028 Stockholm
SWEDEN
T: +46 8 617 4711; +46 733 700 714
F: +46 8 617 4747
berit.bergstrom@ncscolour.com



VICE-PRESIDENT

Prof Dr Javier Romero
Dept. de Óptica
Facultad de Ciencias
Campus Fuentenueva s/n
Universidad de Granada
E-18071 Granada
SPAIN
T: +34 958 244241
F: +34 958 248533
jromero@ugr.es



SECRETARY/TREASURER

Mr Nick Harkness
Nick Harkness Pty. Ltd.
Birdcage 3.1
65 Doody Street
Alexandria NSW 2015
AUSTRALIA
T: +61 2 9700 8110
F: +61 2 9700 8112
nick@nhpl.com.au



COMMITTEE MEMBER

Prof Lindsay MacDonald
Faculty of Media
London College of
Communication
Elephant & Castle
London SE1 6SB
UK
T: +44 207 514 6707
l.macdonald@lcc.arts.ac.uk



COMMITTEE MEMBER

Arch. María Luisa Musso
Consulting Professor at the
School of Architecture,
Design and Urbanism,
University of Buenos Aires
Carbajal 3281
C1426EMA Buenos Aires
ARGENTINA
T/F: +54 11 4555 5937
mlmcolor@arnet.com.ar



COMMITTEE MEMBER

Ms Verena M. Schindler
Art & Architectural Historian
Postfach 504
CH-8702 Zollikon
SWITZERLAND
T: +41 44 391 62 74
vmschindler@yahoo.com



COMMITTEE MEMBER

Prof Shoji Tominaga
Chiba University
Graduate School of
Adv. Integration Science
1-33, Yayoi-cho, Inage-ku,
Chiba 263-8522
T/F: +81-43-290-3486
JAPAN
shoji@faculty.chiba-u.jp

Accounts for period 1st May 2009 to 30th June 2010 prepared by the AIC Treasurer, Nick Harkness.



Opening Balance at 1st May 2009	CHF
UBS account	5,888.67
Cash	3,886.77
Total	9,775.44
Transactions during the period	
Income from members (UBS account)	3,285.70
Bank interest	7.80
Bank fees	- 133.00
Income from members (cash)	475.00
Gifts for leaving AIC Executive Members (cash)	- 242.00
Printing of AIC 2009 Newsletter at RIT (cash)	- 1,800.53
Closing Balance at 30th June 2010	
UBS account	9,049.17
Cash	2,319.24
Total (CHF)	11,368.41

Letters for period 1st January 2008 to 31st December 2009 from the AIC Auditors, John Hutchings and Jin Sook Lee.

John Hutchings
Visiting researcher
Department of Colour Science
The University of Leeds

6 Queens Road
Colmworth
Bedford MK44 2LA
United Kingdom

tel +44 (0)1234 376768
john.hutchings@physics.org

Prof. Jinsook Lee
Chungnam National University

Division of Architecture,
College of Engineering
Chungnam National University,

220 Gung-Dong, Yuseong-Gu Daejeon,
305-764, Korea
Phone : +82-42-821-6573
Fax : +82-42-821-8717
e-mail : js_lee@cnu.ac.kr

2nd April 2010

Prof Javier Romero
Departamento de Optica
Facultad de Ciencias
Universidad de Granada
Spain

Prof. Javier Romero (AIC Secretary/Treasurer)
Departamento de Optica. Facultad de Ciencias
Universidad de Granada
18071 Granada, Spain

Dear Professor Romero,

Dear prof. Romero.

Accounts Examination

Audit Report AIC 2008-01-01 ~ 2009-12-31

AIC accounts for the two years ending 31st December 2009

I have copies of the AIC accounts and bank statements relating to the two years ending 31st December 2009.

AIC accounts for the two years ending 31st December 2009

I have copies of the AIC accounts and bank statements relating to the period ending 31st December 2009.

I am happy to report that the UBS Bank Basel account statements agree with the records of income and expenditure for the above period. The closing balance in the UBS account at 31st December 2009 is 7778.68 CHF. For obvious logistical reasons I am unable to confirm the cash balance of 2319.24 CHF shown in the cash account. However, the accounts have been kept in an exemplary manner, and there is no reason to believe that this total is incorrect.

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Yours sincerely,

Best regard,
Jinsook Lee.

MEMBER COUNTRIES

GRUPO ARGENTINO DEL COLOR

Prof Omar Burgos
Secretaría de Investigaciones FADU-UBA
Ciudad Universitaria Pab. 3 piso 4
C1428BFA Buenos Aires
ARGENTINA
T: +54 11 4789 6289
+54 11 4782 9280
gac@fadu.uba.ar
www.fadu.uba.ar/sitios/sicyt/color/gac

COLOUR SOCIETY OF AUSTRALIA

Dr Ken Pidgion
4 Morning Glory Avenue
5158 O'Halloran Hill S.A.
AUSTRALIA
T: +61 8 8381 3192
F: +61 8 8381 1546
kpidgeon@bigpond.com
www.coloursociety.org.au

ASSOCIAÇÃO PRO-COR DO BRASIL

Dr Paulo Felix M. Conceição
Avenida Paulista 1313
9º Andar – cj. 903
São Paulo SP 1311-923
BRAZIL
T: + 55 (11) 3262-4566; 9538-1236
F: +55 (11) 2236-0594
paulofelix@procor.com.br;
paulo-felix@uol.com.br
www.procor.com.br

COLOUR GROUP OF BULGARIA

Dr Elena Krasteva
Bulgarian Academy of Sciences
Institute of Electronics
72, Tsarigradsko chaussee blvd.
1784 Sofia
BULGARIA
T: +359 2 979 5865
elenakra@ie.bas.bg
blog.cvetovete.info

ASOCIACIÓN CHILENA DEL COLOR

Mrs Elisa Cordero
Instituto de Arquitectura y Urbanismo
Universidad Austral de Chile, Campus
Isla Teja
Valdivia
CHILE
T: 56-63-221943
F: 56-63-221943
chileacolor@gmail.com
www.asociaciondelcolor.cl

COLOR ASSOCIATION OF CHINA

Prof Guanrong Ye
Zhejiang University Hangzhou
Inst. Optical Radiation Technique (ORT)
310027 Hangzhou
CHINA
T: +86 571 8795 1191, 1183
F: +86 571 8796 8967
ygr@zju.edu.cn
www.fashioncolour.org.cn

SUOMEN VÄRIYHDISTYS SVY RY

Asst Prof Harald Arnkil
Kangastie 9
FIN 00630 Helsinki
FINLAND
T: +358 40 716 4804
harald.arnkil@aalto.fi
www.svy.fi

CENTRE FRANÇAIS DE LA COULEUR

President: Annie Mollard-Desfour
annie.mollard-desfour@dbmail.com
Vice President: Patrick Callet
patrick.callet@ecp.fr
Secretary/Editor: Laurence Pauliac
lpauliac@hotmail.com
FRANCE
www.cf-couleur.fr

DEUTSCHER VERBAND FARBE

Dipl-Ing Frank Rochow
Gralsburgsteig 35
D-13465 Berlin
GERMANY
T: +49 (0)30 401 02 618
F: +49 (0)30 401 42 49
offices@rochow-berlin.de
www.deutsches-farbenzentrum.de

THE COLOUR GROUP (GREAT BRITAIN)

Prof John Mellerio
Croft House, Bridge Street
Witham
Essex CM8 1BT
UK
T: +44-1376-513351
john@mellerio.org.uk
www.colour.org.uk

HUNGARIAN NATIONAL COLOUR COMMITTEE

Prof Antal Nemcsics
Ungvár u. 42
H-1185 Budapest
HUNGARY
nemcsics.antal@t-online.hu
www.colourandlight.hu

ASSOCIAZIONE OTTICA ITALIANA

Prof Dr Lucia R. Ronchi
1, via Sour Maria Celeste
I-50125 Firenze
ITALY
T: +39 55 22 3112
F: +39 55 22 2090
lucia.ronchiositani@associazioneotticaitaliana.info
www.associazioneotticaitaliana.info

COLOR SCIENCE ASSOCIATION OF JAPAN

Dr Yoshitsugu Manabe
Graduate School of Information Science
Nara Inst. of Science and Technology
8916-5 Takayama, Ikoma
630-0192 Nara
JAPAN
T: +81 743 72 5271
F: +81 743 72 5279
manabe@is.naist.jp
www.soc.nii.ac.jp/color

KOREAN SOCIETY OF COLOR STUDIES

Prof Park yon-Son
210 2nd floor Geryeo Bldg 544
Dohwa Dong, Mah-po Gu
Seoul
KOREA
kscs2008@hanmail.net
www.color.or.kr

ASOCIACIÓN MEXICANA DE INVESTIGADORES DEL COLOR

Dr Georgina Ortiz
Calle B #22, Mz. 10, Col. Educación
CP 04400, Delegación Coyoacan
MEXICO
T: 01 (55) 5622 2264
F: 01(55) 5622 2256
geortiz@servidor.unam.mx
www.amexinc.org.mx

NEDERLANDSE VERENIGING VOOR KLEURENSTUDIE

Ms Louise Buvelot
Dutch Society for Study on Colour
Rotsoord 3
3523 CL Utrecht
THE NETHERLANDS
T: +31 6 4511 4352
info@kleurenvisie.nl
www.kleurenvisie.nl

ASSOCIAÇÃO PORTUGUESA DA COR
Dr Maria João Durão
Faculdade de Arquitectura da UTL
Rua de Sá Nogueira
Polo Universitário - Alto da Ajunta
P-1349-055 Lisboa
PORTUGAL
T: +351 213615089; +351 916220608
F: +351 213 625 138
mjdurao@fa.utl.pt, apcor@fa.utl.pt
www.apcor.org

DRUSTVO KOLORISTOV SLOVENIJE
Prof Dr Slava Jeler (President)
Dunja Legat (Secretary)
Ventrinjska 16
SI-2000 Maribor
SLOVENIA
T: +386 2 429 5322; +386 2 250 1323
F: +386 2 250 1324
legat@uni-mb.si
www.dks-drustvo.si

COLOUR GROUP OF SOUTH AFRICA
Mrs Natasha Nel-Sakharova
Electromagnetic Metrology 1
Private Bag X34
Lynnwood Ridge 0040
SOUTH AFRICA
T: +27 12 841 3618; +27 82 807 7310
F: +27 12 841 2131
nnelsakharova@nmisa.org
www.colourgroupsa.org.za

COMITÉ ESPAÑOL DEL COLOR
Dr Manuel Melgosa
Departamento de Óptica
Facultad de Ciencias
Universidad de Granada
18071 Granada
SPAIN
T: +34 958 246364
F: +34 958 248533
mmelgosa@ugr.es
sedoptica.cfmac.csic.es/color/color.html

STIFTELSEN SVENSKT FÄRGCENTRUM
Mrs Berit Bergström
Swedish Colour Centre Foundation
Igeldammsgatan 30
P. O. Box 49022
S-100 28 Stockholm
SWEDEN
T: +46 8 617 4711, +46 733 700 714
F: +46 8 617 4747
swedish.colour.centre@ncscolour.com
www.colorsport.org

PRO COLORE
Schweizerische Vereinigung für die Farbe
Ms Eveline Staub
Postfach 8701
CH-8036 Zurich
SWITZERLAND
T: +41 44 342 36 08
F: +41 44 342 36 09
info@procolore.ch
www.procolore.ch

COLOR ASSOCIATION OF TAIWAN
Prof Lee Tien-Rein
55 Hwa-Kang Road
Yang-Ming Shan,
Taipei 111-92
TAIWAN
T: 886-2-28610511 ext. 10105
F: 886-2-28615624
trlee@mail.pccu.edu.tw
www.color.org.tw

THE COLOR GROUP OF THAILAND
Prof Dr. Aran Hansuebsai
Dept. of Imaging & Printing Technology
Faculty of Science
Chulalongkorn University
Phyathai Rd.
Bangkok 10330
THAILAND
T: +66 2 218 5588/9, +66 2 218 5581/2
F: +66 2 254 6530, +66 2 255 3021
aran@sc.chula.ac.th
www.thaicolourgroup.org

INTER-SOCIETY COLOR COUNCIL
Mrs Cynthia J. Sturke
c/o Hunter Associates Laboratory Inc.
11491 Sunset Hills Road
Reston, VA 20190
USA
T: +1 703 318 0263
F: +1 703 318 0514
iscc@coompuserve.com
www.iscc.org

ASSOCIATE MEMBER
INTERNATIONAL ASSOCIATION OF
COLOR CONSULTANTS/DESIGNERS
NORTH AMERICA (IACC-NA)
Ms. Marcia Walter (President)
2600 South Race Street
Denver, CO 80210
USA
T: +303 722-6808
F: +303 744-0766
president@iaccna.org
www.iaccna.org

INDIVIDUAL MEMBERS

Mr Fulvio Mario Beretta
ISTITUTO DEL COLORE
Via Ippolito Rosellini
3 – 20124 Milano
ITALY
T: +39 345 320 1933
fulviomarioberetta@virgilio.it

Dr Nilgün Camgöz-Olgunturk
Faculty of Art, Design and Architecture
Bilkent University
Oyak 10 Sitesi
16/20 Koru Mah Gayyolu
06810 Ankara
TURKEY
onilgun@bilkent.edu.tr

Dr Andrew Chalmers
Dept. of Electronics & Computer Eng.
Manukau Institute of Technology
Newbury Street 09
Private Bag 94006
Manukau City, Auckland
NEW ZEALAND
chalmers@manukau.ac.nz

Mr Michel Cler
President, Ad Chroma
64 rue Vergniaud
75013 Paris
FRANCE
T: +33 1 45 80 91 15
contact@ad-chroma.com

Prof Dr Ana Marija Grancaric
Faculty of Textile Technology
University of Zagreb
Prilaz baruna Filipovica 30,
HR-10000 Zagreb
CROATIA
T: +385 1 48 77 360
amgranca@ttf.hr

Dr Susan Habib
6. Sokak 43
Bahcelievler 06500
Ankara
TURKEY
lapismaple@gmail.com

Ms Ingrid Estefania Calvo Ivanovic
General Gorostiaga 509,
Depto. 501-B, Ñuñoa
Santiago, Región Metropol. Cp: 7790559
CHILE
T: +56 2 934 1878; +56 9 9487 4614
contacto@proyectacolor.cl
juanita.laguna@gmail.com

Ms Latika Khosla
Freedom Tree Design
63 Worli Sea Face Road
Worli
400018 Mumbai
INDIA
latika@hathway.com

Mr Markus Maas Kotterink
Dutch Color School
Van Allenstraat 110
1562 TN Krommenie
NETHERLANDS
T: +31 75 616 9977
algemeen@nederlandskleurencentrum.nl

Mr Lukasz Litwiniuk
Optical Radiation Standards Laboratory
Ul. Elekoralna 2
PL-00-950 Warszawa P-10
POLAND
T: +48 22 620 0241 ext. 9549
vprbl@gum.gov.pl

Dr Ole Ingolf Jensen Nyrén
Drivhusgatan 6 B
SE-412 64 Gothenburg
SWEDEN
Tel: +46 31 83 24 83; +46 73 99 33 713
nyren@brevet.nu

Dr Leonhard Oberascher
Kaltnergasse 8
A-5020 Salzburg
AUSTRIA
info@leoncolor.com

Dr Zena O'Connor
6/144 High Street
North Sydney, NSW 2060
AUSTRALIA
T: +61 2 9922 7485
zena.designresearch@gmail.com

Dr Renata Pompas
Corso Ventidue Marzo, 4
20135 Milano
ITALIA
T/F: +39 2 5519 2384
renata.pompas@libero.it

Arch Rita Rao
Seconda Strada, Torre 2 – San Felice
20096 Pioltello (MI)
ITALIA
T: +39 02 753 2414; +39 348 42 07 469
ritarao@libero.it, rita.rao@fastwebnet.it

Dr Alan R. Robertson
2428 Ogilvie Road
Ottawa ON K1J 7N5
CANADA
alan.robertson40@gmail.com

Mr Péter Paizs
Egres u. 32
(Babér u.) 2000
HUNGARY
T: + 36 26 316 700
paizspeter@gmail.com

Mrs Mette Terkildsen
Dansk Farveinstitutet
Lillevangspark 30
DK-3520 Farum
DENMARK
T: +45 7020 9978
Email: info@danskfarveinstitut.dk

Prof Dr Theano F. Tosca
Aristotle University of Thessaloniki
Dept. Architectural Design & Visual Arts
Priv. 17, Athan Soulioti Street
546 42 Thessaloniki
GREECE
tosca@eng.auth.gr

Assoc Prof Rengin Ünver
Yildiz Technical University
Faculty of Architecture
Building Physics Dept.
Besiktas
80750 Istanbul
TURKEY
runver@yildiz.edu.tr

Dr Dipl-Ing Andrea Urland
Spitalska c. 59
811 08 Bratislava
SLOVAKIA
a_urland@yahoo.com

Prof Arne Valberg
Norwegian University of Science and
Technology
NTNU, N-7491 Trondheim
NORWAY
T: +47 7359 8373
arne.valberg@ntnu.no

Prof Arch Pietro Zennaro
Dept. of Architectural Design (DPA)
University Iuav of Venice
Cotonificio veneziano, Dorsoduro 2196
30123 Venice
ITALIA
T: +39 338 348 8214
pietro.zennaro@iuav.it



The 11th Congress of the AIC was held in Sydney, Australia, between 27 September and 2 October 2009 at the University of New South Wales. Over 330 delegates from a total of 34 countries attended, of whom more than 200 had travelled the long distance from overseas. Some 135 oral and 80 poster papers were presented, covering a diverse range

of topics in colour research and applications. For the first time at an AIC Congress, authors were given the opportunity to have their papers peer-reviewed prior to the event.

Delegates to the Congress were welcomed by haunting Aboriginal music, with the traditional 'Cleansing Ceremony' performed by the Diramu Dancers. The traditional owners of the land, the Aboriginal peoples of Australia, were acknowledged with particular reference to the Wallangang Tribe whose land adjoins Sydney Harbour. A feature of the Congress was a traditional sand painting created outdoors by Walangari Karntawarra with assistance of Congress delegates.



Walangari Karntawarra puts the finishing touches on a sand painting in front of the Congress venue at UNSW (Photo by Maja Strgar).

The keynote address, 'Why are animals colourful? Sex and Violence, Seeing and Signals', was given by Prof Justin Marshall, head of the Visual Ecology Laboratory at the School of Biomedical Sciences, University of Queensland.



Derek Grantham, Sponsorship Chair, and Tara, leader of the 'Pink Ladies' from Arinex, the Congress Administrators.

The organising committee's stated goal for the 11th AIC Congress was to create an environment for the meeting of minds across all disciplines of colour research and application. The Congress format was designed to promote greater dialogue between people working in different academic disciplines, with opportunities for delegates to broaden their understanding of colour. To meet this goal a number of special features were included in the programme:

1. Pre-Congress workshops
2. Interdisciplinary symposia
3. Topic review papers
4. Invited speakers

Three pre-Congress colour skills workshops introduced delegates to current issues in art and design:

- Colour: Meaning and Communication, presented by Associate Professor Dianne Smith.
- Master Class for Artists and Designers, presented by Professor Lois Swirloff.
- Introduction to Colour Psychology and Statistics, presented by Professor Byron Mikellides.

'Good and bad' colours: conservation & reproduction of art

The first interdisciplinary symposium illustrated the interdependence of the art and science of colour. Those who restore and conserve artworks need the skills of an artist and the knowledge and insights of an art historian combined with an understanding of the physics and chemistry of the materials used by artists past and present. Especially they need to know the circumstances that can lead to the deterioration of materials and how appearances can change over time. They need to be able to use sophisticated equipment in a process equivalent to forensic science.

Contributors brought together to discuss the issues included: a paintings conservator, Dr Maria Kubik; an imaging specialist, Prof Roy Berns; and an art historian, Dr John Gage. The symposium was chaired by Dr Paul Green-Armytage.

AIC 2009 CONGRESS – SYDNEY, AUSTRALIA

Appearance in nature & design: phenomena & measurement

The second interdisciplinary symposium focused on aspects of appearance other than colour, such as interference, texture, gloss and transparency, which are of increasing interest to designers with the advent of new 'effect pigments'. These new materials are challenging the ingenuity of both designers and those who devise measuring instruments for their control. The aim of this symposium was to look at the palette of effect colours in nature and to raise awareness of the possibilities. Contributors included: a designer, Chalisa Morrison; an industrial engineer, Gabi Kigle-Boeckler; and a cardiologist, Dr Kevin Hellestrand, who has a particular interest in appearance phenomena in the natural world. The symposium was chaired by Nick Harkness, who was also the overall Congress Chair.

