



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

**ANNUAL REPORT
2013**



NO. 26

EDITED BY

Lindsay MacDonald
University College London



AIC 2012 TAIPEI *In Color We Live: Color & Environment*



September 22-25, 2012
Chinese Culture University, Taipei, Taiwan



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AIC 2012 Meeting in Taipei – Photographs by Lindsay MacDonald and the official conference photographer.

EDITOR'S NOTES

Thank you very much to the contributors from all the member societies of AIC, who have again provided such excellent material describing the rich and chromatic activities going on around the world during 2012. The subject of colour lends itself to colourful presentation, and where better than in this report.

Some highlights of the year have been: Government approval in Brazil for a national Colour Day (page 13); publication of a national strategy in China for development of colour research studies (page 16); the 50th anniversary celebrations of the Deutsches Farbenzentrum (DFZ) in Germany (page 18); an Interdisciplinary Conference on Colour and Pattern Harmony in Hungary (page 20); the 20th anniversary celebrations of pro/colore in Switzerland (page 30); and the formation of the Asia Color Association (page 32).

Included also in this issue is a profile of the European CIMET consortium (page 36), which although not an AIC activity involves many AIC members and has done an outstanding job over the past five years in training over 100 Masters students in colour science and technology.

One of the notable aspects of 2012 was the number of events taking place around the world to celebrate International Colour Day (ICD). Although the seeds were first sown in 2008

Excursion by delegates at AIC2012 to the Gold Ecological Park in the mountain town Jinguashi in Rueifang district. It was the first park in Taiwan created according to eco-principles. The dancing 'G' symbol has two meanings: 'Gold' represents the name of the park; 'Green' represents the park's integration of cultural and living resources.



Comparing socks at AIC2012 with Steven Fischer, President of the Valspar Color Institute.

by Maria João Durão, it has taken until now to bear fruit. Activities related to ICD are reported in these pages by members in Brazil, Chile, Great Britain, the Netherlands, Portugal and Sweden.

The Colour Group (GB) and APCOR (Portugal) organised a joint meeting in Lisbon at the splendid Gulbenkian Museum (see pages 19 and 26). The formal presentations were given during the morning of each day, alternating Portuguese and British speakers. Simultaneous translation was provided. On the first afternoon there was a tour of a social housing estate in Lisbon, led by the architect João Pernão who has been conducting a major project to develop a harmonious colour scheme for the buildings. It is to be hoped that we will see more such bilateral collaborations between AIC member countries in the future.

The great event of 2012 was the AIC interim meeting in Taipei, hosted by the Colour Association of Taiwan (see report on page 9). Prof Tien-Rein Lee was brilliant as a host and every aspect of the event was memorable, not only the conference sessions but also the venue, accommodation, receptions, social activities and excursions out into the countryside. He has set a very high standard for us in the organising of the forthcoming AIC Congress in the UK in July 2013 (see page 44).

– Lindsay MacDonald



Dear Friends,

It is a great honour for me to communicate with you again in our yearly AIC Annual Report 2013. This will be the last issue published during my term as President of AIC. As usual I will start by saying thank you to all of you contributing to this annual report, which is an important face towards the colour community. This shows all things and events happening around the world with focus on colour. Isn't that great! A very good advertisement of our colour activities.

The AIC Interim Meeting 2012 with the theme 'In Color We Live: Color and Environment' was held in Taiwan on 22–25 September at the Chinese Culture University, with an astonishing view over the city of Taipei and the surrounding landscape. The aim of the conference was to explore and examine how colour interacts with or influences our daily life. Understanding effects of colours in natural and man-made environments contributes to healthier living spheres through colour applications.

The meeting was excellently organised by the Color Association of Taiwan (CAT), and it turned out to be very successful in both the scientific programme and the social arrangements. We had the opportunity to listen to 45 oral presentations and to study 115 different posters. The four invited lectures covered the complexity of our colour vision, the five elements theory, future colour trends and the colours of the beautiful nature of Taiwan. I am sure that many of us will remember AIC 2012 with a big smile for good arrangements, interesting talks, fruitful meetings, and great hospitality; a conference to be remembered!