Review papers and invited speakers

Three review papers gave delegates an overview of the topics addressed during the Congress and introduced the latest developments in understanding and research:

- Colour Vision, presented by Professor Paul Martin;
- Colour Technology, presented by Professor Roy Berns;
- Applications of Colour in Art and Design, presented by Associate Professor Karin Fridell Anter

Maintaining the overall multi-disciplinary theme, a further three invited speakers presented topics of general interest:

- Colours of Aboriginal Australia, by Walangari Karntawarra, the celebrated indigenous artist and educator;
- History of Traditional Natural Dyeing Methods, by Sachio Yoshioka, a textile dyer and historian in Kyoto, Japan;
- The Early History of White's Illusion, by Professor Michael White, presented as the closing keynote address.



Catherine van Wilgenburg (Australia) and Maja Strgar (Croatia) discuss colour composition at the Art Gallery of New South Wales.

AIC Study Groups are an important part of AIC activities and each SG was allocated a dedicated session, including a presentation by an invited speaker (see the SG reports at the end of this Newsletter).



Congress delegates enjoyed the contrast between the bright views over Sydney Harbour and the lush shadow of the Botanic Gardens.

Social Events

The main hall was occupied one afternoon by a Colour Market, with stalls offering a colourful variety of merchandise from colour charts to cuisine. The Wednesday afternoon excursion, on a perfect spring day, was to the Botanic Gardens with aboriginal guides to explain the significance of the many native plants. Afterwards delegates were entertained to a sumptuous tea in the Art Gallery of NSW. Later everyone relished a dinner cruise around Sydney Harbour on a clear warm evening. The organising committee and the Colour Society of Australia did us proud!

A special issue of ***Colour: Design & Creativity***, published by the Society of Dyers and Colourists (SDC) in association with AIC, includes content based on presentations given at the AIC Congress in Sydney. The editorial of this special issue by the guest editor, Nick Harkness, is reproduced in part here with the permission of SDC. To read the full articles in this issue, visit: www.colour-journal.org/2010/5/105contents.htm

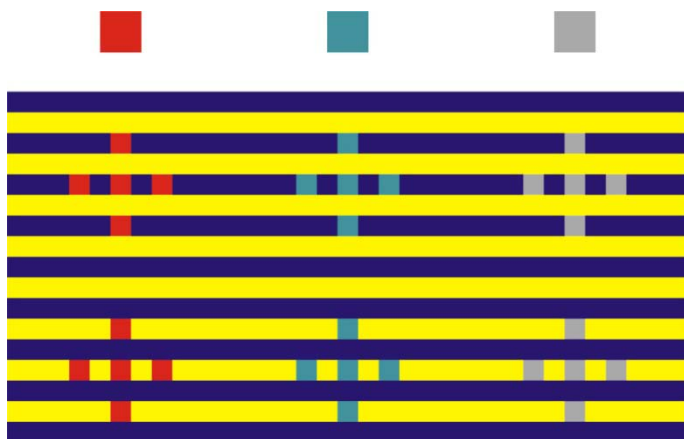
Colour: Design & Creativity is an online journal and is currently free to all users. To view articles, to subscribe to the journal, or to receive e-alerts when articles/issues are published, please visit: www.colour-journal.org. To find out more about colour publications from SDC: www.sdc.org.uk/publications/publ.htm



The AIC Deane B. Judd Award was established in 1973 to honour the memory of Deane B. Judd, and is presented every two years. It is the highest honour that can be bestowed by the international colour community. The Award recognizes work of international importance in the fields of colour perception, colour measurement, and/or colour technology. The 2009 recipient was Dr Arne Valberg, who was honoured at the AIC 2009 Congress in Sydney. The members of the 2009 Judd Award Committee were: Paula Alessi, Robert Hunt, John Hutchings, Mitsuo Ikeda, Daniel Lozano, Alan Robertson, Lars Sivik, Gunnar Tonnquist and Pieter Walraven. These nine previous winners of the award and past presidents gave very careful consideration to the five nominations.

Arne Valberg received his PhD from the University of Oslo in 1976. He was a Research Scientist for the Norwegian Research Council for Science and the Humanities at the Max Planck Institute, Göttingen, and the University of Freiburg 1972-1990. He was appointed Professor of Biophysics and Vision Science at NTNU in Trondheim in 1991. He is a Fellow of the OSA, and author of three books and approximately 100 peer-reviewed articles in scientific publications.

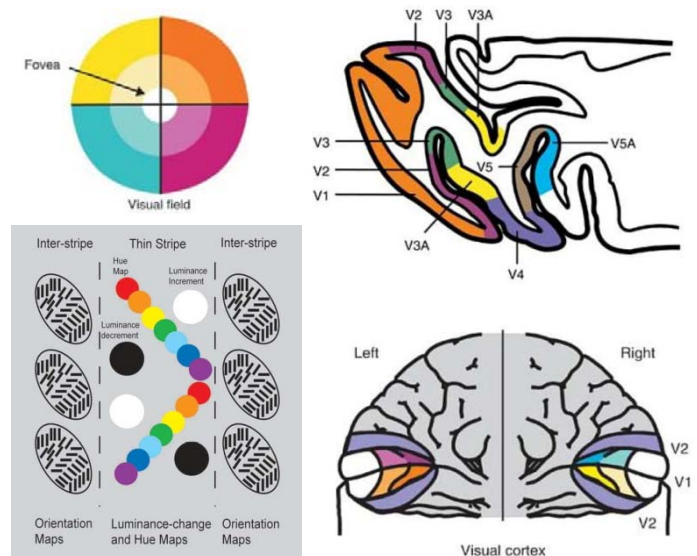
The title of Dr Valberg's lecture was: 'Colour vision: different roads from perception to neuroscience'. In response to the rhetorical question 'What is colour?' he replied, 'Colour is neither spectral distribution, nor relative cone excitation, nor chromaticity.' As examples he cited: (a) colours of the same chromaticity but different appearance (simultaneous and successive contrast); and (b) colours of different chromaticities but similar appearance (colour constancy).



The Munker illusion, a chromatic form of White's illusion, arises from the colour assimilation effect. This appeared as the cover illustration of the 4th Edition of WD Wright's 'The Measurement of Colour', 1969.



Building upon electrophysiological recordings from the lateral geniculate nucleus (LGN) of the macaque monkey, Arne Valberg and his colleague Thorstein Seim have developed a model for neural processing of colour and brightness/lightness information that starts in the cone receptors and continues through the opponent cells of the retina, LGN, and visual cortex. The excitation of the three cone types to direct stimulation by light is modified in accordance with a hyperbolic response function before providing inputs to retinal ganglion cells. Using weighted differences of such cone outputs, the model simulates the responses of common types of opponent ganglion and geniculate cells to light modulation along the chromatic and luminance dimensions. By extrapolating the results of the simulation, they showed how the brain might combine inputs from the LGN to obtain correlates of chromatic and achromatic colour vision and of brightness/lightness perception. Notably, they demonstrated for the first time how combinations of "L-M" and "M-L" parvocellular ON- and OFF-opponent-cells may lead to a quantitative account of brightness and blackness scaling.



Regions of the visual cortex (right) involved in processing of areas of the retinal visual field. After V1, chromatic as well as achromatic information is carried to area V2, to the so-called thin stripes, which are flanked by orientation-selective cells. Beyond V2, colour information is distributed to several areas (V3, V4, V5, and inferior temporal cortex), with increasingly specialized cells.



Dr Yoshinobu Nayatani passed away at a hospital in Hyogo Prefecture, Japan, on 29th May 2009. He was a great colour scientist and a most diligent contributor to the colour research community.

Dr Nayatani was well-known as a prolific author and a member of the Editorial Board of *Color Research and Application* from 1977

until 2008. His last article in this journal appeared in April 2009. Dr Nayatani received the AIC Judd Award in 1993, during the 7th AIC Congress, in recognition of his work on colorimetry and colour vision, including many contributions to models of chromatic adaptation and colour appearance. He was Chair of the Organizing Committee for the AIC Quadrennial Congress in Kyoto in 1997. In the CIE, he chaired TC 1.3 on Standard Sources for eight years, and TC 1.32 Prediction of Corresponding Colors. He was an honorary member of the Japanese National Committee of CIE, the Color Science Association of Japan, Illuminating Engineering Institute of Japan, and Japanese Society for Quality Control.

Dr. Nayatani graduated from Osaka University in 1951, where he had studied electrical engineering. He began working in the Electrotechnical Laboratory of the Ministry of International Trade and Industry (MITI), engaged in photometry, colorimetry, and fundamental theory of illuminating engineering. Meanwhile he continued his education, earning a PhD from Osaka University in 1961. In 1974 he was promoted to director of the Osaka Branch of ETL where he continued to work until his retirement in 1980. He joined the Faculty of Engineering at Osaka Electro-Communication University as a Professor in 1980, and served as Dean of the Faculty of Engineering (1995–1997). As Professor Emeritus he served on the Board of Trustees from 1999 to 2002.

Dr Nayatani studied the evaluation of sources simulating the CIE daylight illuminants, assessment of observer metamerism, and prediction of colour appearance. His professional interests covered information processing at the interface between psychology and physics; colour engineering (colour appearance and metamerism); statistical information processing, and quality management and control. He published much on the relationship between colour order systems, colour appearance and colour difference. In addition he published on quality management and control, including *Proposal of New Seven Tools for Quality Management* in 1977, still widely used in Japan. The books on these tools have been translated into several languages. An award-winning book, *Management for developing Creative New Products*, was published in 1997 with two colleagues.

He will be greatly missed by all the colour science community.

Dr Leo M. Hurvich, professor emeritus of psychology from the University of Pennsylvania, passed away at his home in New York City on 25th April 2009 at the age of 98.

Dr Hurvich and his wife Dorothea Jameson, who predeceased him in 1998, received joint recognition for their major contributions to our understanding of

how we perceive colour and how our visual systems operate. They were the joint recipients of the AIC Judd Award in 1985. They were elected to the major honorific societies including the National Academy of Sciences and the American Academy of Arts and Sciences, received many awards, and published numerous joint as well as individual articles and books.

Dr Hurvich earned his undergraduate and graduate degrees from Harvard University. After receiving his PhD from Harvard's psychology department in 1936, he worked there until 1947, then at the Color Technology Division of Eastman Kodak. In 1957 he returned to academia, first in the psychology department of New York University (until 1962) and then at the University of Pennsylvania.

When Hurvich and Jameson began investigating the nature of colour vision at Eastman Kodak, the dominant theoretical idea was the Young-Helmholtz trichromatic theory, which states that the wavelength composition of light is encoded by three separate classes of cone photoreceptors. The scientific orthodoxy of that time decreed that subjective appearance could not be studied scientifically at all. Jameson and Hurvich found, however, that trichromatic theory did not provide a good account of the way that colours appear, and they were the first to use the subjective appearance of colours as a guide to rigorous, quantitative experimentation. They revived and modernized Ewald Hering's theory that colour processing relies on three opponent visual channels, each of which signals mutually exclusive perceptual response states (red vs green, blue vs yellow, and white vs black, respectively). They devised an ingenious hue cancellation procedure which allowed experimental quantification of the properties of the opponent channels. In a series of papers that are remarkable for their rigour and scope, they developed an opponent-process model that provides a unified account of normal human colour vision and of deficits in colour vision that had previously gone unexplained.

Although he retired in 1979, Dr Hurvich remained active in writing and conference participation until about the turn of the century. He served as vision editor for *Color Research & Application* from 1992 to 1993. His 1981 book, *Color Vision*, provides a comprehensive treatment of the field that is still in wide use. He changed how we see the world in colour.





The Argentine Color Group (Grupo Argentino Color, GAC) was founded in 1980, and brings together all institutions and individuals who share an interest in the study of colour science and

colour applications. The goals of the Group are to encourage research on problems related to colour, to promote the exchange of information with similar associations abroad, to manage a documentation centre, and to integrate the different fields from which the study of colour can be addressed: science, technology, design and education. There is also strong interest in the Group from the artistic community in the diffusion of their works. For further information, please visit our website at:

www.fadu.uba.ar/sitios/sicyt/color/gac.htm

Exhibition of Visual Arts 2009

With the participation of 16 artists who are members of the Argentine Color Group, and coordinated by Silvia Barrios and Omar Burgos, this exhibition was presented in two cities:

March: City Hall and House of Culture, San Fernando del Valle de Catamarca, province of Catamarca.

November: Central Library of the National University of Lomas de Zamora, province of Buenos Aires.



The artist's group of the GAC



Children looking at the colour art exhibition

National Conference of Color in Arts

The conference was held on 14 April, with the presentation of 20 oral papers at the School of Architecture, Design and Urbanism of the University of Buenos Aires. Objectives were:

- Dialogue, discussion and exchange of colour ideas between artists, critics, curators, researchers and art historians.
- The submission of papers on colour in arts to be offered in conjunction with the itinerant exhibition of Visual Arts, which GAC has been showing in different provinces of the Argentine.

Thematic areas covered were:

- a. Colour in art history.
- b. Colour in the artistic techniques.
- c. Colour in contemporary art.
- d. Colour in art education.
- e. Colour in personal art work.



National Conference of Color in Food

Held in April at the School of Architecture, Design and Urbanism of the National University of North-East, Campus Resistencia, province of Chaco, with the presentation of 18 oral papers and various posters. Some of the topics covered were: visual appearance and food, food packaging and colour, pigments from edible vegetables, taste-colour synaesthesia, food representation in still natures, colour in restaurants, influence of colour in the design of kitchens, colour of food products: Maillard reaction.

Color Course

Delivered in conjunction with the AAQTIC (Argentine Association of Chemists and Technicians of the Leather Industry). It was taught at the seat of AAQTIC in Buenos Aires by Daniel Lozano from 10-26 November. Module I: Introduction to the Science of Color. Module II: Advanced Techniques of Color Technology.

RESCA

The Argentine Color Group is integrated into the Steering Committee of RESCA (Argentine Network of Scientists Societies) created in November 2008.

Other activities were the monthly meetings of the steering committee, and the organization of the AIC 2010 Interim Meeting to be held in the city of Mar del Plata, province of Buenos Aires, in October 2010.



The Colour Society of Australia was inaugurated in 1987 and has Divisions in New South Wales, Victoria, Western Australia, South Australia, Queensland and Tasmania.

The membership is drawn from people whose work and interests involve colour. Objectives are:

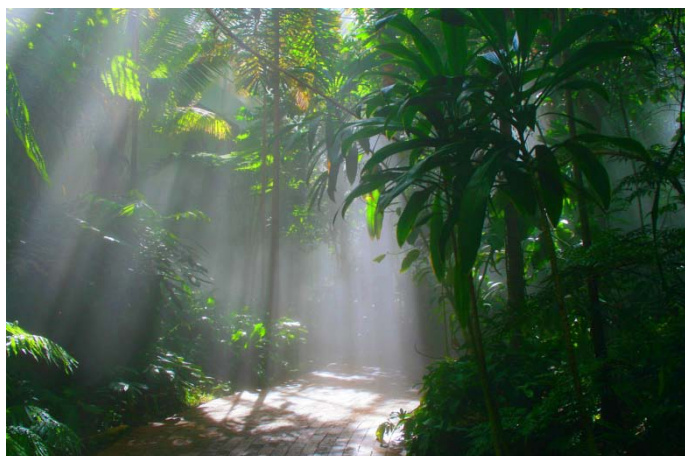
- Provision of a forum on colour and its application in science, industry, the visual arts and education.
- Promotion of colour consciousness, both within colour related spheres and in the wider community.
- Fostering of international collaboration in colour.
- Provision of avenues for the acquisition of colour information for all members of the community.
- Encouragement and promotion of research into all aspects and applications of colour.

Publications

SPECTRUM, the Journal of the Colour Society of Australia, is now a digital publication transmitted regularly via email.

Activities

2009 was big year for all Australian State Divisions, especially for NSW, much of whose energies were consumed by the AIC Congress. In Queensland one meeting was both topical and tropical: featuring the excitement of colour of the Queensland Landscape. AIC members from cold climates may be intrigued to hear from an expert in tropical gardens such as Dr Jeannie Sim, Senior Lecturer in landscape architecture. In the lush areas of our Australian North there is more “green” in the landscape and visual sensations can be achieved through wise composition of elements, shapes, patterns and tones. By ignoring the hues of flowers and concentrating on the use of light and shadows in the garden design; the undertones of stone, rock and sand dappled by the sun and sky while water provides a play of reflections up into the understory.



Mist and light create a mystical feeling in an artificial rainforest in the Adelaide Botanical Gardens, South Australia. (Image courtesy of SXC).

The Victorian Division hosted a meeting about digital colour and its use in Architecture for its joint meeting with the Surface Coatings Associations. Other memorable meetings included one on the transition of LED colour into the urban night and its application in illuminating modern interiors.

In Tasmania the sleuthing of a 500 year old Renaissance painting restoration was mixed with external excursions to visit famous ceramicist Rynne Tanton at work at his country retreat, a visit to a factory mixing inks, and a modern daily newspaper press colour run using the latest CMYK computer assisted colour.



The Sacrifice of Isaac (c.1525) by Antonio di Donnino del Mazziere, Harvard Art Museums (1977.177). During conservation treatment by Jocelyn Evans (Paintings Conservator, Tasmania), a layer of silver leaf was discovered beneath the paint layers.

Social events were also prominent such as when the Director of Designer Rugs invited NSW members to celebrate in their beautiful Edgecliff showroom and over wine and cheese, presented their stunning, colourful collections of rugs from prominent designers Akira Isogawa and Easton Pearson amongst others. All in all, 2009 was one the Society's best years ever in Australia.



Rynne Tanton and his macrocrystal glazed ceramics have recently been featured in Vogue Living Australia. The colours are created using different metal oxides in the glaze mix – cobalt for blue, copper for green, titanium for white, etc.

Congress in Sydney

The highlight of the 2009 year was our very successful AIC Congress in Sydney. The Committee chaired by Nick Harkness created a most memorable event, as demonstrated through the outstanding number and quality of papers and the great social events (see separate report on the Congress).



The principal activities of the Associação Pró-Cor do Brasil in 2009 were debates and meetings around the creation of Brazil's Day of Color. The objective was to raise public awareness of the richness of the colours that exist in Brazil, manifested not only in nature, football, folklore, carnival, but also in other cultural aspects. With all this wealth of colours, Pró-Cor also intends to highlight the general lack of knowledge of colour that exists in Brazil.

21.09.2009 – **Creation of The Brazil Day of Color** – Lectures at the Federação das Indústrias do Estado de São Paulo (FIESP): Fashion, Sustainability and Color Trends for 2010 – activities that marked the beginning of celebrations of the Day of Color. Activities that could be developed include:

- Awards for the best work in the field of colour research and application;
- Plastic arts exhibitions, architectural design, decoration, fashion, among other activities from standpoint of colour;
- Meetings and scientific debates of literature on the art and science of colour;
- Promotions of colour products at retail stores;
- Interviews in the communication channels with experts in art and science of colour;
- Presentation of chromatic projects for urban areas of Brazilian cities.



October 2009 – Start of the registration of the trademarks: Pró-Cor and Dia da Cor – Instituto Nacional de Propriedade Industrial (INPI). A document was filed in the Legislature, in the office of Alderman Floriano Pesaro, a letter requesting the official Day of Color (September 21) within the events calendar of the City of São Paulo.

Color & Sustainability: Color in Society and Psychology

(Briefing of Paulo Felix speeches in the proposing of the creation of The Brazil Day of Color.)

The mission of Pró-Cor do Brasil is to promote research, advise, encourage and disseminate knowledge of colour in art, science, industrial processes and in all fields of human activity, taking in account that colour can provide welfare and quality of life – hence the importance of having an official date in Brazil to celebrate the good use of colour. Colours may represent nuances of psychological and social dynamics – expressed in sensory impressions of the environments and feelings evoked by chromatic sensations. We need to broaden the debate on colour, technology and sustainable development taking into consideration the psychological and social impacts of colour.

More about the Manifesto of the Brazilian Day of Color can be found on the Pró-Cor website at: www.procor.com.br

In the Manifesto of the Day of Color, Fabiana Mendes gave a lecture Colour in Fashion, based on her experience of seven years in the chemical industry, and as a teacher since 2004 in the faculty in engineering of UNIP. "The purpose of colour in fashion is meaningless and it is with this view that the textile industries are obsessed with definition of their colour cards." And how are trends created? "To devote themselves to fashionable colours for a particular season, a lot of research is carried out. We know how the culture of a country, art history, ecological impacts and other external factors contribute to the definition of colour trends. Fibre, fabric and market segment are also involved in the formation of a commercial colour chart."



There are many colour choices for the fashions in clothing, homes, household fabrics and walls. How to combine them is what the expert, graphic designer Nelson Bavaresco, System Colors Cecor, discussed in his lecture on Colour Harmony. "We will show professionals in different segments involved with schools how to develop projects based on a three-dimensional chromatic system. Using only 72 bases with anchor points, more than 110,000 colour combinations can be developed."

Colour in the Era of Green

The interior designer Scheila Ferlin found that all customers preferred renovation by recycling. Ten years ago she began to research renewable materials for decoration and scenography, and became a consultant for sustainable product development. "We train the eye to see what materials can be processed. What was dull, comes to life in new clothing. Today we work with numerous studies and they all lead to recycle. In this mix, we get the colours, materials and products that bring Brazilian-ness to architectural design, in colours inspired by nature and what we call an ecotone. They range from the green of the dense forests, crystal clear blue, to the yellow and terracotta of the scorching sun of the dry lands, using all the colours displayed in nature."



Remodelled eco-house near the base of Sugarloaf mountain and the shores of Rio de Janeiro. <http://inhabitat.com>

ГРУПА ЦВЯТ БЪЛГАРИЯ



COLOR GROUP BULGARIA

The beginning of the activities of a colour society in Bulgaria was in 1980, when a group of scientists founded the group of “Color and Optic Measurements”, headed by Prof Dr Razum Andreychin and Asst Prof Todor Kehlibarov. The group grew steadily and was registered in 1994 as a non-profit association “Color Group – Bulgaria”. Over the years, specialists from various domains of science and art joined the group: artists, architects, designers, art historians, physicists, chemists, colorimetrists, and engineers from various industries: textile, food, polygraphy. The designer Asst Prof Dimitar Dobrevski was elected as president of the Group in 2008.

During these 30 years, many national and international conferences have been held, and a lot of workshops and exhibitions organized. The activities of the publishing team contributed to the promotion of the Group. Since 2001, the materials of the conferences and symposia held by the Group, have been published on CD. Separate specialised studies on the problems of colour science are also published.

Scientific forums

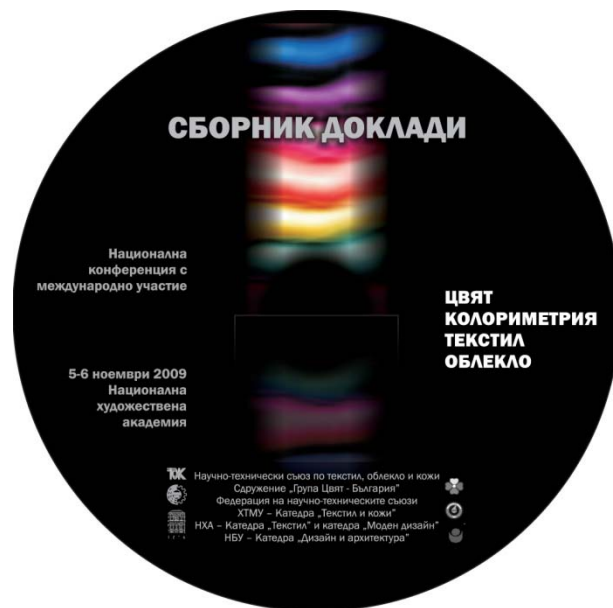
In 2009, the Group organized two successful scientific forums:

“Photocolor 2009”, a national workshop, held on Midsummer Day, dedicated to the problems of photography. The frame of the workshop was open and allowed participation of researchers in photographic science, as well of creative authors for the presentation of visual projects. The forum was held with the kindest cooperation of our host – the Technical University of Sofia.



Creative display in exhibition at Photocolor 2009

“Color, Colorimetry, Textile and Clothing”, a National Scientific Conference with international participation was held in autumn. It was jointly organized with the cooperation of the long-term partners of CGB: the Scientific and Technical Union of Textile, Clothing and Leather, the Department of Textile and Leather at the University of Chemical Technology and Metallurgy, and the Department of Textile at the National Art Academy. Lectures concerning the problems of colours in fashion, textile industry and art textile were presented in the various topics of the conference. A competition was held for youth textile design projects within the frame of the national scientific conference. Funds were raised for the awards of the finalists, selected by an expert jury.



CD label for Proceedings of National Scientific Conference

Exhibitions

One object – many points of view: an exhibition of photographic experiments within the frame of the Scientific workshop “Photocolor 2009”.

Youth exhibition of textile design projects within the frames of the National scientific conference with international participation “Color, Colorimetry, Textile and Clothing”.

Publications

Photocolor 2009: Proceedings of the national workshop (CD), ISSN: 1313- 9509.

Color, Colorimetry, Textile and Clothing: Proceedings of the National scientific conference with international participation (CD), ISBN: 978-954-92092-3-5. Design of the CD jacket was done by Svilen Gavrilov, a PhD student and member of CGB.

The monograph by Dimitar Dobrevski “Methodical manual of design for disabled persons”, where the role of colour for creating a better environment for persons with disabilities is amongst the highlights, was published in the series “COLOR Library”, ISBN: 978-954-92092-2-8.

In 2009, issues No. 18, 19 and 20 of the Bulletin of Color Group – Bulgaria were published.



A few of years ago, some professionals from Chile participated in Colour Meetings held in Argentina and Brazil.

During a Colour Seminar held at the Universidad Austral de Chile in September 2008, the creation was proposed of a Chilean Colour Association that would bring together these professionals and other interested people. At the time, the President of the AIC, José Luis Caivano, who was a seminar participant, strongly supported the idea. Verena M. Schindler also expressed her support and encouragement electronically. Eventually, the Asociación Chilena del Color (ACC) was launched in 2009 with 43 founding members nationwide. Its membership includes a great variety of professionals and experts. The ACC Board was organized mostly with members from Valdivia.

The main goal of the group is to promote the discussion of issues pertaining to colour in all areas that are deemed relevant and to share knowledge taking into account the contributions that the different disciplines may make. Eventually, we are heading toward the development of interdisciplinary approaches and work related to colour and reaching the community at large to increase their awareness about the role that colour plays in everyday life. The group's first task was to formalize its organization and internal by-laws under the terms of *Asociación Chilena del Color*.

Web site

The second immediate task concentrated on the design and implementation of a web site for the purpose of establishing a nation-wide contact network and disseminating information regarding colour related activities. The ACC's web page is constantly updated by posting news and information about national and international events. It also includes a resource page with references and information for members. This web site is the first national meeting place for Chileans interested in colour. See: www.asociaciondelcolor.cl. The designer is a young ACC member who lives in Santiago. She made a presentation through a video conference to the ACC Board on how to manage and feed the site.



The Board of ACC learning how to feed the web site. From left to right: Catherine Hugo, Patricia Renner, Elisa Cordero (President), and Marcos Matus. On the screen is the web designer, Ingrid Calvo.

Regional groups

During 2009, regional groups were created in Santiago and Valdivia, promoting the ACC in their cities. In Santiago, members are participating in some national exhibitions. In Valdivia, the group is composed mostly of artists, designers and architects. They are furthering the ACC's main goal by organizing an event that includes live electronic music and colour installations to present the web site to the local community in order to promote a higher level of awareness pertaining to issues related to colour among lay people.

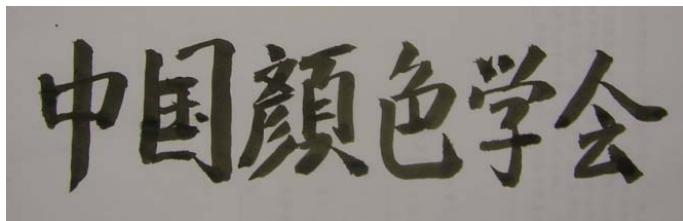
In August 2009, the ACC was accepted as a member of the AIC. This international recognition strengthened the ACC's commitment to continue working on issues pertaining to colour and its multiple implications for a variety of disciplines and everyday life.

New initiatives

Some members of the ACC are participating in a colour research project with the architectural school and anthropology school of the Universidad Austral de Chile. The results will be published in November 2010.



The founding members of the ACC during the First Chilean Colour Seminar, Universidad Austral de Chile, Valdivia, 2008.



The Color Association of China is one of the committees of the Optical Society of China, specialised for colour and vision. As the National Color Association it joined AIC in 1986, together with Illuminating Association Division 1 of China. Its objectives are to encourage the research of colour science and its application in different aspects, through seminars to exchange information and new technology about colour. The annual meeting is usually held together with Optical Society of China. The website is together with the Optical Society of China.



Events in 2009

The 6th Asia Color Forum took place in Beijing in December. More than 300 participants from China, Japan, Korea, India attended the meeting. The applications of colour science were discussed in the meeting.



The 25th Chinese science and technology Salon "Color and City Life" was undertaken by the Color Fashion Association in December in the city of Shen Yia in Hai Nan Province. The participants came from Beijing University, Zhejiang University, Chinese Art University, Center Art University Beijing, etc.

Topics were "Color and Architecture", "Color and Industrial Design", "City Color and administration of landscape", and "The influence of white light in road lighting for the city".



A seminar "Color Science in Textiles" took place in the city of Wu Xi in Jiansu Province in October, attended by many young people. The applications of colour science in textiles were discussed, including new multicolour fibre, the design of textile materials and dress, and the influence of international colour fashion on textile products.



Exhibition of colour fashion tendency for non-athletic sports shoes.

The colour education seminar at Center Nation University Beijing in March was attended by more than 150 students from furnishing, environment art design and graphic design.



In technical universities colour courses emphasize the technical application, for example colour measuring methods and instrumentation design, whereas in art universities the colour order, colour match, and design are emphasized.



Suomen Väriyhdistys, the Finnish Colour Association, was founded on 24th September 2002 at the University of Art of Design Helsinki (now Aalto University School of Art and Design). The purpose of the association is to maintain collaboration and exchange of ideas between professionals in the field of colour, to further colour research and education and to promote good use of colour in Finland. The association organizes courses, symposia, conferences and excursions to colourful places and furthers its members' collaboration with other colour organisations in Finland and abroad. Through its web site the association disseminates information about current Finnish and foreign colour events and publications. The Finnish Colour Association is a corresponding member with the Pattern Recognition Society of Finland.

Activities in 2009

The Executive committee met four times during 2009. The annual meeting of the FCA was held on 5th May at the Aalto University School of Art and Design. After the statutory presentation of the review of activities, financial report, and plan for the coming year and election executive committee and other responsible persons for 2009-2010, the meeting discussed development of future activities. The chairman presented information on the upcoming AIC Congress in Sydney, Australia and encouraged members to participate.



Entries in the Väri09 competition for environmental colour design.



Runner-up in the Väri09 competition, the Tuomarila daycare centre in Espoo by architects Claudia Auer & Niklas Sandås.

In October three FCA members Harald Arnkil, Lauri Niemi and Caterina Casagrande-Mäkelä took part in the jury of the Väri09 competition for outstanding environmental colour design, organized by the Finnish Association of Painting Contractors and the Finnish Fair Corporation to highlight and promote Finnish building facades and interior colour design. Prizes totalling 5000 euros were handed to the winners at the opening of the "Colour and Surface" expo at the Helsinki Exhibition and Conference Centre on 7th October. The first prize went to Architects Lahdelma and Mahlamäki for their design of the Maritime Centre Vellamo in Kotka (Ilmari Lahdelma acting as principal designer).

The FCA collaborated with the Turku University of Applied Sciences and the Turku branch of the Finnish Association of Architects in organising the seminar COLOUR IN THE URBAN ENVIRONMENT in Turku on 20th November. By a happy coincidence the event was held in the elegantly coloured VIMMA Youth Activity Centre, which received first prize in the Colour 07 Competition. The subjects of the talks ranged from the main theme, the conservation and history of colours in urban environments to the colours of contemporary architecture. The speakers were Harald Arnkil, president of FCA and senior lecturer at Aalto University School of Art and Design, building conservator Pentti Pietarila, doctoral student Marje Tammert from the Restoration Department of the Art Academy in Tallinn (Estonia), architect and colour researcher PhD Karin Fridell Anter (Sweden) and Pentti Kareoja, architect SAFA and professor of spatial design at Aalto University School of Art and Design. Organizers in Turku were Ulla Seppälä-Kavén and Markku Hyvönen of the Turku University of Applied Sciences department of building conservation and Caterina Casagrande-Mäkelä, architect SAFA and member of FCA. Participants were taken on a guided tour of the event's venue, the Youth Arts and Activity Centre VIMMA, by one of the Colour 07 award winners, Ms Tiitta Itkonen of LPR Architects.

The president Mr Harald Arnkil acted as referee reader for the AIC Colour 2009 conference in Sydney. He also chaired the session The Nature, Extent and Categorisation of Colour. Close collaboration with Swedish colour colleagues continues through participation in the SYN-TES research project led by Dr Karin Fridell Anter of Sweden.



Activities in 2009

February: CFC General Meeting «Décoder les couleurs. Méthode sémiotique» A lecture by Marina Cavassilas. Commented tour of Notre-Dame de Paris via the study of its interior and exterior monumental polychromy, by Laurence Pauliac, Art Historian.

March: Annual « École de printemps » in Roussillon, « La couleur, une question d'échelle : l'espace » in partnership with the CNRS (French National Centre for Scientific Research) and OKHRA company - www.okhra.com



« École de printemps » (Spring School) in Roussillon,
« La couleur, une question d'échelle : l'espace » March 2009

March: The association organised a series of lectures in the French Language Week « Couleurs sensibles 2 » in the Post Museum, Paris.

April: Patrick Callet (CFC Vice-President) was invited to give three lectures at the Architecture School of Marseille, SPECTRA International Congress on Spectroscopy in Lima (Peru), and the Lycée Léonard de Vinci, Soissons.

April: Philippe Roaldes and Éric Guillouard (color designers, co-managers of "Atelier 3D Couleur" and CFC members) and Annie Mollard-Desfour (CFC President) took part in « La couleur : un langage », Le Mans Créapolis.

June: CNRS (French National Centre for Scientific Research) Symposium / Cergy-Pontoise University and Paris 13 Villetaneuse University, « Un dictionnaire – Pourquoi? Pour qui? Comment?» with a day dedicated to colour dictionaries.

July: The association took part in the 5th « Chromatiques » Festival in Fos-sur-Mer (South of France) an annual festival concerning colour. The 2009 colour was "yellow".

October: 11th Congress of the AIC. "Simulation of Pearls, Physically Based Rendering, the Virtuelium Approach" by Patrick Callet, in the Colour Physics Session, and "Colour merchandising: three solutions for the French home" by Elisabeth Condemine, in Colour Communications Session.

November: Annie Mollard Desfour took part in the Bar des Sciences (scientific debate in a Parisian café) « Des couleurs structurales aux nanotechnologies.

December: Patrick Callet lecture « Sur les traces des couleurs perdues - restitution des polychromies- couleur des métaux et alliages » at Maison des Sciences de Châtenay-Malabry.

December: « Couleurs et Cultures » Study day animated by Michel Indergand in Ecole Estienne (Superior School of Art and Graphic Industry).

CFC publications

« *Primaires* » the CFC magazine (n° 169, June 2009; n°170, December 2009). Download at: www.cf-couleur.fr/primaires

Philippe Lanthony, *Lumière, Vision et Peinture*, Citadelles et Mazenod, September 2009.

Brigitte Gautier and Claude Juillard, *Un coach pour un nouveau look*, Solar, 2009.

Maurice Elie, *Couleurs & Théories : Anthologie commentée*, preface by Michel Blay, Ed. Ovidia, 2009.

Annie Mollard-Desfour, nouvelle édition du volume de la série de dictionnaires de la couleur. « *Le Rouge* ». Mots et expressions d'aujourd'hui. XXe-XXIe siècle, CNRS Eds, 2009.

Robert Sève, *Science de la Couleur - Aspects physiques et perceptifs*, Chalagam, 2009.

Marie-Cécile Bauchet, *Cinéma et couleur*, Michel Houdiard, 2009.

Members exhibitions

Valérie Ciccarelli, paintings, sculptures, jewels, performances, in particular « L'état de tas », Aix-en-Provence, June; Denise Houssard, Grand Palais, « Art en capital », November; Martine Royer-Valentin, Médiathèque d'Uzès, July-August: « Au-delà des illusions » ; Domaine de Malaïgue, Uzès, « Robes couleur lie de vin »; Lucrèce Tressol, «Art et Matières», Maison de la Citoyenneté, Carmaux, November; François Bossière, « Cap sur les arts », Perros-Guirec, February; Richard-Viktor Sainsily-Cayol, (Saint-Barth ExactColor), « Ferrements. Mémoires d'ici et d'ailleurs. 30 années de création », Pavillon de la Ville, Pointe-à-Pitre, Guadeloupe, June-July 2009.

The CFC also sponsored the exhibition «Un Monde en Couleurs, de G. Lippmann à la Nanophotonique » in the Palais de la Découverte, Paris, on the centenary of Gabriel Lippmann Nobel Prize for Physics, from January 2009 to May 2010.



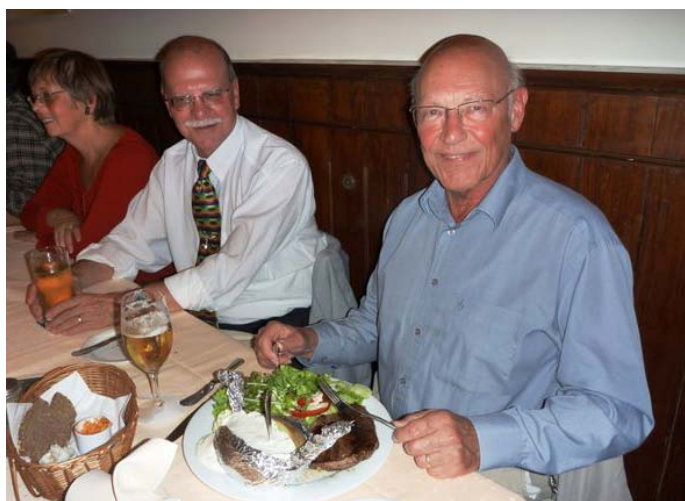
Elisabeth Condemine and Patrick Callet at 11th AIC Congress, Sydney



The Deutscher Verband Farbe (DVF) is the German AIC member organization, representing the FNF of the DIN (German Institute for Standardization), Deutsches Farbenzentrum e.V. (DFZ) and Deutsche farbwissenschaftliche Gesellschaft e.V. (DfWG). At its 2009 assembly, Frank Rochow (DfWG) was re-elected as chairman, Ms. Susanne Wied (DVF) was elected as vice-chair.

Within DIN various standardization activities were continued, in the fields of Basic Concepts in Colorimetry (DIN 5033-1) and Tolerances in Automotive Paint (DIN 6175-1). The committee FNF 2 focuses on basic colorimetry and tries to keep German standards current and in sync with CIE. Current work has been finished on calibration of colour measurement instruments and also on updated geometrical descriptions of measurement geometries. FNF 24 focuses on colorimetry and tolerances of automotive paint and plans to have visual tests to check and improve the existing standards in a way that the formulae are valid for solid and metallic paint. Further work has been started for interference effect paint.

The board of the Deutsches Farbenzentrum (DFZ) consists of Chairman Prof Axel Buether, Vice-Chair Dr Anne-Marie Naser, and Treasurer Susanne Wied. At the member's meeting during the 35th annual conference of the Deutsche Farbwissenschaftliche Gesellschaft in Berlin, in September, the DfWG-Chairman Dr. Gerhard Roesler, Vice-Chair Prof Bernhard Hill, Treasurer Dr. Carsten Steckert and Secretary Dipl-Ing Frank Rochow were re-elected.



Frank Rochow and Prof Bernhard Hill at annual conference dinner.

An interesting research paper was given by Dr Peter Bodrogi, S. Brückner and Prof Tran Quoc Khanh of the Lighting Laboratory, TU Darmstadt, on 'Redefinition of the colour rendering index of today's light sources'. For use in room lighting applications, white LED light sources show a lack of colour rendering capabilities and luminous efficacy. While luminous efficacy is the principal issue for outdoor applications, indoor lighting requires good colour rendering. Newly developed high power white LED light sources provide good colour rendering based on a well-filled spectrum.

During the DfWG-conference, the winner of the "2009-DfWG-Förderpreis", Ms Dipl-Ing Katrin Möller, was honoured for her work "Color stabilization on LED-Spotlights, using temperature characteristics and/or a color sensor". The DfWG-Förderpreis, which comes with a 1000 EUR cash prize, is offered to younger colour scientists every two years.



Session of the 35th annual conference of the DfWG, Berlin.

The 36th annual DfWG conference will be held in Darmstadt 6–8.10.2010. This meeting with the topic "Color Science and its Application in Industry" will be hosted jointly by the Institute of Printing and the Special Field of Lighting. Prof Dörsam and Prof Khanh, both of the Technical University of Darmstadt, will organize the technical programme.

Call for Papers

The international conference "Colour in Education" offers a platform for open discussion and international comparison of scientific and artistic methods for teaching colour theory, colour practice and colour research. For the first time, experts from all fields across the international educational landscape will meet to discuss how to further colour education. 29-31 October 2010, Burg Giebichenstein, University of Art and Design Halle www.deutsches-farbenzentrum.de The DFZ is offering the "Karl-Miescher-Preis 2010" for "Innovative ideas in dealing with colour in pre-school and school teaching".