Today we are 24 regular members and within the AIC Executive Committee we are constantly working to attract new AIC member countries. The five AIC Study Groups are also key to developing new interest for colour science: Colour Education (CE) with Robert Hirschler as chair; Environmental Colour Design with Verena M Schindler as chair; Visual Illusions and Effects (VIE) with Osvaldo da Pos as chair; Colour Vision and Psychophysics (CVP), formerly Colour Perception of the Elderly, with Katsunori Okajima as chair; and the Language of Colour (LC) with Jin-Sook Lee as chair.

The introduction of the international day of colour and light, known as 'International Colour Day' (ICD), March 21st, is an idea that we hope that you will all contribute to with memorable colour activities in your different countries. During



2012 we held a competition for an ICD logo. An eleven member international jury chaired by Prof Maria João Durão considered 43 applications, and chose the winning design by Hosanna Yau, from Kowloon in Hong Kong. Her concept of the logo is: "Two circles form an eye, with equal halves of rainbow colour and black to represent light and darkness, day and night. Everyone can feast one's eye on the international colour day." The graphic file can be downloaded from our web site at www.aic-color.org. The application for the official creation of the 'International Colour Day' has been launched by a proposal sent to some of the Representatives of the Executive Board of UNESCO. I have chosen representatives from those countries where we have an AIC Regular Member, namely Mexico, China, France, Japan, Korea, Mexico, Spain, Thailand and USA.



INTERNATIONAL COLOUR DAY

During 2012 three electronic bulletins, AIC e-news, were sent by email and are posted on the AIC home page. Here you can also find the *Journal of the International Colour Association* (JAIC) which is actively published online.

The AIC Membership grew in 2012 with the following new individual members: Dr Kevin Smet from Belgium, Mr Olumide Bamidele Akomolafe from Nigeria, Dr Maria João Durão from Portugal, Mr José Maria Macías from Mexico, Ms Anishka Amilani Hettiarachchi from Sri Lanka, and Dr Yulia Griber from Russia. Welcome all to AIC! As a result of our new individual members this year we now have 39 different countries represented in AIC.

The next meeting where I hope to see you is the 12th AIC Congress, which will take place in Newcastle, Great Britain, 8–12 July. After the Congress we are looking forward to the following: 2014 AIC Interim Meeting in Oaxaca City, Mexico, 21–24 October; 2015 AIC Midterm Meeting in Tokyo, Japan, 19–22 May; 2016 AIC Interim Meeting in Santiago de Chile, 18–22 October; and the 13th AIC Congress 2017 in Korea, 16–20 October.

It is with great sorrow that I have to recall that our colour community, during 2012, has lost five honoured members. John Gage passed away in February, Silvia Rizzo left us in July, Lorenzo Plaza in August and Gerhard Rösler in December. Dominique Lenclos also passed away during 2012. We will remember them for their passionate work for colour and I know they will continue to inspire us in the coming years.

Please keep in contact and feel free to send your comments, news and proposals and make the AIC into the strongest colour community ever.

See you in Newcastle...

Berit Bergström, AIC President

EXECUTIVE COMMITTEE 2010 – 2013



PRESIDENT

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

Nick Harkness
11a Liberty Street
Enmore
NSW 2042
AUSTRALIA
T: +61 2 9700 8110
M: +61 402 228 964
nick@nhpl.com.au



COMMITTEE MEMBER

Lindsay W MacDonald
Dept of Geomatic Engineering
University College London
Gower Street
London WC1E 6BT
UK
M: +44 7753 661 610
ucfslwm@ucl.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

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

Accounts for the period 1 January to 31 December 2012 were prepared by the AIC Treasurer, Nick Harkness. During the year the AIC funds were transferred from the UBS Bank in Switzerland to the St George Bank in Australia. The reason was that we received this remarkable letter dated 22 May from UBS Zürich, with which the AIC had held an account since its inception: *"We have been managing the above business relationship with you for a number of years and are grateful for the trust you have placed in us. Due to the complexity and regulatory standards placed on UBS in advising relationships with legal entities, which were set up for the purpose of conducting commercial activities, we now look for minimum assets of CHF 2,000,000. On looking through the above business relationship, we have noticed that your account does not presently meet this minimum required amount. We feel that it would be in your best interest to contact your advisory team in order to discuss alternatives to maintain the business relationship with you. Should we not hear anything of you by*