Everyday colour communication: red and green pedestrian lights in Berlin.



In 2009 the Colour Group (GB) held nine meetings: two were joint meetings, two were all-day meetings and five lasted for half a day. The Group's main concern is with education in colour and its programme of awards to encourage postgraduates and postdoctoral researchers to attend meetings and disseminate their work was continued with the presentation of five Palmer Awards which covered travel to conferences in the USA, Australia and Portugal. The awardees also presented their research to the Group and received feedback on the content and presentation style. A small prize was awarded to the presentation judged the best: this year Dr Yazhu Ling (Newcastle University) won an electron tree in a perspex block, donated by the National Physical Laboratory.

Below university level the two Colour Teaching Fellows continued their series of lecture/ demonstrations for senior school pupils in Scotland and Wales. In their first year they lectured to 1400 children and feedback was positive. The Fellowships have been extended for a year and more schools in Scotland and around London are being visited.

The first meeting of the year in January was the traditional vision science all-day meeting at the Institute of Ophthalmology. The highlight was the Palmer Lecture, this year given by Prof Ken Knoblauch from Bron, France, entitled: *Partition and Integration of Chromatic Information in the Visual System*. There were eight other speakers including a lecture sponsored by Cambridge Research Systems Ltd., *Chromatic signals abandoned by their form: Their fate and neural representation* by Steve Shevell (University of Chicago).



Prof Ken Knoblauch receiving the Palmer Lecture certificate from Colour Group Chairman Prof Lindsay MacDonald.

In February 2009, at the Royal College of Art, Dr John Gage was awarded the Colour Group's Newton Medal for lifetime contribution to colour in art, and he addressed a packed theatre on JMW Turner and his work as a colourist.

In March a joint meeting with the Society of Dyers and Colourists was held at Leeds University where their colour research was described. Back in London the April meeting concerned surface colouring of ceramics, metals and glass.

In June there was an all-day meeting at the prestigious headquarters of the Royal Institute of British Architects (RIBA), organised jointly with the Design Research Centre at Kingston University. The theme of the meeting was how the design and science of light, materials and colour interacted in the environment. Prof. Maria João Durão attended with a lively contingent from the Portuguese Colour Association.



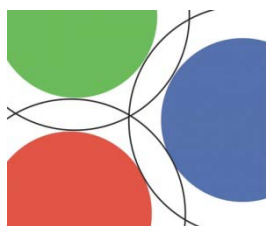
In July a small party enjoyed a summer visit to the Tate Gallery in Liverpool to see the remarkable exhibition *Colour Chart: Reinventing Colour - 1950 to Today*.

In October Dr Mike Pointer and Dr Robert Hunt considered the *Future of Colour Science* and pointed the way for scientific members to direct their research activities henceforth.



Dr Robert Hunt demonstrating some of the problems of colour additivity which need to be addressed in colour reproduction.

Work continued by the organising committee of the Colour Group responsible for planning the 12th AIC Congress to be held in the UK in 2013. The first major task was to find a venue for the Congress and several site visits were made before recommending The Sage Gateshead in NE England.



The Hungarian National Colour Committee was founded in 1969. Its expert committees are: Colour Classification, Coloured Vision, Colour Representation, Colour Measurement, Colour Environment Design, Colour Psychology, Colour

Training, Colour Application. From 1980 onwards it has operated within the framework of the Hungarian Academy of Sciences. Since its foundation, the HNCC has taken an active role in the life of AIC: in one quadrennial cycle there was a Hungarian vice-chairman, in two cycles there were two members of the Executive Committee, there are members in all AIC Study Groups, and for one cycle we gave the Chair for the Colour Education Study Group. AIC Midterm Conferences have been organized in Hungary three times, and the 7th AIC Congress was held in Budapest.

The Chairman is Prof. Antal Nemcsics, and members of the Committee act as Chairs for the following societies:

- Society of Colour Dynamics (ÉTESz)
- Society of Colouristics (MKEK)
- Society of Fine Arts and Applied Artists (SzFNA)
- Society of Colour Science (MTASzE)
- Society of Informatics (VEAB)

Colour and Light Foundation

The CLF was founded in 1992 by the Hungarian National Colour Committee, the Hungarian National Committee of the CIE and the Technical University of Budapest. Its objective is to facilitate the material and intellectual conditions for Hungarian scientific colour research, industrial and artistic colour application and training. Main achievements in 2009: the visual design of the town of Pécs as the European Cultural Capital, the visual design of the District XIII of Budapest and street designs and colour dynamics plan of panel buildings.



Architectural colour design. The diagram illustrates the location of the palette colours in the Coloroid colour space.

Meetings

1. 32nd Colouristics Symposium (Eger, May 11-13)
2. CREATE European Colour Workshop (Veszprém, May 20-23)
3. CIE Conference 'Light and Lighting' (Budapest, May 27-29)
4. 8th Lux et Colour Veszprémiensis (Veszprém, October 5)
5. Built environment and colour (Budapest, October 14)

CIE

In May 2009 the Hungarian National Committee of the CIE organized a very successful international conference on Light and Lighting with special emphasis on LED measurements. The event featured invited papers, short communications and posters in all areas of light and lighting, with special emphasis on: Modern light sources and systems; LEDs and solid-state lighting; Health aspects of modern light sources; Photometry and colorimetry; Indoor lighting; Outdoor lighting.

Further it was with Hungarian chairmanship that the CIE Technical Report 184:2009: *Indoor Daylight Illuminants* was completed and published by the CIE.



Exhibition of coloured environment planning

Education

Special courses related to colour are offered in 14 university grade educational institutions. Colour research related to Ph.D. degrees has been conducted in three universities.

Publications

In relation to Hungarian colour research, the following articles have been published in *Color Research and Application*:

Proposal for an indoor daylight illuminant (pp.18-25)
Katalin Gombos, Michael Pointer, Cecília Sik-Lányi, János Schanda, Tünde Tarczali.

Experimental determination of laws of colour harmony. Part 3: Harmony content of different hue pairs (pp.33-44)
Antal Nemcsics.

Experimental determination of the laws of colour harmony. Part 4: Colour preference and the colour harmony content (pp.210-224) Antal Nemcsics.

The 2009 programme of the Associazione Ottica Italiana (AOI) included the following themes:



- the long-term effects on health of various light sources, differing in SPD, in relation to senile macular degeneration;
- compensation effects concerning colour vision and ageing, binocular interactions, and their task dependencies;
- organization of a visual laboratory for the 3rd millennium.

AOI Study Groups

The study group on “Children Maturation and the Use of Color in Drawings” is in a very advanced stage. The strategy of analysis of the drawings has been decided, by taking into account the stages of the perceptual organization: segregation, segmentation, representation, and enrichment with feelings (fear, drama, pleasantness, etc.). Colour was found to be used even for segregation, without reference to form. A report was published in issue N°4 of the Journal *Luce e Immagini* and the material for a booklet is being collected.

A new study group has been organized, entitled “Painters and the colour of food”, chaired by Margherita Abbozzo, who has diffused a first report. Another study group is starting, entitled “Colour vision in the 3rd millennium”.



The changeable appearance of the façade of the Villa Rossa, at the end of the central path across the “Pian dei Giullari”. Its change in colour appearance during the sunset was considered instructive by Michel Cler, who recorded the time course of its various phases.

Lectures

In April 2009, Verena M. Schindler and Michel Cler, from the Atelier Cler Etudes Chromatiques in Paris, were invited to Florence to give presentations during a meeting of the UIA (Università Internazionale dell’Arte, Villa il Ventaglio). Their contributions on “A Way of Looking Chromatic Studies for Urban Space” and “The Future is Green! On the Concept of Green and Greenery in Contemporary Architecture and Urban Culture” were both reported to be “at a high qualitative level” by members of audience and chronicles. Monsieur Cler talked about his observations of the various chromatic aspects of the landscape and surroundings hills of Florence.

Particularly interesting were changes in colour appearance of a Villa’s red façade during sunset on a serene day and its striking difference in sunlight and shadow. In turn, Verena M. Schindler considered the role of greenery in Florentine natural settings, in which the contrast of the dark-green cypresses and the silvery-green shining olive trees is a characteristic. This exchange has been the starting point of an ongoing study of the peculiarities of green in the natural environment.

Meetings and Recent Publications

A detailed report of Congress AIC2009 (Sydney) appeared in the 4th issue of the Journal *Luce e Immagini*, the voice of AOI, regularly published. The contributions of Italian attendees (Pompas, Sandford, Ronchi, *et al.*) appear in the Proceedings, distributed at the Congress.

A book entitled *The Excentric Blue*, by L.R. Ronchi and J. Sandford, (68 pages, in English, published by the G. Ronchi Foundation, as Vol. XCVII) appeared early in 2009.

Another book, *Traditional Vocabulary of Italian Cuisine and of its Color*, by L.R. Ronchi and J. Sandford, 40 pages, in English, published by the G. Ronchi Foundation as Vol. CVI, appeared at the end of 2009. It has been utilized, together with John Hutchings’ book *Food and Colour Appearance* (London, Aspen, 1994), in local schools, aiming at familiarizing the interested people with the transition “from the farm to the table”.

Activity Reports from some Italian Colour Experts

LIA LUZZATTO at the seminar organized by the Dept. of Science for Architecture, Genova, presented a talk “Color in the epoch of globalization”, analyzing the knowledge of colour as a perceptual phenomenon affecting both communication and design.

RENATA POMPAS was a visiting guest at the “Milan design week events” organized by Televisionet, and presented a paper “Made in Italy: fashion, design, colour”.

MARIA CHIARA POZZANA at the UIA (International University of Art in Florence), Villa il Ventaglio, during a meeting entitled “The Landscape Color”, she introduced the topic “Color of Florence” in history and present time.

JODI SANDFORD and her husband VALTER GOSTI co-work in visual arts. In addition to numerous installations and pieces based on colour primaries (RGB and RYB), observing the use of colour pigments suspended in water, they produced various video-pieces involving different aspects of colour theory.

LUCIA R. RONCHI, at the CIE Light and Lighting Conference, Budapest, dealt with the blue response in presbyopia by recording the speed of reading a text lit by sources with various SPDs, at a given luminance level. The compensation of degradation due to the yellowing of the eye lens has been found even beyond the eighties.





Meetings in 2009

The 40th annual meeting of the CSAJ was held at Keio University (Yokohama) on May 16-17. Participants in the meeting numbered about 300. Sixty-one papers were presented from various fields of colour science, design and its applications. The invited lecture was given by Mr Fumito Kondo (NHK) on "Color of UTAMARO."



A symposium on Color Information in Nagano was held at Nagano University (Ueda, Nagano) on Sep. 4-5. Participants in the meeting numbered about 180. There were three invited lectures, and eleven papers were presented.

Color Forum Japan 2009 was held at AIST Tokyo Waterfront (Tokyo) on Nov. 3-5. Twenty-eight papers were presented.

Awards

2009 CSAJ Award:

Tadasu Oyama (Honorary Member of the CSAJ)

2009 CSAJ Best Paper Award:

Shigeki Nakauchi, Tatsuya Onouchi, "Detection and Modification of Confusing Color Combinations for Red-Green Dichromats to Achieve a Color Universal Design", *Color Research & Application*, Vol.33, No.3, pp.203-211.

2009 CSAJ Research Encouraging Award:

Tomoko Ohtani (University of Tokyo)

CSAJ Presentation Encouraging Awards 2009:

Kaori Ogawa (Chiba University).

Rie Otsuki (Kanebo COSMETICS INC.)

Hajime Arai (Nagano University)

Study Groups

CSAJ has twelve study groups: Color Design, Environmental Color, Illusion, Teaching Materials for Color Education, Personal Color, Colorimetry, Color Vision, Color in Image, Whiteness, Safety Color, Environmental Color Design for Daily Living and Fundamental of Visual Information.

Publications

Journal of the Color Science Association, Volume 33, Numbers 1-4 and Supplement, 2009 were published. CSAJ News was published bimonthly. Address for contact is:

The Color Science Association of Japan

3-17-42 Shimoochiai, Shinjuku,

Tokyo 161-0033, JAPAN

Phone: +81-3-3565-7716

Fax: +81-3-3565-7716

Email: office@color-science.jp

Courses

"Basic Courses for Color Science", composed of two major courses: Color Technology and Color Psychology (seven lectures for each course), were offered at the Keio University, aiming at the education in colour science for members of CSAJ and others. 83 participants completed the course of Color Technology and 80 participants completed the course of Color Psychology. A diploma was handed to each person.

The course for Color Technology included: Color Physics, Color Systems, Color Materials and Mixture, Illumination and Measurement of Light, Measurement of Color. The course for Color Psychology included: Color Physiology, Color Psychology, Psychological Measurement of Color.



The entrance poster for the 40th CSAJ Annual Meeting, designed by the president of CSAJ, Dr. Mituo Kobayasi. The motif for the design was a modification of the Chinese characters for "colour":

色彩



사단
법인 한국색채학회
Korea Society of Color Studies

The Korean Society of Color Studies is an organization with the research capability in colour which was established under the name of Korea Color Studies Association in April, 1988. Four years later, in 1992, it was renamed the Korean Society of Color Studies (KSCS) and completed its registration as a non-profit organization in 2000. In the same year it hosted the AIC 2000 Interim Meeting in Seoul.

Through its winter and summer academic conferences each year, the organization exchanges with experts and studies in colour fields to advance into in-depth academic organization. KSCS has been very active in research and education projects with respect to academic conference each year, international colour invitation exhibition and others. In March 2008, the Korean Society of Color Studies and Korean Color Design Society have merged to be born again as the Korean Society of Color Studies with the added dimension of design in its appearance and academic portfolio. See: www.color.or.kr



Grand Prize for Korean colour studies 2009

Regular Activities

The Korean Society of Color Studies undertakes the following activities each year on a continuous basis:

- 1) Academic promotion by hosting winter and summer academic conferences each year. In summer, it hosts various seminars and workshops for 3-day and 2-night schedule. In winter, it hosts an external exchange-oriented academic conference with the features of an international conference.
- 2) Hosting of Grand Prize for Korean colour studies (from 2003 to the present). The award is granted for current colour work outcome and has the value of research.
- 3) Hosting of international invitational exhibition (from 2008 to the present), showing the colour work products of overseas and domestic artists.
- 4) Commencing the certification work for colour educational materials and colour books and publications. One colour certification project heightens the level of domestic colour books and publications. Another certification process applies to colour education materials for the colourist qualification.



International colour art exhibition, Seoul 2009.

- 5) Colour education certification business (from 2002 to the present), undertaking certification of business plan for reasonable operation of colour education institution.

Special Activities

To mark the 20th anniversary of the foundation of the Society, KSCS published a commemorative booklet and held a book publishing ceremony at Golden Plate Hall, Hongmun Building, Hongik University. In this ceremony, the activities conducted by the Society for the past 20 years were reviewed, allowing participants time to reflect on what we have achieved up until now.



The Korea Society of Color Studies has seven departments: environmental colour, media colour, product colour, living colour, colour science, colour education, and colour psychology. Each department is engaged in its specific studies on a continuous basis. At the annual meeting, Professor Jin Sook Lee was elected as the 12th Chairman, despite stiff competition. To celebrate her election, a performance of Pansori, a traditional Korean music form, was held.



Performance of Pansori to celebrate election of KSCS President



Asociación Mexicana de Investigadores del Color (AMEXINC), founded in May 2005, is the Mexican organization that promotes colour in interdisciplinary researches, exchanging expertise applications among different areas and contributing with culture diffusion about Mexican colour use. Actually AMEXINC counts with more than 30 professionals of different specialties: psychologists, physicists, graphic designers, home designers, architects, and teachers. The organization is not exclusive to high academic degree people, but open to all passionate colour professionals who want to learn more about colour or share experiences and knowledge. AMEXINC was accepted as AIC member in 2007.

Meetings



The most important event in 2009 for AMEXINC was the first national meeting called "1er Encuentro Mexicano del Color" (The

First Mexican Color Meeting) which was achieved in the *Antiguo Palacio de Medicina* (Ancient Medicine Palace) in downtown Mexico City at September 10-12.

There were 3 book presentations, 4 special talks, and 40 oral presentations, with around 50 participants; one of the sponsors was *Trillas* publishing house.



Members of the Committee of the Mexican Color Association welcome José Luis Caivano, President of AIC, to the first Mexican Color Meeting

This event caused a great expectation in colour community, many people visited our web site and asked for information about AMEXINC, and there was an increase of new members. Unfortunately, the global economical crisis of 2009 inhibited the participants from other Mexican states and Latin American countries, who had intentions to visit Mexico. In 2010 AMEXINC is planning three courses: "Color for Kids", "Basis of Color Design"; and "Psychology of Color". The next conference is planned for 2012, the city still to be defined. Mexico is the candidate to host the AIC 2014 Interim Meeting.

Website

The most important communication media for the association is the Internet. In AMEXINC's web site www.amexinc.org.mx you can find interesting information about the meaning of colours, the colour of gems, a virtual museum, useful applications, and interesting local topics about colour. This site in Spanish language is visited by many users every day, from both Mexico and other countries.



Colours and precious stones brought to life on the Mexican website.

NEDERLANDSE VERENIGING VOOR KLEURENSTUDIE

Colour Café, our first colour event of 2009, was held on the 31st January at “Toonkamer, centre for interior design”, formerly known as the furniture factory “Pastoe”. The Dutch Society for Study on Colour now has its offices at the centre as well as its library. We had a colourful introduction to the New Year with an interactive program, inspiring lectures, the AGM and, of course, a toast to 2009. It was a moment to meet again, pass on new developments and plan our strategy.



Toonkamer – the new headquarters of the Dutch Colour Society

Caroline Houthuyse and co-writer Lia Vos presented their new book entitled *Kleur ben je zelf* (You are Colour), illustrated in full colour. The book is filled with background information, practical tips and exercises.

Our second colour event of the year was held at the School of Arts in Utrecht on 13th November. Our theme was “Hoezo Groen?” (What about green?). The many facets of the colour green were highlighted and greatly appreciated by the eighty people who attended this successful green event. Nowadays the colour green is omnipresent and represents durability, change, rejuvenation and an urge towards a healthier living. According to Lukas Stofferis, the colour green has two main schizophrenic facets: threatening and tranquilising. In order to prove his statement, Lukas read a stanza from Federico Garcia Lorca's poem *Romance Sonambulo*. Biologist and Colour Advisor, Kim van der Leest, described the importance of greenery in our living environment and its contribution to the quality of life. Our brains have hardly evolved and need to be immersed in a green environment. She stated: “Green is not a hype, it is part of us.”



Hans van Kampen, architectural historian, spoke on the nostalgic and traditional use of the colour green in the province of “Noord-Holland”. With a touch of humour throughout, we learned that historians distinguish three different greens in this province: West-Friesgroen, Zaansgroen, and Amsterdamgroen – the darkest green of all. During the break we had the chance to learn how to incorporate or use the colour green successfully in an outfit.

Publications

In 2009 we published two editions of our magazine, *Kleurenvisie* (Vision on Colour). While the first edition had a scientific approach, we chose for the second to linger on the theme “Green” in a printed version of the event in November. Articles noted that people living in green surroundings are healthier. William Visser wrote on “Colour and Psychology” – do males and females have different preferences regarding most and least favourite colours? We interviewed the artist Jos van Merendonk, who primarily uses green in his paintings. Lukas Stofferis contributed an article on colour in art – the observation and recognition of colour and light, as well as the physical properties of colour.

Media

Our association cooperated with several media publishers. Amongst others we supplied articles to *ArchitectuurNL*. For instance, Kim van Savooyen, interior designer, colour specialist and member of the board, wrote on “Red”. If there is one colour inextricably linked to blood and passion it certainly would be red. The attraction to this colour is simultaneously heart-warming and heart-breaking. It would be interesting thoroughly to investigate architects' use of red.



The red dye Rubia Red is extracted from roots of the madder plant.

Rubia Pigmenta Naturalia is a Dutch company, which manufactures and sells vegetable dyes. The company Rubia has accepted the challenge to be the first factory in the world set up specifically for production of natural dye from madder on an industrial scale. The factory opened its doors especially for our members. The natural production process of the dye Rubia was explained and demonstrated step by step. Painting materials with the derivative red, orange, brown nuanced dye is gaining in popularity and is used more and more in a variety of applications such as fashion and the carpet industry.



The Portuguese Colour Association (*Associação Portuguesa da Cor – APCOR*) was founded in the context of the Master Course 'Colour in Architecture' at the Faculty of Architecture-Lisbon

Technical University in 2003. The mission of APCOR is to promote the study, research, application and dissemination of all aspects of colour covering a large range of fields of knowledge: art, architecture, environmental design, geography, urban design, product and graphic design, fashion design, art history, sociology, advertising, marketing, cinema and image reproduction, psychology, physiology, biology, vision, physics and chemistry.

Besides the academic colour education activities, participation in conferences, seminars and an exhibition were the principal means used to communicate with the public, resulting in various forms of publication.



"COR" colour exhibition at Galeria da Ordem dos Arquitectos, Faculdade de Arquitectura de Lisboa (May 2009).

The Exhibition and Seminar "COR", co-organised by Architects Luis Bissau and João Pernão, showcased the research work of 21 members of APCOR at the *Ordem dos Arquitectos* Gallery and 4 week seminars were held at the Faculty of Architecture of Lisbon. More on the projects at: www.apcor.org

International Day of Colour and Light

1. At the General Assembly Meeting of 19th April 2008 the members of the Portuguese Colour Association approved, with great enthusiasm, the proposal presented by Dr Manuel Pais Clemente for the creation of a day for celebrating colour on an international and world scale.

2. A written proposal was presented to the AIC Executive Committee in Stockholm 2008 by the President of the Portuguese Colour Association, Prof Dr Maria João Durão:

- The scope and extension of the influence of the phenomena of colour and light in the life and culture of human beings justify the existence of an annual world mark for reflection and information that supports the implementation of further pedagogical action.

- Cultural activities could gain more effectiveness and sensitivity towards the importance of light and colour education in the physical and emotional dimensions of life, as well as the development of knowledge in scientific, artistic, technological, ecological and cultural fields.

- A common day for the celebration of colour and light would promote the organization of exhibitions, meetings, seminars and other events within the broad scope of colour and light.

- Regional and geographic related dates should be avoided as a means to reach international consensus

- The adoption of the designation "International Day of Colour and Light", instead of "International Day of Colour" avoids racial connotations to the term "colour", and adds conceptual relevance to the connection between both phenomena

3. The President of the AIC, Prof Dr José Luis Caivano, addressed members directly through the AIC Website at: www.aic-colour.org/internationalcolorday.pdf.

4. At the 11th AIC Congress in Sydney, (September, 2009), the AIC Executive Committee agreed upon:

- The designation: International Day of Colour And Light

- The date for celebration: 21st March, the equinox when night and day are approximately equal, symbolically relating the complementary nature of light and darkness, expressed in all human cultures. The March equinox was preferred to the September equinox in order to coincide with other existing celebrations based on fundamental human values.

5. At the AIC General Assembly the concept was presented to the AIC members by the President of the Portuguese Colour Association, and some doubts were clarified. The President of the AIC announced that having reached consensus within the AIC, related international and national associations would be contacted by the newly elected Executive Committee and the idea shared within the colour-light community.

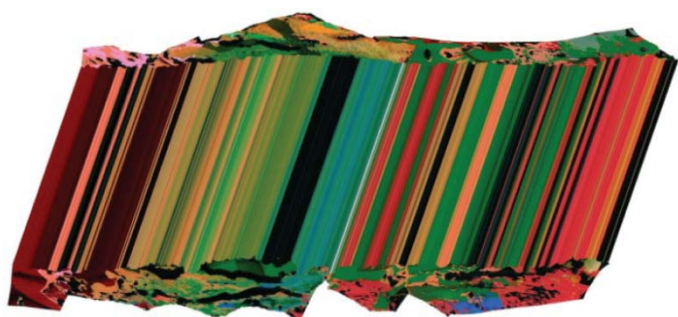


Presentation of International Day of Colour and Light by the President of the Portuguese Colour Association, Prof Dr Maria João Durão.



Members of Društvo Koloristov Slovenije (the Slovenian Colorists Association, SCA) are not only Slovenian citizens but also come from other, mainly neighbouring, countries such as Croatia. They are professionals in physics, chemistry, psychology, art, architecture, design, etc.. The main drawback of our multidisciplinary association is the lack of members, due

to the small area of two million inhabitants that we cover. The new leadership is facing some important challenges such as organization and motivation of younger generations to participate actively in SCA. Ultimately we face not only the reduced number of members but also a lack of support from industry. We will have to fill this gap by finding new industrial branches and supporters to start a new era of revitalization.



Picture of the project *Bridges of Harmony*, author Vojko Pogačar

Exhibition

From 23.10. to 29.11.2009 in Kostanjevica on the Krka River (in gallery »Lamut salon«) a group exhibition »LOOK 5 – I feel Kostanjevica na Krki« was held, where a part of the project related to colours and art, named *Bridges of Harmony*, was presented by Vojko Pogačar. This traditional exhibition in a renowned Slovenian gallery represented all relevant artists of the southern region of Slovenia.

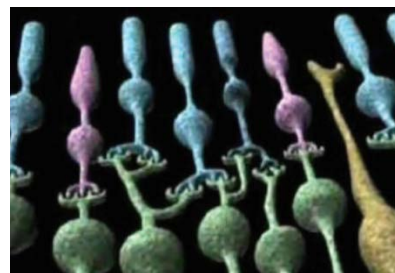
Media

in 2009 a team of our members prepared a short documentary video film *Living with Colours*, which examines the influences of the colour spectrum on human perception from physical, physiological and psychological points of view.



DVD and cover of the documentary video film *Living with Colours*.

Professional producer and editor-in-chief of the video film was Franc Kopic and it was published in coproduction of Film and video club Maribor. The film was presented at several film festivals and received positive recognition: second award in the category of "Documentary and Slovenian film" at the TOTI video festival in Maribor 2009 and second award in the video competition Ota Hrovatin in Trieste 2010, Italy. The mission



of the film is to inform and educate the younger Slovenian generations as well as to support and explain some colour topics. Video film is in the Slovene language, but it could be easily translated into other foreign languages.

Inevitable change

According to complex transitional changes in economy in general, resulting in modification of numerous industrial branches and particularly in the Slovenian textile industry, which slowly declined in almost all branches, deep changes occurred in our SCA as well. In the past our association was driven and supported mainly by the textile industry.



The changing industrial base of Slovenia

However, the textile industry in Slovenia is transformed to something else. Therefore the mission, goals, members and supporters of SCA have changed. In response to the new conditions we elected in 2009 a new leadership. Professor Vojko Pogačar is now new president, Professor Slava Jeler is the first vicepresident for Maribor region, Professor Marija Gorenssek is second vicepresident for Ljubljana region, Professor Marta Klajnsek Gunde is the head of Science and colour theory section, Professor Darinka Fakin is the head of Textile section, Natasa Barle is the head of Paints and polymers section, Professor Gorazd Golob is head of Graphics and paper section, and Professor Vojko Pogačar is head of Architecture, art and design section. In the general meeting, held on the 15th October at the University of Maribor, Professor Marta Klajnšek Gunde presented some novelties from the CIE conference, held in Hungary. Prof Pogačar reported the news from the AIC Congress in Sydney.



Activities

In November 2009, the Grupo de Óptica de la Universidad Pública de Navarra (www.unavarra.es/color) hosted the third workshop of the Spanish network on Color Science and Technology, chaired by Dr. Joaquín Campos (CSIC). This meeting included an invited lecture by Mr. Werner Rudolf Cramer (colour consultant, Germany), with the title “*Optical properties of interference pigments – Solutions for description and characterization*”. This meeting was clearly oriented to boost the participation and training of our PhD students as well as communication among the different participating

research groups. It was completed with nine oral presentations from research groups belonging to CSIC (Madrid), University of Granada (UGR), Technical University of Catalonia (UPC), University of Alicante (UA), and University of Santiago de Compostela (USC). The contributions in this meeting were published in the book entitled “Ciencia y Tecnología del Color. Seminario 2009 de la Red Temática” (Eds. Dr. Joaquín Campos Acosta and Dr. Rafael Huertas Roa).



Topography of a one-euro coin measured with an optical confocal profilometer developed at the Centre for Development of Sensors (UPC). The ordinal colour scale represents the height of the surface relief. www.cd6.upc.edu

External Participation

Different researchers from our National Committee have joined several CIE Technical Committees, in particular CIE TC 1-57 (Standards in Colorimetry), CIE TC1-64 (Terminology for vision, colour and appearance), CIE TC1-71 (Tristimulus Integration), and CIE TC8-11 (CIECAM02 Mathematics). Several members also attended meetings of the CREATE scientific network (Colour Research for European Advanced Technology Employment) during the past year.



The Color Group of the University of Granada has been actively involved, together with the Universities of Saint Étienne (France), Joensuu (Finland), and Gjøvik (Norway), in the European Master Erasmus Mundus “Color in Informatics and Media Technology” (CIMET), which commenced in September 2008, and will continue for several years. See: www.master-erasmusmundus-color.eu

Planning for National Congress

During 2009 the main activities of Comité Español del Color were focused on the planning of our next IXth National Congress (Alicante, 29th June – 2nd July, 2010), chaired by Dr. Francisco Martínez-Verdú, which will be held at the University of Alicante, with a main topic on inter- and multi-disciplinary colour. Detailed information about this meeting can be found in the website: www.sri.ua.es/congresos/color10/. It is expected that this meeting will have an audience of 200 people and that 50 students will be awarded scholarships. Moreover, the Congress will be sponsored by 10 prestigious companies, with different degrees of collaboration.

Website

For additional information on the activities of our Committee please visit <http://sedoptica.cfm.ac.csic.es/color/color.html>



Spanish expedition to Australia for AIC Congress 2009



The last AIC Congress in Sydney was a rewarding and unforgettable experience for all of us. Spanish participation was very active, with two oral presentations and several posters, plus the opportunity to discuss colour matters with other delegates. Finally, the Spanish expedition finished our trip in Australia by visiting the Great Barrier Reef.



The Swedish Colour Centre Foundation (Stiftelsen Svenskt Färgcentrum) was founded in 1964 by IVA (Royal Academy of Engineering Sciences), The Swedish Design Council and a number of important Swedish industrial companies. Its main objective was to carry out interdisciplinary research and development within the colour field. This work, lead by Dr. Anders Hård, together with Prof. Gunnar Tonnquist and Prof. Lars Sivik, eventually resulted in the Natural Colour System, NCS, which became a Swedish Standard in 1979.

Today the SCCF has around 150 individual members working with different aspects of colour and 25 organizational members from many sectors of society. Its tasks are to:

- Encourage scientific research within the colour field for industry, education and people working with colour;
- Spread new knowledge and experience in the field of colour;
- Be a natural centre for colour and colour research.

To fulfil these tasks the Swedish Colour Centre Foundation accomplishes the following activities:

- Organises yearly *Colour Days* with different themes;
- *Newsletter* 4 times a year with information about colour research projects, colour use in practice and new developments within the field of colour in Sweden;
- Regular meetings with guest lecturers or study visits.

International Colour Day 2009 in Stockholm – May 14th

SCCF arranges annual conferences to spread knowledge about colour, always with a specific theme. The Colour Day 2009 was arranged together with the Scandinavian Colour Institute AB, taking advantage of the opportunity to celebrate the 30th anniversary of the NCS System. The theme was “Colour Spotting – Glimpses of colours surrounding us” and showed how colours are used in different contexts: architecture, interior design, furnishing design, industrial & product design, lighting design, fine art, and from different cultural perspectives, thanks to our many international speakers.



This year we attracted 200 participants from 22 different countries. The moderator of Colour Day 2009 was Ewa Kumlin, Managing Director of the Swedish Society of Crafts and Design. International architects Astrid Klein & Mark Dytham from KDa, Tokyo gave their presentation “Colour is free – Use it!”. In “The semantics of colour in branding and architecture” two architects from wester+elsner spoke about the integration of brands in architecture, important when it comes to shopping and business projects. Vesa Honkonen, architect from Finland talked about the meeting between colour, light and design in “Shadowlands”.

We also learnt about the interaction between art and architecture in Karriere Bar, Copenhagen and how colours can sell the brand in the Monki World Store Concept. Justine Fox, colour trend specialist at Global Color Research asked “What are colour trends for?” We rounded off the convention with “How an idea becomes a world success” for the Ice Hotel in Jukkasjärvi, in far north Sweden. We ended the day with a banquet dinner, song, music and dance in good company.



Colour sells the brand - Image taken from the presentation by Joel Degermark and Catharine Frankander, founders of Electric Dreams, one of Sweden's leading exponents of colour in interior design.

Members meetings

In April, we heard a presentation about the Colours of Libya. Lena Anderson, chair of the SCCF, together with architect Kerstin Berg, gave a very interesting résumé of a journey to Libya illustrated with a lot of beautiful pictures.

In September we arranged a study visit guided by an antiquarian, Camilla Grön, around an old church decorated with paintings by the best-known “church painter” Albertus Pictor in Sweden. This was painted 500 years ago in a lot of fantastic colours. In October we had a presentation by David Zahle from BIG architects office in Copenhagen.

This year's last meeting was the SCCF annual meeting. After the annual reports we enjoyed listening to Beata Stahre giving a presentation of her recent PhD thesis “Defining Reality in Virtual Reality: Exploring Visual Appearance and Spatial Experience Focusing on Colour”. She showed with grace and lucidity how different colour combinations, light sources, and viewing distance influence the impression of room and space.

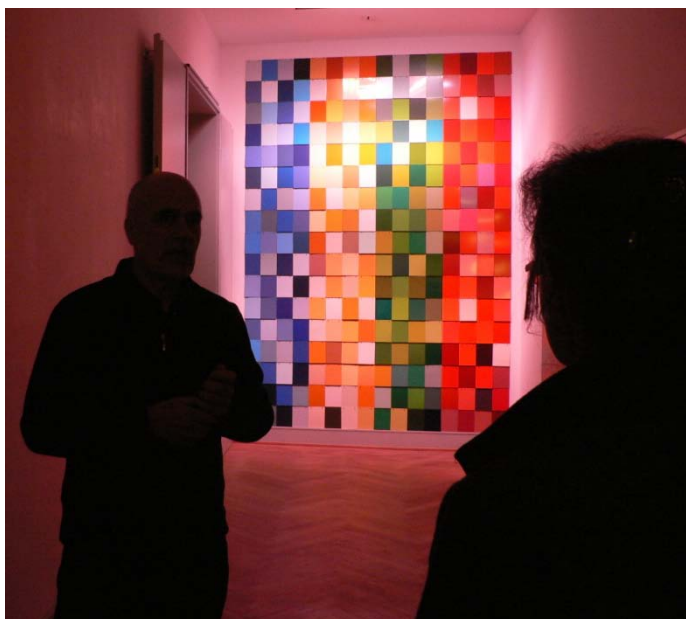
Colorspot

We continue to work on the development of our new homepage Colorspot. We are keen to get more visitors. www.colorsport.se is a new hub for all people interested in the progression of colour use, colour news, opinion and concepts. Colorspot is also intended as a meeting place where users can share discussion, penetrate topics, analyse concepts and interact with one another. Updated regularly by its team of dedicated bloggers and with a finger firmly on the pulse of the modern colour world, Colorspot is the place to find the latest developments in this crucial international language of colour.



Colour plays an important role in different sectors of the Swiss economy,

for example in graphic design, architecture, textiles, industry, and other fields including the broad public sector. The Swiss Colour Association pro/colore aims to serve as a general and professional platform for dealing with colour design, dyes, colour reproduction, and colour communication. It was one of the signatories of the founding act of the International Colour Association (AIC) in 1967.

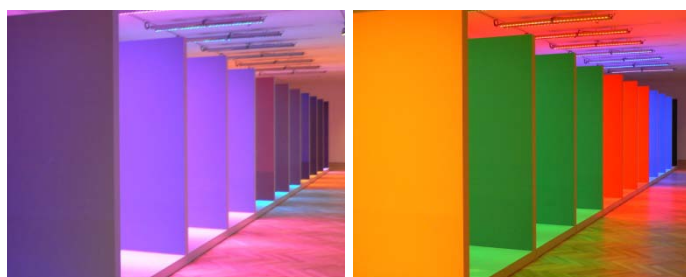


pro/colore's visit to the exhibition "LED – Staging Light and Colour" at the Gewerbemuseum Winterthur

Events

The year 2009 developed smoothly, with light and lighting design being central to the pro/colore events. All meetings were extremely popular and successful, as much interest is devoted to coloured light today.

In January, a visit to the exhibition "LED – Licht und Farbe inszenieren" (LED – Staging Light and Colour) at the Gewerbemuseum Winterthur was planned. Conceived by the Zurich University of the Arts (HZdK), it offered many interesting scientific and artistic insights into the light-emitting diode (LED) as an illumination means of the future. Professor Ulrich Bachmann guided the visitors through the exhibition explaining the rather complex but fascinating interaction of coloured LED-illumination and coloured surfaces.



Two colour schemes of LED lighting of the same physical structure.

In March, after the General Assembly, Ueli Seiler-Hugova gave a talk on "Farben zwischen Licht und Dunkelheit" (Colours Between Light and Darkness), dealing with the world of coloured shadows and Goethe's prism experiments. Goethe's colour theory continues to captivate people 200 years later.

In November, Modular Lighting Switzerland AG presented twice a lighting course under the theme "Richtiges Licht kann ein statisches Objekt in ein emotionales umwandeln" (Correct lighting can change the appearance of an object from a static into an emotional one). This hot topic attracted a large number of attendees to the firm's inspiring showroom. Stimulating talks explaining how lighting could become a creative means of producing different atmospheres were followed by a lively discussion.

Colour Courses in Zurich

A seminar on "Intersubjektive Farbgestaltung" (Intersubjective Colour Design) was held in January. Jointly organized by pro/colore and the Swiss Textile College (Schweizerische Textilschule, STF), it aimed at giving a specific expression to a product by means of colour so that the message could be immediately understood by anyone.

General Assembly

After many years of activity, Brigitta Weber (CEO Hurter Tapeten AG) and Verena Felder (Designer, Felder Gestaltungen) have resigned from the pro/colore Board, although they will continue as regular members of pro/colore. At the General Assembly on March 25th, Simone Läuchli, Head of Education Coordination SMGV was newly elected to the Board. The President and all other Board members were re-elected for a period of two years.



Illuminated bar at Marina Fallenbach (Modular Lighting Switzerland)

Upcoming International Event

During 7-10 June 2011 pro/colore will be hosting the AIC 2011 Midterm Meeting in Zurich. The pro/colore AIC official delegate Verena M. Schindler is Chair of the Organising Committee. She was also elected as a member of the AIC Executive Committee 2010-2013 at the AIC Congress in Sydney. pro/colore looks forward to welcoming many AIC delegates and guests in Zurich. A report on plans for AIC 2011 appears earlier in this newsletter.



The Color Association of Taiwan (CAT) is very pleased to have been admitted into the International Colour Association (AIC) as a regular member. We are highly inspired and motivated to contribute our expertise and experience in the fields of colour research, to intensify the international exchange on colour-related topics, and to create new networking opportunities for the international colour research community. Besides having organized the "International Conference on Multispectral Color Science 2007 (MCS '07)", CAT has already held 12 national symposia on colour themes during the past 10 years, focusing on colour applications in science, psychology, communication, arts, environmental design, and culture in general.



*International Scientific Symposium 2009 – Design, Culture, Color
CAT President Prof. Tien-Rein Lee with Prof. Steven Shevell (centre)
and Prof. Yoichi Miyake (right).*

Recent activities included the March 2009 International Scientific Symposium on Design, Culture and Color. Distinguished scholars and professionals from all over the world were invited to visit Taiwan to share their expertise and research findings. Distinguished guests were Prof Yoichi Miyake, of Chiba University, President of the Japanese Association for Imaging Sciences & Technology, speaking about "Applications to Color Information to Diagnosis", and Prof Steven Shevell of University of Chicago, President of the Society for Vision Sciences, speaking about "The Perception of Color Seen in Context".



CAT is the only non-profit organization in Taiwan dedicated to colour studies. CAT holds annual meetings, conferences and workshops as major events for scientists, artists, designers, engineers, teachers and students in Taiwan to mingle with colourful ideas. CAT publishes annual proceedings collecting island-wide submitted colour research papers.

In September, CAT Director General Dr. Tien-Rein Lee conducted a delegation to Sydney for the AIC 2009 Congress, and the twelve representatives provided 10 papers. They were addressed as official conference members, with the status legally confirmed in December 2009.



In November, CAT convened the "Environmental Art, Life Aesthetics and Color Workshop" at the Chinese Culture University, Taipei. Two focus themes emphasized at the workshop were "Environment as an Art vs Art in Public Environment" and "Color's Status in Life Aesthetics". For the first part, international Artists in Residence of the Taipei Artist Village (TAV) and landscape architects had been invited to join the discussion of urban colour, its forms and future development. The workshop participants then went on an excursion to the municipal park of Taipei Da-An district for hands-on practice of measuring environmental colours and an investigation to prepare further colour planning. Another topic of discussion was LED energy-saving light and how to apply LED lighting for enhancing the ambience of city night scenery.



The Color Association of Taiwan welcomes you to share your expertise with us, and we cordially invite you to attend the 2012 AIC Interim Meeting "In Color We Live: Color and Environment", 22-25 September 2012 in Taipei, Taiwan.





The Colour Group of Thailand elected a new Chairman for the period 2009-2012. Mr. Theera Piyakunakorn was nominated and finally approved by the members.

Although his background is in printing, he has been involved in colour for long time, including a wide variety of research.

Activity

The CGT organizes a regular meeting every 3 months. Members come from various industries. From this year, the group aims to expand its members to the field of academia.

Annual Meeting

During the annual meeting on January 8, 2010, we hosted the 2nd meeting "Colour Vision" with support from Chulalongkorn University (Thailand) and Ritsumeikan University (Japan). 14 research papers were presented by professors and students.



Photograph of speakers and organizing committee of the 2nd meeting "Colour Vision" at annual meeting of the Colour Group of Thailand.

In addition, it has been our honour to have the opportunity to assist the Thai Government to renovate the colour of the buildings at several historical sites in Thailand.



Hua Lamphong Grand Central Railway Station

Hua Lamphong Grand Central Railway Station is officially known as the Bangkok Central Terminal Station. It is the main railway station in Bangkok, Thailand, and is operated by the State Railway of Thailand. The station was opened on 25 June 1916, after six years' construction. During World War II the Allied forces tried to bomb the station but, fortunately for Thai heritage, hit a nearby hotel instead.

The station serves over 130 trains and approximately 60,000 passengers each day. Since 2004 it has been connected by underground passage to the MRT subway system with a station by the same name. The station was built in an Italian Neo-Renaissance style, with decorated wooden roofs and stained glass windows. The architecture is attributed to Turin-born Mario Tamagno, who, with countryman Annibale Rigotti (1870–1968), made a mark on early 20th century public building in Bangkok.

Our project is to repaint the colour on the building. A survey was conducted by our team by cracking the surface of the walls which revealed two layers of paint, the inner of which appeared to be the original colour. The NCS colour map was used to match the colour visually, and six colour shades were obtained. The colour of the main building was found to be light yellow between 0510 Y10R and 0560 Y20R. We have received favourable unofficial feedback from websites and other media about the colour selections.



Amphawa Floating Market

Nearby in Samut Songkhram province, Amphawa Floating Market is an attraction by the canal near the Amphawan Chetiaram Temple. On Friday, Saturday and Sunday, during the afternoon 12–8 pm, the Amphawa Canal is occupied by vendors who pack their boats with food and drinks, such as fried sea mussel, noodles, coffee, O-liang (iced black coffee), sweets, etc. Visitors can enjoy the cosy atmosphere and music broadcast by the community members, explore the market, have food, and hire a boat to see fireflies at night.

Over a hundred years, the changes of colour in the buildings and scenery have affected the appearance of the historical Amphawa village. The government thus gave us the project to define the proper colours of all the houses, pathways, bridges and buildings around the village in order to restore the same appearance as in the old days. The survey took three months and the obtained colours were approved by the Amphawa community.



Palette of historic colours (NCS codes) of the Amphawa Floating Market.



The Inter-Society Color Council (ISCC) is the principal professional society in the field of color in the United States. The Council was founded in 1931 with the goal of advancing the knowledge of color as it relates to art, science, and industry. There are three classes of ISCC membership: Individual, Member-body and Sustaining. There are currently ten sustaining members, 18 Member-Bodies and approx. 540 individual members. Joining the ISCC Board of Directors in 2009 were Dr Nathan Moroney of Hewlett-Packard Company, Ann Laidlaw of X-Rite Inc. and Leslie Harrington of The Color Association of the U.S.

Publications

The ISCC publishes a newsletter six times each year. It also offers for sale the following technical reports: *Color and Light* by Fred W. Billmeyer and Harry K. Hammond III; *Demystifying Color* by Robert Chung, *Guide to Material Standards and Their Use in Color Measurement* (ISCC TR-2003-1), and a Commemorative DC and limited edition pin from the ISCC's 75th Anniversary, all available from the ISCC Office.

Annual Meeting

The Inter-Society Color Council held its 2009 Annual Meeting in June in Rochester, NY at Rochester Institute of Technology. RIT and the Rochester area have a rich history of imaging, photography, graphic arts and printing, and of course the science and art of color. The Sunday program was filled with technical talks from the three ISCC interest groups. A student poster exhibit followed the technical sessions on Sunday.

The Annual Meeting was followed by a special symposium hosted by the Munsell Color Science Laboratory (MCSL) celebrating their 25th anniversary. In the early 1980's when the Munsell Color Foundation, Inc. was making plans to dissolve, a proposal was made by RIT to use the assets to establish MCSL as a research laboratory, directed by the newly established Richard S. Hunter Professor in Color Science, Appearance, and Technology. MCSL was established in 1983 and an inaugural symposium "Frontiers in Color Science" was held February 1984 featuring the world's leading experts. Twenty-five years later, MCSL is an internationally recognized leader in color science research, education, and outreach.

Preliminary Program, 2010 ISCC Annual Meeting

This meeting will confront the hottest issue in color today: precise, accurate control of the colors of multi-colored objects. Markets today demand much tighter color tolerances than ever before, and color-production technology (including new colorants, new textures, and advanced gonio-apparent surfaces) challenges these tolerances. We'll meet at North Carolina State University in Raleigh, NC on **October 7-8**.

Awards

At the 2009 Annual Meeting the ISCC presented the Godlove Award to Dr Roy Berns, Director of the Munsell Color Science Laboratory, for his many contributions, through research and education, in color and imaging science, and for his leadership in the color community. The Godlove Award was established in 1956 and is the most prestigious award given by ISCC. It honors long term contribution in the field of color science.



Dr Roy Berns with his wife Susan on receiving the prestigious Godlove Award from the ISCC (October 2009).

The ISCC's Nickerson Service Award was given to Mr Phil Hunter of Hunter Associates Laboratory, Inc. for his many years of support to the ISCC. The ISCC Nickerson Service Award was established in 1980 to recognize outstanding long-term contributions towards the advancement of the ISCC and its aim and purposes. The Award is named to honor the late Dorothy M. Nickerson, a founding member of the ISCC, its Secretary from 1938-1950 and its President from 1954-1956.

In Memoriam

Frederick Tyler Simon passed away on 16th February 2009, at the age of 91. Fred was educated at the Carnegie Mellon University, Philadelphia Textile Institute, Charleston University, and Marshall University. He joined the faculty of Clemson University in 1968 as the Serrine Professor of Textile Science, and later became Professor Emeritus of Textile Science. He contributed to the field of color science both by innovative solutions to problems of industrial color measurement, and by training numerous graduate students. His industrial legacy includes Simon-Goodwin color charts for color identification, the two-mode method for simplifying measurement of fluorescent samples with a single monochromator spectrophotometer, the 555 method of shade grouping according to tolerances in three parameters ($\Delta L^*a^*b^*$ or $\Delta L^*C^*h_{ab}$), industrial color standards, fluorescent color matching, and many other projects.



President of **ad chroma**
Michel Cler has been a member of the AIC since 2008. A non-profit colour

association, **ad chroma** was founded in Paris in 2003 by architects, colour consultants, designers, photographers, editors, art historians, physicians, public officers and industrialists. The founding members were Michel Cler, Véronique Willemin, Verena M. Schindler, Béatrice Gisclard, Christian Gérard-Pigeaud, Christian Fauconnet, France Cler, Christophe Rebours and Pierre Vincent. All were present at the first meeting of the Council on January 14th, 2004, at the Café de Flore on Boulevard Saint-Germain, Paris. In 2009 the following persons became honorary members of **ad chroma**: José Luis Caivano (Argentina), Annie Mollard-Desfour (France), Juan Carlos Sanz (Spain), Lars Sivik (Sweden).

Objectives

The association is concerned with dynamic aspects of colour, such as light/shadow and texture/material, which determine the appearance of colour in our private and public environments. The objective is to identify areas and topics of converging interests in applying and understanding colour and its appearance. Treated as a trans-cultural language, colour is to be explored in research, practice and communication via an open-minded and critical perspective.

Thereby **ad chroma** is committed to supporting different approaches with a major aim of creating exchange platforms through a network of professional specialists and interested laypersons, as well as representatives of industrial, academic and private institutions. The objectives of **ad chroma** include: a) increasing awareness about colour; b) developing specific programs of study; c) furthering research about the daily use of colour; d) collecting, interpreting and disseminating information to keep it accessible and alive through professional exchange; and e) participating in conventions and organizing special events on colour.

Since its creation **ad chroma** has become an international platform for discussing colour-related topics in an interdisciplinary and cross-cultural context. Professionals coming from different fields, such as design, urbanism, art, photography, communication, psychology, textile, colour measurement, colour science, colour imaging and robotics and countries, such as from Argentina, Germany, Russia, Spain, Sweden, or the United States, have presented their approaches and work to **ad chroma** members and friends.

In 2009 two main **ad chroma** events were held at the Society of Architects (Société Française des Architectes) in Paris.

1) On May 20th the general theme was colour synaesthesia. Michel Cler introduced the diversity of systems, which help to visually and linguistically differentiate colour. The first speaker was José Luis Caivano (Argentina), architect, professor at University of Buenos Aires (UBA) and AIC President. Inquiring into the effects of colour on the perception of different sensorial continua, he talked about colour and flavour in chromo-gustative synaesthetics.

The second speaker was President of Centre Français de la Couleur, Annie Mollard-Desfour. She discussed colour vocabulary and the cultural significance that arise when nuance-defining colour terms are translated into another language. How do we deal with the context, connotations, figurative significations and metaphors of colour terms? The third speaker, Juan Carlos Sanz (Spain), presented his second edition of *Lenguaje del Color. Sinestesia Cromática en Poesía y Arte Visual*. The final speaker was Verena M. Schindler, architectural historian and co-author of *Farb-Systeme 1611-2007*, who addressed colour systems over three hundred years beginning with Forsius' drawings of 1611.



Michel Cler, President of **ad chroma**

2) On October 8th the general theme was colour perception. As an introduction environmental designer Béatrice Gisclard described the conditions and major upheavals affecting our society today. These developments have served to re-open basic debates concerning mankind's central role in affecting the environment and disrupting its natural equilibrium to cause bio-geographical and climatic changes on a global extent. Two of the following talks then dealt with the relationship of mankind to the environment as evidenced through the appearance of colour. Lars Sivik (Sweden), psychologist, professor and co-developer of the Natural Colour System (NCS), talked about the concept and philosophy of NCS discussing the dimensions of colour and combinations which have been most prominent in his life-long research. The second talk was by artist and filmmaker Bertolt Hering (Germany) who inquired into our sense perception of colour in natural and built environments. His approach dealt with nature as an incentive of design through its inspiring colour.

Summaries of both events have been published: *Primaires* 169, July 2009, p. 9-11; *Primaires* 170, December 2009, p. 8-9.

ad chroma is also concerned with organising seminars to increase awareness about colour. Such seminars have been realized in Paris at the flagship store *Printemps*, *Institut d'Arts Visuels d'Orléans* and *Institut Supérieur des Arts Appliqués*.

ad chroma participated at the AIC Congress by presenting a research paper entitled 'Towards Colour... The Sense of Colour of Shadow' by Melanie Yonge *et al.*

AIC STUDY GROUP ON COLOUR EDUCATION (CE)

The AIC Study Group on Colour Education is an international network of scientists, teachers within the field of colour (colour theory, colour design, colour psychology etc.) and professionals like designers and architects with a specific interest in colour education. The aims are: (1) to exchange knowledge and experience; (2) to stimulate teaching and research; (3) to inform about coming events which might be of interest; and (4) to share news from congresses, seminars, workshops, publications and exhibitions.

Dr Robert Hirschler from Hungary has taken over from Berit Bergström (now AIC President) as Chair of the Study Group. He has long experience of colour education and is well known in the AIC community.

Activities

The study group has its own Newsletter with news and information about coming AIC meetings and other colour seminars, colour studies, methods of teaching colour, new literature, etc. We also have a literature list which is continuously updated regarding articles, reports and research papers regarding how colour is used in colour studies and how to teach colour. The list is divided into the following groups:

- Colour Atlases, systems and books about them
- Literature about how to teach colour
- Journals and papers about how to teach colour
- Literature and papers that we use to teach colour
- Video, CD-ROM, websites and multimedia

During the AIC Congress 2009 in Sydney, we had a special session on Colour Education and also a members' meeting for the Study Group. The invited speaker was *Galen Minah*, Associate Professor of Architecture at the College of Built Environments, University of Washington in Seattle. "Between knowledge and fairy tales: a methodology for teaching color and design". The next three presentations demonstrated different approaches to colour education:

"Teaching Colour" by Lindsay MacDonald, School of Printing and Publishing, London College of Communication, UK;

"A reflective model for colour studies learning", Nur Demirbilek, Queensland University of Technology, Australia;

"A Virtual Colour Laboratory", Karin Fridell Anter, School of Architecture at the Royal Inst. of Technology in Stockholm.

The session ended with a discussion about some important questions in colour education. Colour studies provide a very good tool to unify different disciplines and can encourage collaborative projects so that students will understand each other in their coming work situations. Colour education is an important and necessary source of stimulation for research, to inspire students to continue studying colour theories and the effects of colours. If we had no colour education, there would be no new generation of colour researchers. Issues were:

1) Through colour studies how can we arouse the interest for colour research? The importance of colour education is the first step into colour research. How to raise the profile of colour studies? How to demonstrate the breadth of colour knowledge and the meaning of colours?



Teaching colour to undergraduate art and design students at the London College of Communication (Lindsay MacDonald)

2) How to teach colour and transform the theoretical knowledge into practical colour design work?

3) How can colour be treated with the same importance as shape and form in the design process?

Members meeting

We had a very fruitful Members Meeting within the SG of Colour Education and we can look forward to a more active network within the Study Group. Many new ideas arose:

- The impact of colour research. Facts of what is important in colour studies and why. How to construct good arguments and be able to put into focus the importance of colour studies and colour research.
- Truth, or better untruths, about colour phenomena. A list of all these "Truths".
- Collection of colour exercises: new ways of running colour education or what we already are doing. This could end up as a data bank of colour exercises for colour education.
- Establish a "Creative Colour Education Competition" for teachers with different education methods.
- AIC Colour Teaching Award. The best teacher of the year will be selected and honoured.
- The Study Group has now 75 members, and 31 nations are represented in the group. The members list is not on our web site to avoid too much spam. It will be sent out continuously when new members are being introduced.

Membership of the SG is free, and is available to every person/organisation who/which scientifically or practically deals with colour education, or contributes to the realisation of the aims mentioned above to support the Study Group generally. The requisites for being incorporated as a new member of the Colour Education Study Group are to subscribe and participate in the e-mail list and to have presented a relevant paper or poster at an AIC meeting.

Chair: Robert Hirschler
Attila u 93-95, 1039 Budapest
HUNGARY

T: +36 1 240 1094

robert.hirschler@hunetkft.hu

www.aic-colour.org/sgroups.htm



The Study Group on Environmental Colour Design (ECD) is an international group of scientists, artists, colour consultants, urban planners, architects, designers, lighting designers, art historians, psychologists, and other professionals with a specific interest in colour as a constitutive element of environmental design and its effects on human emotion, cognition and behaviour.

1. MEMBERSHIP REQUIREMENTS

A person who participates once via an oral presentation or scientific poster at an AIC meeting or congress may become a member. Another requirement is to subscribe to the Colour Mailing List by sending an email with "subscribe colour" in the subject heading to ecd.studygroup@yahoo.com

2. AIC 2009 SYDNEY

2.1 ECD Special Session

At the AIC 11th Congress in Sydney, a special session of the Study Group on Environmental Colour Design attracted many congress participants, despite four parallel sessions.

Our invited keynote speaker **Maria João Durão** (Portugal) presented a paper on "COLOUR AS PATHWAY OF LIGHT: SEARCHING THE SHADOW OF LUIS BARRAGÁN". Durão's point of view was based on her own experience while visiting Mexico, including some of Barragán's buildings, ancient monuments, and daily life culture. In her highly attractive visual presentation, she focused on all those elements that Barragán drew attention to in his acceptance speech of the Pritzker Prize in 1980: beauty, inspiration, magic, spellbound

enchantment, as well as the concepts of serenity, silence, intimacy and amazement. Thereby colour, light and shadow play an essential role. Durão showed how important it is to visit buildings onsite in order to capture the atmosphere, and light and shadow interacting in the living space.

Sung Min Byun (Korea) talked about "A STUDY ON THE CHARACTERISTICS OF COLOR PAlettes AND COLOR SCHEMES IN KOREAN PALACES OF CHOSUN DYNASTY" which she had carried out together with Gyoung Sil Choi. Using different methods and tools to measure colour, at different distances, as well as considering the symbolic meaning of traditional colours in Korean culture, she presented interesting results underscored with compelling visual evidence of the representative colour ranges of historical Korean palaces.

Zena O'Connor (Australia) focused on "FACADE COLOUR AND JUDGEMENTS ABOUT BUILDING SIZE", in effect, one specific topic of a wider research project. Her method was based on a semantic differential rating scale, the Latin-square technique, and digitally-manipulated façade colour treatment. Examining how colour can create contrast between buildings and the landscape or alternatively can integrate them into the landscape, her colour choices were strikingly Australian, closely related to colours found in the natural environment.

Finally, **Tatiana Semenova** (Russia) presented her paper entitled "BASICS OF THE MOSCOW COLOUR DESIGN" which surveyed her impressive work as Director of the Moscow Colour Centre. The city's colour concept includes a whole range of different levels, such as building façades, street pavements, urban furniture, and also vegetation, advertisement and festive colours of ephemeral events. The colour schemes are conceived for historical buildings as well as for contemporary architecture, and recently for the glass towers of the prestigious business district.

In summary, the four contributions of the ECD special session represented different approaches to environmental colour design. These colour studies and colour projects represented contrasting cultural contexts and ranged from the specificity of a single topic to the complexity of urban scale. At the end of the session, a lively discussion ensued.



Special Session of the Study Group on Environmental Colour Design at the AIC Congress in Sydney 2009: Speakers (from left to right) Tatiana Semenova, Sung Min Byun, Zena O'Connor, and Maria João Durão.

AIC STUDY GROUP ON ENVIRONMENTAL COLOUR DESIGN (ECD)

2.2 ECD Project: Interaction of Colour and Culture

The current project of the ECD Study Group is entitled INTERACTION OF COLOUR AND CULTURE. Environmental Colour Design 1965-2011: An Anthology on Colour. The aim of the project is to collect published and unpublished texts, articles and essays from many different countries written by practitioners such as architects, landscape architects, colour consultants, artists, designers, graphic designers, cultural heritage commissioners, urban designers, town planners and lighting designers, as well as other professionals who have been directly involved in the conception, realization and application of colour in the environment and urban space. Therefore, the plan is to include:

- 1) papers from past AIC Meetings;
- 2) articles and papers not available in some countries
- 3) texts available only in one language.

Collecting and publishing these texts together will not only serve to validate individual efforts and achievements, but also put these in an historical context. This will serve the broader aim of promoting a deeper understanding of the relevance of colour in the overall design process of the twentieth and early twenty-first centuries. A more complete report on this project can be found on the ECD web site.

2.3 ECD Project: Synaesthesia

Juan Carlos Sanz (Spain) and Verena M. Schindler (Switzerland) are collaborating on a project entitled "SYNESTHESIA AS A BASIS OF COLOR DESIGN". Sanz argues that the increasingly multi-sensorial environments of daily life conceived on the basis of multimedia performance are having an impact on designers. The basis of the current research project is Juan Carlos Sanz's publication entitled "The language of colour, chromatic synaesthesia in poetry and the visual arts" (*Lenguaje del color. Sinestesia Cromática en Poesía y Arte Visual*. 2nd Ed, Madrid 2009) *The language of colour* deals with different definitions of colour concepts in the arts and sciences, determined through cognition, linguistics and iconicity in the perceptual and phenomenological occurrence of designating, categorizing and specifying colour. It also inquiries into synaesthesia described as different modalities of multi-sensory experience or different forms of cross-sensory metaphor. Thereby colour synaesthesia can involve sound, taste, smell, touch, motion, emotion or intuition.

2.4 ECD Selected Bibliography

The colour bibliography compiled by José Luis Caivano has more than 4,000 entries, therefore it was suggested creating a selected bibliography focused on Environmental Colour Design, see our website. The suggestion was made to include not only the bibliographical reference of specialized books but summaries as well. This would help members decide which book would be helpful for a specific professional activity. Tatiana Semenova (Russia) suggested the creation of an international ECD journal.

2.5 AIC Wiki Workspace

Leonhard Oberascher (Austria) introduced the AIC Wiki Workspace as a platform for discussion and collaboration.



2.6 New Members

After the ECD special session, an informal Meeting was held, with more than 80 Members and interested participants. Eighteen new members from twelve different countries registered at AIC Sydney, including:

Juliet Albany (Australia), Margarida Allen Gamito (Portugal), Harald Arnkil (Finland), Mahshid Baniani (Japan), Pilar Belmonte Useros (Spain), Pierre Bonnefille (France), Sungmin Byun (Korea), Nur Demirbilek (Australia), Margaret Grose (Australia), Babette Hayes (Australia), Tien-Rein Lee (Taiwan), Heidi Naper (Norway), Zena O'Connor (Australia), Xiao Yu Pei (China), Tatiana Semenova (Russia), Zélia Simões (Portugal), Isabel Villar (Sweden), Melanie Yonge (France).

2.7 Contributions of ECD Members

In Sydney, many ECD members contributed with oral and posters presentations. On the Organising Committee for AIC 2009: ECD outstanding member Paul Green-Armytage, as well as Dianne Smith and Margaret Pope, were directly involved.

3. ECD LOGO

During the AIC Interim Meeting 2008 in Stockholm, the AIC Executive Committee specified the inclusion of the AIC logo. The ECD logo has been adapted to the standard version now available on the official site (see head of this article).

4. ECD WEBSITE

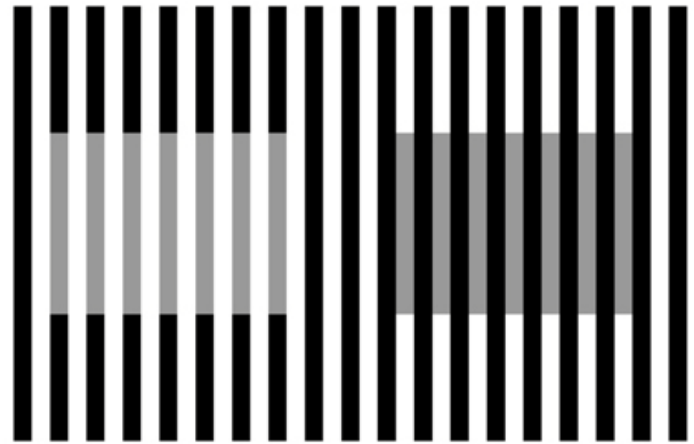
Look for updates of the ECD website by going to www.aic-colour.org then to Study Groups then ECD. It is edited in English and French, and serves as an information platform. You will find there information about the history of the study group, its aims, announcements of its events, a description of on-going research projects, a membership list, information on becoming a member and subscriber to the colour mailing list, as well as a link to the bibliography assembled by the former chair José Luis Caivano, and a list of new colour publications. Take your time to explore it.

CHAIR: Verena M. Schindler
Atelier Cler Etudes Chromatiques
64, rue Vergniaud
75013 Paris, FRANCE
T: +33 1 45 80 91 15
ecd.studygroup@yahoo.com

CO-CHAIR: Dr Leonhard Oberascher
Kaltnergasse 8
A-5020 Salzburg
AUSTRIA
info@leoncolor.com

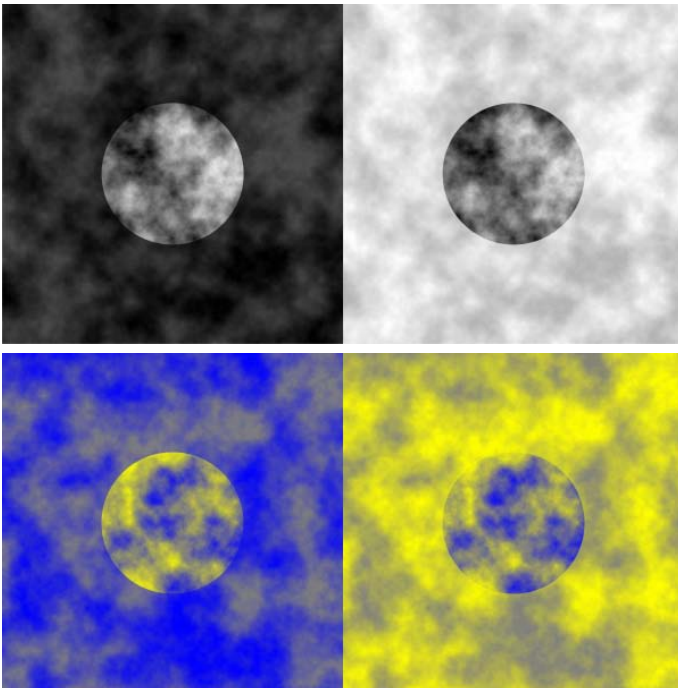
The work of the Study Group was concentrated in the preparation and realization of the Session on Visual Illusion of the 11th AIC Congress 2009 in Sydney. The session started with the presentation of the invited talk given by Akiyoshi Kitaoka, followed by three presentations by Branka Spehar, Alexander Logvinenko, and Sara Moorhouse.

The introduction by Kitaoka proposed a classification of colour illusions which might be useful to understand their underlying mechanisms. These are relatively few, and can be summarised in contrast-assimilation phenomena, visual completion or colour spreading, inversion surface-colour/light-shadow, scission or transparency, and motion from colour. In some cases more than one mechanism contributes to produce an illusion, and a comparison between the achromatic and the chromatic version of the same illusion can help to point out which mechanisms are at work and which among them is more relevant. In his talk Kitaoka examined two pairs of illusions starting from their achromatic original version and trying to produce the corresponding chromatic examples.



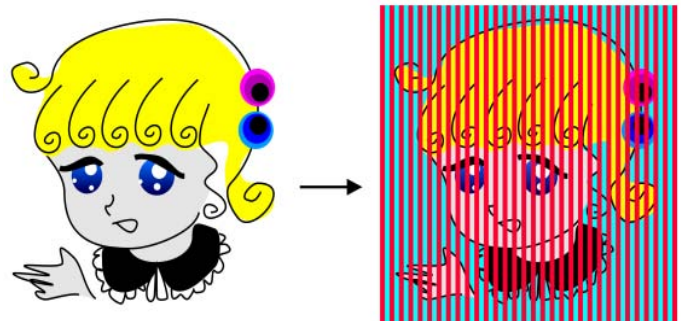
White's illusion The grey grating on the left appears to be lighter than that on the right, although they are the same lightness.

The second illusion where the chromatic version can better disambiguate the underlying mechanisms is the famous White illusion (the discoverer himself later spoke on its historical early stages). First of all Kitaoka explained a simple procedure to produce the illusion. Put a figure over a differently coloured background and then cover both with a pattern of parallel lines (or dots, a grid, a checker pattern) to obtain different versions of the same illusion. The combination of a red figure over either a blue or a yellow background, and a yellow or blue pattern respectively, give particularly strong effects, as the background and the overlapping pattern act in the same direction: on the one side the blue background moves the red figure towards the yellow pole by contrast, and on the other side the yellow overlapping pattern again moves the red figure towards the yellow pole by assimilation, with the result that the figure appears yellowish orange. The other combination of a yellow background together with a blue pattern moves the red figure towards the blue pole for the same reason as before, and the figure appears bluish purple. So the same figure which appears red in a uniform achromatic background, appears of contrasting colours under the effect of the two inducing fields (the contrasting background and the assimilating pattern).



The Anderson moon illusion: (top) the dark surround makes the moon appear lighter, whereas the light surround makes it appear darker; (bottom) the blue surround makes the moon appear yellowish, whereas the yellow surround makes it appear bluish.

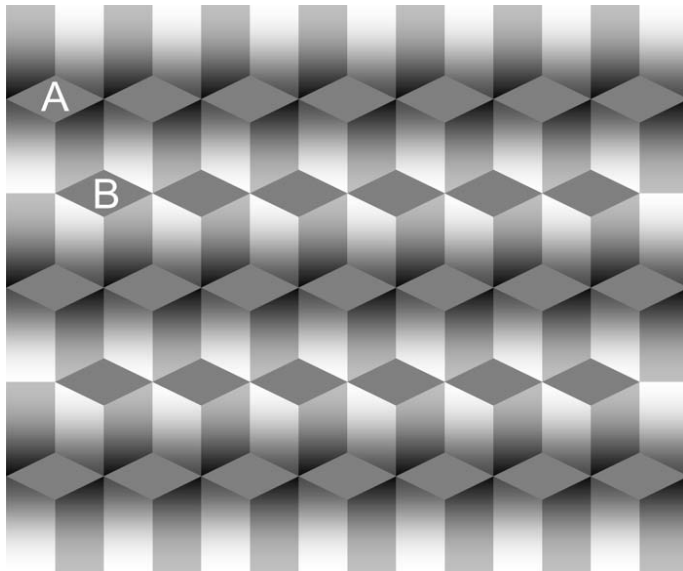
The first case was that of Anderson moon which appears dark if surrounded by light clouds and light if surrounded by dark clouds. The illusion is due to an inversion of surface-colour/light-shadow: in one occurrence it is a light surface covered by dark clouds, in another it is light clouds covering a dark surface. This inversion produces a strong perceptual change about the same object, which is the essential feature of an illusion. Nevertheless is difficult to exclude the role of contrast in an achromatic display of this illusion. By using coloured clouds Kitaoka could obtain the same effect, but the colour combinations needed showed that contrast is irrelevant while the surface-colour/light-shadow inversion is decisive.



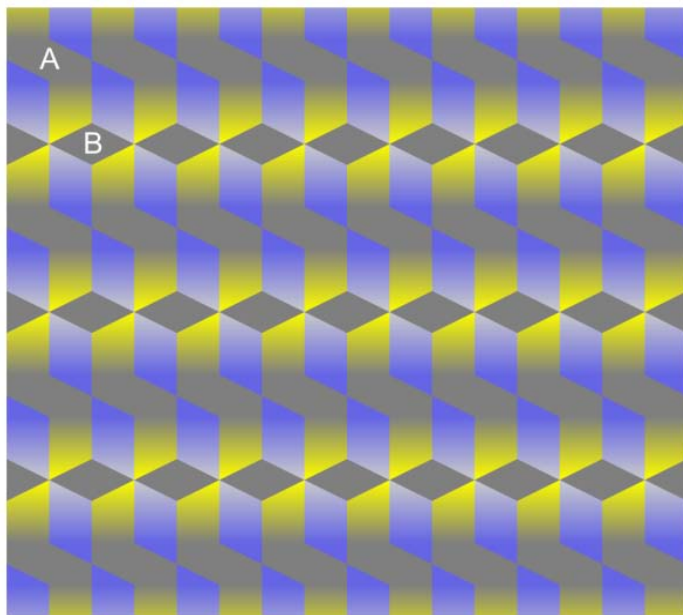
Pale complexion can be improved by colour assimilation and contrast.

The third illusion discussed in the presentation by Kitaoka was the wall of blocks by Logvinenko, in which diamonds of the "same colour" appear very different if surrounded by different contexts. The effect appears "incredible, terrific, wonderful": the colour combinations which offer the same effect as the achromatic display show that contrast is not responsible.

Kitaoka showed that this is a case of colour constancy, as the contexts differ by appearing more or less illuminated (in the achromatic version) or illuminated by differently coloured lights in the chromatic version. By the way the expression "same colour" is a shortening of "the same colour stimulus", referring to stimuli that only appear the same if the background and the observer's adaptation state are the same.



Logvinenko illusion: A appears to be lighter than B, though A = B.

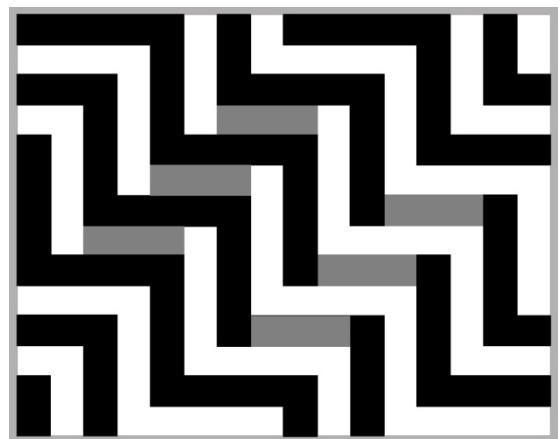


Chromatic version of Logvinenko illusion: A appears to be lighter and more yellowish than B, though A = B.

Therefore when dealing with illusions the correct expression should be "figures which appear to be the same colour on a uniform background, appear of different colours on different backgrounds", because the comparison is made between appearances, which belong to the same perceptual category. It is not possible to compare stimuli and appearances which belong to two different categories, one physical and the other psychological. In any case Kitaoka confessed he had not succeeded in producing a strong chromatic version of the Logvinenko illusion.

My explanation is that while handling contrast and assimilation in the chromatic domain is rather easy, illumination seems to resist to appear coloured, as evidenced in the Ambegujas illusion by S.S. Bergström. Also in the case of the fourth illusion discussed by Kitaoka (the Adelson snake) the chromatic version appears quite weak, as again the role of illumination/shadow is very strong, although combined with counter-phase brightness contrast.

The presentation by Logvinenko seemed to provide further support for the theory put forward by Kitaoka: under pseudoscopic viewing the 3D appearance of objects is reversed so that what normally appears close to the observer seems farther away, and on the contrary what normally appears far from the observer looks close. The consequence is that a cone casting a shadow over the floor appears behind the floor, and the shadow loses its appearance of diminished illumination and looks instead like a region of different surface colour. The perceptual change is remarkable and is called illusory because the same area, which appears as a shadow in normal viewing condition, appears as a surface colour under pseudoscopic vision. Logvinenko brought other examples of surface-colour/light-shadow inversion, which appear dramatic by changing the viewing conditions. Usually our naive interest is focused on the objects of the surrounding environment, while the illumination is not of interest because it does not affect the objects, which appear almost unaltered when the illumination changes. The two modalities of visual perception, surface colour and illumination, are therefore basically different (c.f. the dual code of Mausfeld) and the phenomenological description of the two reveals that surface colours are more dense, contrasting, saturated, impenetrable and pronounced as compared with illumination or shadows. No wonder that illusions of this kind appear so striking!



Zigzag version of White's illusion (Branka Spehar)

The contribution by Branka Spehar centred on a study of contrast and assimilation, which often work antagonistically but in some cases cooperate as in the White illusion. Spehar found that the appearance of the test object (or figure) depends not only on its contrast with the background and its assimilation with the superimposed pattern, but also on the local and global contrast, i.e. on the brightness difference between figure and its background, and on the brightness difference between background and the pattern.

Traditionally the White illusion, and many others, presents the test figure at an intermediate level between the background brightness and the pattern brightness: this is the condition which most efficiently provokes the illusory impression (the strongest colour variation). If the test figure is brighter than the other two components, the illusion is very weak, if any.



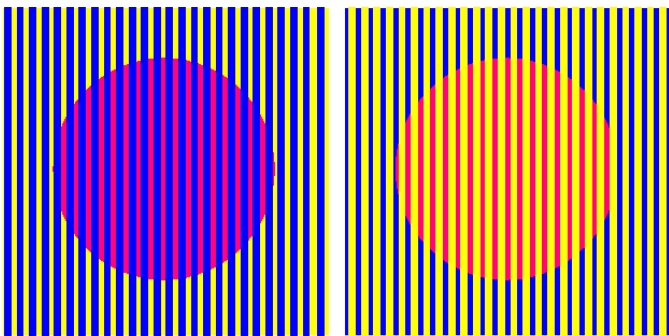
Carefully placed bands of brightly contrasting colour make the spaces of the conical bowl appear to be wider or narrower, deeper or shallower, or to undulate, bend or hover (Sara Moorhouse).

Worthy of praise was the work of Sara Moorhouse, who also dealt with surface colours and the 3D appearance of ceramic bowls. By changing the inner colours, their area, their position, and their spatial frequency, she showed that the shape of the bowl appeared modified in a predictable way. The illusory effect is more evident if one looks directly at the bowl, instead of a picture, because the motion parallax supplies relevant information about the 3D shape of the bowl which clashes with the colour-induced visual appearance. Colour combinations derived from observing nature and art masterpieces seem to produce considerable illusory effects.

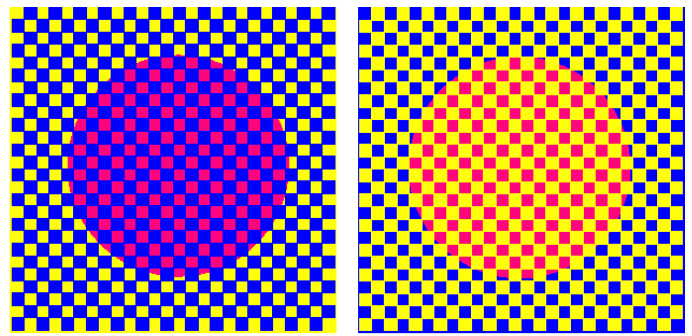
All these considerations were resumed in the concluding lecture of the Congress given by M. White himself, who offered an overview about the origins of his famous illusion. White started his study from a design by Susan Hirth, a student of Parola, in which different perceptive effects were mixed and no interpretation was given. Other illustrations were published like that well-known graphic by W.D. Wright (1964) on the cover of his book "The Measurement of Colour", in which coloured squares (red, orange, green) were weakly assimilated to the colour of the uninterrupted bars above and below them. Only after further studies did White adopt the idea that contrast with the bar to which the square belonged was the main factor determining the illusion, although assimilation with the adjacent bars could strongly intensify it. The presentation by White was accompanied by an animation by da Pos, in which the role of contrast was made visible through a figural evolution in different steps starting from the most traditional form of lightness contrast. Spehar added the results of her many studies on the subject in which local and global factors interact in producing the illusory effect.

Chair: Prof. Osvaldo da Pos
Department of General Psychology
University of Padua
Via Venezia 8
35131 Padova
ITALY
osvaldo.dapos@unipd.it
www.psy.unipd.it/~dapos/visual_illusions

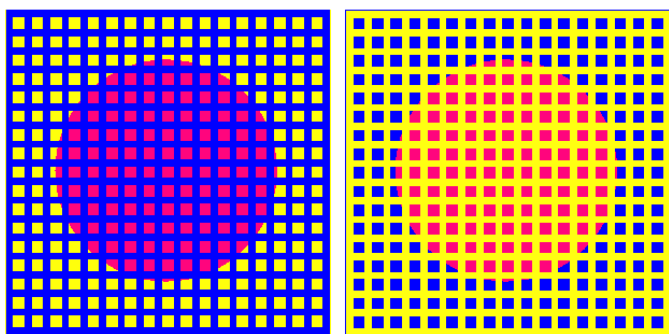
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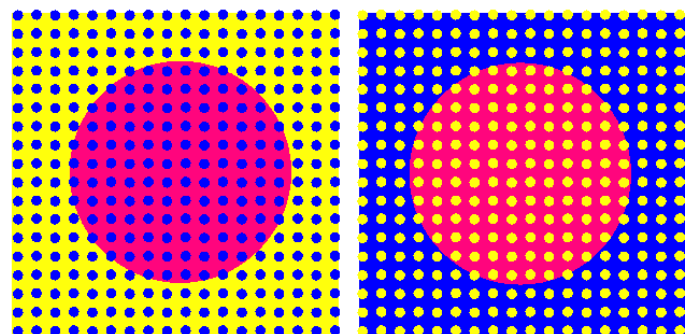


Figure 1. The red is always the same (R=255, G=5, B=125). 1) Munker illusion; 2) De Valois illusion; 3) Chromatic dungeon illusion (originally achromatic, Bressan); 4) Dotted colour illusion (originally achromatic, White).

AIC STUDY GROUP ON COLOUR PERCEPTION OF THE ELDERLY (CPE)

The purpose of this Study Group is to discuss basic and practical studies on colour perception of the elderly, such as colour appearance, colour discrimination, brightness perception of colours, colour preference and application tools for planning and testing universal colour designs. In addition, we seek to share useful information among the members concerning colour perception of the elderly.

Activities

1. A symposium of our study group was held at AIC2009 in Sydney. The attendance was more than seventy. We had one invited keynote talk by Dr. Mitsuo Ikeda and three contributed talks from UK, Spain, Thailand and Japan. Dr. Ikeda showed in his keynote talk that haze within the human lens greatly affects the colour perception by de-saturating colours with age. He emphasized that more attention should be paid to the haze element. In the contributed paper section, UK and Spain pointed out that an adaptive weighting function in colour opponent mechanisms compensates age-related changes in the ocular media and retinal sensitivity losses to maintain colour constancy throughout the life span. On the other hand, Thailand and Japan indicated that cataracts significantly decrease legibility under mesopic and photopic vision with low illuminance level, depending on contrast polarity of text. Finally, the Japan group reported that young observers are more sensitive to discomfort glare than the elderly, and blue LEDs have a different glare property from other coloured LEDs. As a result, we were able to share and discuss in the symposium the latest topics on aging vision research, that is,

colour vision and legibility with cataract, age-related changes of colour vision mechanism and glare with LED.

2. The chairman and the secretary of the SG were invited as guest speakers at several kinds of academic conferences and meetings in Japan, Spain, UK, Portugal and USA.

3. We relocated the domain of the SG homepage to the new site "<http://www.okajima-lab.ynu.ac.jp/CPEsg>" since the original domain was eliminated for some reason.

4. Currently, the number of members of the SG is 67 from 16 countries.

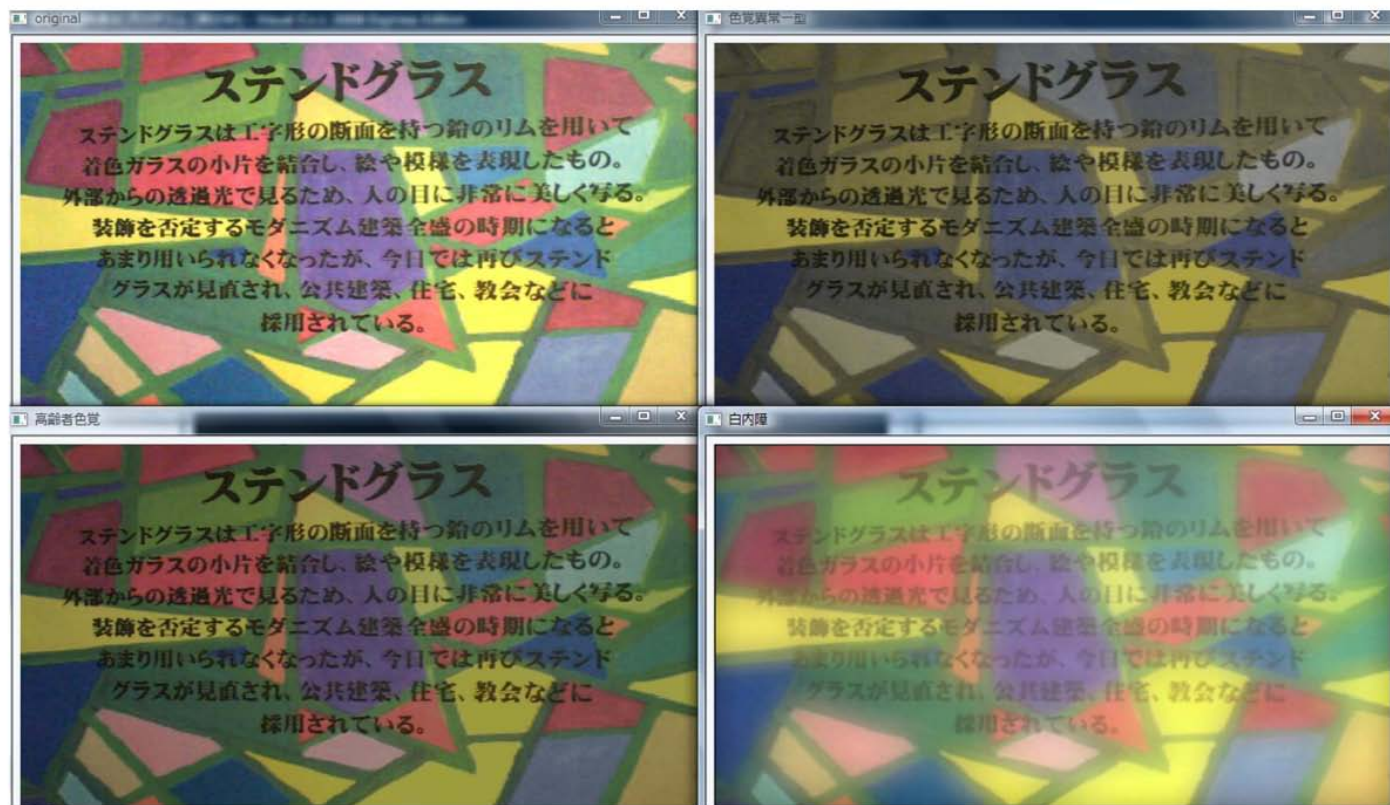
5. We are planning to hold our next study group symposium at AIC2011 in Switzerland. The theme will be "Universal Colour Design". (See figures below.)

Chair: Dr. Katsunori Okajima
Dept. of Environment and Information Sciences
Yokohama National University
79-7 Tokiwadai, Hodogaya, Yokohama
240-8501 JAPAN

Secretary: Dr. Manuel Melgosa
Facultad de Ciencias
Universidad de Granada
E-18071 Granada
SPAIN
www.cpesg.org/CPEsg

Original

Dichromat (P)



Elderly (80-yr)

Cataract



A new AIC Study Group, entitled “Language of Color” was created at the 11th Congress in Sydney. The Executive Committee endorsed a proposal from Prof. Lucia Ronchi, with the help of a world expert in linguistics, Prof. Carole Biggam (University of Glasgow, UK) and of Dr. Giordano Beretta (HP, Palo Alto, USA), who, with Dr. Nathan Moroney, has issued a Color Thesaurus.

The basis of the proposal is the documentation of the AIC involvement in the Language of Color and related topics, after a review of the Proceedings of all past AIC meetings, starting with Abders Hard, in 1982, at Budapest.

Objective

The purpose of this study group (LC) is to discuss and share information on studies of related fields such as linguistics, semiotics, cognitive science and other topics including colour naming and categorization, coloured synaesthesia, semantics, colour grammar and syntax.

Activities

- AIC 2010 Interim Meeting in Argentina will not have a study group meeting.
- The study group website we are preparing will be linked to the main AIC website in early August.
- A seminar will be held in Korea and the related activities will be shared through website.

Membership

New members will be recruited at the website and AIC 2010 Interim Meeting.

Future Activities

Definition of the study scope on colour language will be shared by members and their mutual interests will be collected so that the future study direction will be established. The study group will gather in session at the 2011 AIC Midterm Meeting in Zurich.

Experiment

Everyone interested in the language of colour is encouraged to participate in the experiment at: www.colournaming.com. The database of colour names gathered in multiple languages will be a valuable resource for future linguistic research.

Chair: Prof Dr Jin Sook Lee,
Chung Nam National University
Department of Architectural Engineering
220,Kung-Dong, Yusong-Gu 305-764
Taejon
KOREA
T: +82 42 821 6573
F: +82 42 821 8717
js_lee@cnu.ac.kr

Co-Chair: Prof Paul Green-Armytage
School of Design
Curtin University of Technology
GPO Box U1987 Perth WA 6845
AUSTRALIA
T: +61 8 9266 2276
F: +61 8 9266 2980
p.green-armytage@curtin.edu.au



Walangari Karntawarra, star of the AIC 2009 Congress in Sydney, and his painting of the Rainbow Serpent. In the Aboriginal mythology of the Dreamtime, the Rainbow Serpent came from beneath the ground and created huge ridges, mountains and gorges as it pushed upward.



Colours on the horizon. An experimental colour contrast performance shot for video by Jodi Sandford and Valter Gosti, in Mutawintji National Park, NSW Australia, 2009

REPORT FROM CIE DIVISION 1



The 2009 meeting of CIE Division 1 *Vision & Colour* was held on 2 June at the Loránd Eötvös University, Budapest, Hungary.

Technical Committee Meetings

The CIELAB colour-difference formula was developed for ΔE^*_{ab} values of approximately 10 and the 2° observer, whereas CIEDE2000 was developed for colour differences in the range $0 < \Delta E^*_{ab} < 5$ and the 10° observer. TC1-55 *Uniform colour space for industrial colour-difference evaluation* is investigating alternative colour spaces, perhaps based on a 'colour appearance space', in which a colour-difference formula might be Euclidean. TC1-63 *Validity of range of CIEDE2000* is investigating the use of that equation outside its recommended range. Both TCs have accumulated a considerable amount of new data to aid in their research. The current colour appearance model, CIECAM02, has found acceptance in a number of image-based applications but, for more general use, for example in architecture, textiles and plastics, it requires a parameter to model the effect of the size of the stimulus on the colour appearance; this is the work of TC1-68 *Effect of stimulus size on colour appearance*. The advent of solid-state light sources has highlighted anomalies in the present Colour Rendering Index. TC1-69 *Colour rendering of white light sources* is leading research at a number of centres to generate relevant subjective data to aid the formulation of a new, additional index.

Technical Reports

TC1-66 *Indoor daylight* has produced a report defining a new illuminant that modifies the spectral power distribution of Illuminants D65 and D50 by the inclusion of the transmittance of a typical window glass. TC1-57 *Standards in colorimetry* has seen the publication of the Joint ISO/CIE Standard ISO 11664-4: 2008(E)/CIE S 014-4/E:2007, *Colorimetry – Part 4: CIE 1976 $L^*a^*b^*$ Colour Space*, and the CIE Standard S 014-5/E:2009, *Colorimetry – Part 5: CIE 1976 $L^*u^*v^*$ Colour Space and u' , v' Uniform Chromaticity Scale Diagram*.



CIE Division 1 meeting in action.



Budapest: Buda on the left, Pest on the right.

New Work Items

Three reports have been submitted by Reporters. R1-44 *Limits of normal colour vision* recommended the formation of a new Technical Committee to document the correlation between performance of colour matching, colour discrimination, colour naming, and colour deficiency tests as a function of appropriate variables. R1-46 *Whiteness* recommended the formation of a Committee to consider improvements to the existing CIE Equations for Whiteness and Tint to extend their scope of application to a wider range of instrument conditions and white materials; e.g. various tints and levels of fluorescence. R1-47 *Hue angles of elementary colours* recommended the formation of a Committee to study unique hue data, including an analysis of the scatter of those data, to include practical viewing conditions. All three TCs were approved. Reporter's Reports are available on the CIE D1 website at www.cie.co.at.

Two additional TCs were proposed, the first to derive colour appearance models that include prediction of the appearance of coloured stimuli viewed in typical laboratory conditions, that appear as unrelated colours, that are viewed under illumination down to scotopic levels and that include consideration of varying size of stimulus. The second to investigate and report on current research on visual performance that relates to psychophysical and physiological measurements in the real lit environment, and to produce a plan for future work.

Two Reporters were proposed to review methods for photometric prediction of the brightness and colour of supra-threshold pulsed signal lights, and to review activity related to 3D vision, image capture, model storage and display where these are relevant to visual appearance issues.

Future Meeting

The next meeting of CIE Division 1 will be held 17-18 June 2010 at the University of Princeton, New Jersey, USA.

Dr Mike Pointer, CIE Div. 1 Secretary

12-15 October 2010

The Argentine Color Group (GAC, Grupo Argentino del Color) would like to invite you to the AIC Interim Meeting 2010, to be held in Hotel Provincial, Mar del Plata, Argentina, on the theme "Color and Food: From the Farm to the Table".

A pre-conference seminar and the opening of the meeting will be held on October 12, the oral and poster sessions will run from October 13 to 15 together with the commercial exhibition, and an excursion will be arranged for October 16. In addition, an artistic exhibition will be held throughout.

The meeting will include keynote lectures by specialists, oral papers and posters on different aspects of colour related to food, as well as a commercial market and an artistic exhibition. The theme of the meeting will be approached from different perspectives, including not only food technology and colorimetry, colour chemistry and physics, but also commercial architecture and design, lighting, packaging, advertising and colour communication, colour psychology related to some aspects of food, consumer expectations, colour preferences, the representation of colour and food in the arts, and various other aspects of the interdisciplinary net interwoven from these two essential aspects of life.



Gran Hotel Provincial, on the waterfront in Mar del Plata



The quantity of abstracts received and approved has no precedent in an AIC Interim or Midterm Meeting. From 193 abstracts that were submitted, 175 abstracts have been accepted: 63 as oral presentation and 112 as posters. In addition, there will be 4 keynote lectures (delivered by John Hutchings, Angel Negueruela, Verena M. Schindler, and Roberto Daniel Lozano), and a pre-conference seminar (by Dardo Bardier, in Spanish).

The authors come from 27 different countries in four continents. The participation by continent is: America 52%, Europe 31%, Asia 15%, Oceania 2%. By July 2010, the Book of Abstracts has already been published on the website, and the full papers are being compiled for publication in the Proceedings.

SPONSORS The AIC 2010 Interim Meeting is sponsored by the following institutions and companies: National Agency for the Scientific and Technological Promotion (Ministry of Science and Technology); National Council for Research (Conicet); Natural Color System NCS; Osram Argentina; Gutenberg Foundation; Verivide / DigiEye; X-Rite / Abastecedora Gráfica / Pantone / Macbeth; Brapack SA; The International Association of Color Manufacturers.

MORE INFORMATION For registration and updated information about the programme, sponsorship possibilities, accommodation and travel details: www.aic2010.org

José Luis Caivano, General Chair



AIC 2011 – ZURICH, SWITZERLAND

7-10 June 2011

On behalf of the Organising Committee of the Swiss Colour Association *pro/colore*, I am delighted to invite you to participate in the AIC 2011 Midterm Meeting in Zurich, Switzerland. The conference theme will be:

Interaction of Colour & Light in the Arts and Sciences.

How colour and light interact is a hot topic in today's scientific and artistic research communities. New technologies, materials and media are now being deployed to enhance and stimulate our experience of daily life in real and virtual, permanent and ephemeral environments. The aim of the AIC 2011 conference is to explore, from both a theoretical and practical, as well as from a scientific and artistic point of view, how the interaction of colour and light plays a crucial role in education, design, art, media, lighting, architecture, theatre, dance, and also in psychology, colour science and technology.

The following variety of topics could be addressed:

SPACE: visual culture, design, lighting, interior architecture, architecture, urbanism, environment, landscaping;

STAGE: performance, art, museography, scenography, theatre, body, dance, movement, concert, sound, virtuality;

EDUCATION: teaching aids, methodology, theory, terminology, static and electronic media, multimedia;

PSYCHOLOGY: colour perception, harmonious interactions, emotion, illusions from light and colour interactions;

SCIENCE & TECHNOLOGY: colour science, physiology, psychophysics, colour appearance, measurement, materiality, texture, surface, transparency and translucency, reflection and glossiness, digital colour processing, colour in computer vision, colour in graphics, multimedia in colour imaging.



Conference Venue: Zurich University of the Arts

The Zurich University of the Arts is the largest university of the arts in Switzerland, combining the faculties of art, media, design, film, theatre, music, dance and art education. It is renowned for colour theory and its creative atmosphere. Prominent director was Johannes Itten (1938-1954).



Only a few minutes walk from the Zurich Main Railway Station, the 1933 building by Adolf Steger and Karl Egender is listed as a heritage monument, and is an icon of Swiss modern architecture from the early 20th century. Recently restored, the auditorium provides technically excellent equipment. The venue is located only 11 kilometres from the international airport, and is well-connected by train and highways. Address: Ausstellungsstrasse 60, 8005 Zurich, Switzerland.

The City of Zurich is perfectly situated on the borders of the Limmat River and Lake Zurich. It is the biggest city of Switzerland, which together with its suburbs has a population of one million. Zurich offers manifold cultural and tourist attractions, such as museums, galleries, theatres, music halls, restaurants, and historic and contemporary architecture. The medieval core provides a colourful and scenic historical urban space, while the Centre Le Corbusier/Heidi Weber Museum is a famous landmark by the famous Swiss architect. From Zurich, one-day tours to the top of the Jungfrauoch, the magnificent Alpine world of the Bernese Oberland, are available, as well as many other tours to fascinating places with beautiful scenery.



The Old Town of Zurich

Please visit our website at www.aic2011.org for further information. We hope you will take this opportunity to share your knowledge and experience, and look forward to welcoming you to Zurich!

Verena M. Schindler, General Chair

22-25 September 2012

The Color Association of Taiwan (CAT) welcomes you to the AIC 2012 Interim Meeting to be held in Taipei, Taiwan, with the theme: **In Color We Live: Color and Environment**. The conference will aim at investigating the colours of man-made and living natural environments in terms of their supportive or disruptive influence on everyday life. A focus will be on reflecting how colours of natural and built-up surroundings influence individual perception and creativity, and vice-versa. Attendees will benefit from a multi-disciplinary approach as well as building future networking opportunities. Papers dealing with subjects related to colour science, psychology, perception, vision, neurology, arts, communication, architecture and design will be welcome. The programme will include workshops at several universities, as well as sightseeing tours to local attractions.



Colour as a major design element of open space and premises inspires individual perceptions. Specific colours and patterns may directly influence health, thinking, feelings, and attitude. In addition to form, light and texture, colour contributes to people's well-being, and its applications can be used scientifically to improve natural as well as man-made ambience. Colours in living space improve our life-style, from stimulating creativity to harmonizing dissonance, by optimizing our work place and even supporting healing.



The National Palace Museum, Taipei, hosts the most exquisite collection of Chinese Art worldwide.



Taiwan has been recognized worldwide for its advanced ICT-industry, and as an important hub of international trade.

Also known under the older name Formosa, the island has always been associated with exceptional natural beauty, and the lively, warm-hearted hospitality of its people is another remarkable feature of this culturally rich and diverse place.

For travelling in Asia, Taiwan can be your first choice one-stop-shop experience for IT products regarding quality and price. The rich local cultural heritage includes the finest Taiwanese and Chinese traditions: tasting the variety of local snacks while exploring a typical night market on a warm summer evening will let you experience the colourful mixture of Taiwan's cuisine, a vivid vending atmosphere and the bright lights of pulsating city night-life.



Different tour packages will be arranged for those who would like to go sight-seeing in Taiwan, e.g. to the National Palace Museum, Yang-Ming Mountain National Park, or Sun-Moon-Lake.



Flower farm on the Yang-Ming Mountain, Taipei.

The public recreational area is of volcanic origin and attracts visitors from all over Taiwan as well as many international guests.



For more information please visit:

<http://eng.taiwan.net.tw>

Tien-Rein Lee, General Chair

AIC 2013 CONGRESS – NEWCASTLE GATESHEAD, UK

8-12 July 2013

On behalf of The Colour Group (Great Britain), I am pleased to announce that the 12th Congress of the AIC will be held in north-east England. The theme will be **Bringing Colour to Life**. The spectacular venue will be The Sage Gateshead, designed by Lord Norman Foster and located on the south bank of the River Tyne, across from the city of Newcastle. Special events planned for the week include a reception in BALTIC, a dynamic gallery dedicated to contemporary visual art, an orchestral concert themed on colour-music synaesthesia, and an excursion to Durham Cathedral, a World Heritage site.



The subject of colour in the natural world will encourage the multi-disciplinary ethos of the Congress to explore ways of using colour sustainably and synergies between technology and nature. Topics will include sustainable colour in textiles and fashion, creative use of colour in the built environment, and colour responses to the natural world:

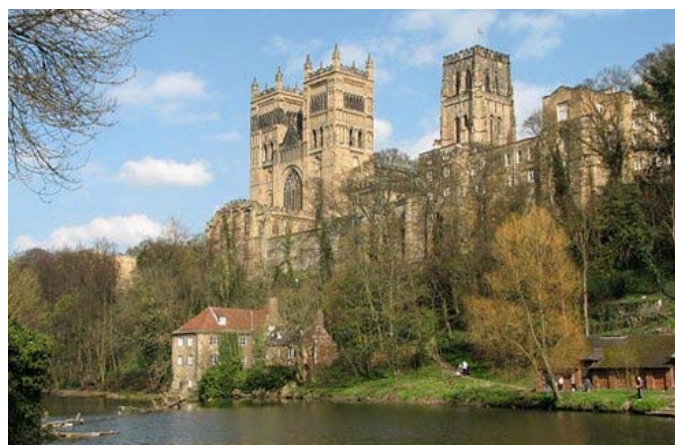
Green chemistry – environmentally friendly coloration
Colour vision – physiology, neurology
Applications of colour science – food, medicine, forensics
Colour imaging – measurement, management, devices
Colour psychology – perception, emotion
Colour psychophysics and appearance, vision models
Colour communication – meanings, semiotics, language
Colour in the built environment – including health benefits
Sustainable coloration in fashion and textiles



Special symposia within the Congress will include:

- (1) Colour Harmony
- (2) Sustainability in Textile Coloration
- (3) Multispectral Imaging
- (4) Human Colour Vision from Retina to Cortex
- (5) Colour Education and industrial Best Practice

In addition to the conference sessions there will be a strong educational component. This will be the first time that colour education for children, students at school and university, and other interested parties will be promoted and delivered during the week. There will also be a particular emphasis on Best Practice for the coloration industry.



Durham Cathedral, a World Heritage site

The glorious countryside of Northumberland and surroundings provides many opportunities for visiting nearby sites such as the Angel of the North, Alnwick Castle, Bamburgh Castle, Hadrian's Wall and Lindisfarne Priory. This will be a Congress to remember!

Lindsay MacDonald and Stephen Westland, Co-Chairs



**ASSOCIATION INTERNATIONALE DE LA COULEUR
INTERNATIONALE VEREINIGUNG FÜR DIE FARBE
INTERNATIONAL COLOUR ASSOCIATION**

www.aic-colour.org