30.06.2012, we would assume that you are not interested in maintaining such a relationship. Therefore, we will reserve the right to close the account by 30.07.2012. We thank you for your understanding and confidence in UBS." Further enquiry established that even if AIC could maintain the account with UBS as it currently stood, the bank charges would be in the range of CHF 10,000 to 50,000 per annum. So much for Swiss banks! It proved to be expedient to open an account in Australia and change the currency to AU\$. An interest-bearing savings account was also opened and AU\$10,000 transferred from the 'day to day' account. AIC is now incorporated as a not-for-profit organisation in Australia.

In December a new facility was established with PayPal to enable AIC members to pay more easily by credit card. This will be particularly helpful for individual members and will also save AIC from the associated bank fees incurred when converting small amounts from one currency to another.

UBS Bank – Opening Balance 1st January 2012	CHF	13,932.89
Transactions in the period 1st January – 2nd August 2012:		
Income from members (UBS) – Electronic or Bank Draft	CHF	1,194.52
Bank interest	CHF	3.20
Bank fees	CHF	-65.00
Website expense – Dimitris Mylonas	CHF	-225.92
Funds Transfer to St George Bank Sydney	CHF	-14,800.14
Bank Charge Funds Transfer	CHF	-39.55
UBS Bank – Closing Balance 2nd August 2012	CHF	0.00



St George Bank – Current Account Opening Balance	AU\$	0.00
Transactions in the period 2nd August – 31st December 2012:		
Deposit from UBS CHF 14,800.14	AU\$	13,932.17
AIC Registration - Accountant Fees	AU\$	-396.00
Transfer to Savings Account 10 th August	AU\$	-10,000.00
AIC Corporate Registration Costs	AU\$	-195.51
Print Republic – Printing of AIC Annual Report 2012 UK£600.00	AU\$	-940.29
Member income	AU\$	1,258.57
Trial payment PayPal	AU\$	0.19
Bank fees	AU\$	-150.00
Closing Balance 31st December 2012	AU\$	3,509.13

St George Bank – Savings Account Opening Balance	AU\$	0.00
Deposit from Current Account 10 th August	AU\$	10,000.00
Interest 10 th August – 31 st December	AU\$	146.11
Withholding tax	AU\$	-64.00
Closing Balance 31st December 2012	AU\$	10,082.11

Total funds 31st December 2012	AU\$	13,591.24
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MEMBER COUNTRIES

GRUPO ARGENTINO DEL COLOR

Lic María Paula Giglio (President)
Grupo Argentino del Color
Secretaría de Investigaciones FADU-UBA
Ciudad Universitaria Pab. 3 piso 4
C1428BFA Buenos Aires, Argentina
mpgiglio@hotmail.com
gac@fadu.uba.ar
www.fadu.uba.ar/sitios/sicyt/color/gac

ASOCIACIÓN CHILENA DEL COLOR

Paz Cox (President)
Escuela de Diseño, Of. 45
Campus Lo Contador
El Comendador 1916, Providencia
Pontificia Universidad Católica de Chile
Santiago
CHILE
T/F: +56 63 221 943
pazcox@gmail.com
contacto@asociaciondelcolor.cl
www.asociaciondelcolor.cl

THE COLOUR GROUP (GREAT BRITAIN)

Dr Valérie Bonnardel (Chair)
Reader in Experimental Psychology
Dept of Humanities and Social Sciences
University of Winchester
Sparkford Road
Winchester
Hampshire SO22 4NR
UK
T: +44 1962 827151
valerie.bonnardel@winchester.ac.uk
www.colour.org.uk

COLOUR SOCIETY OF AUSTRALIA

Dr Ken Pidgeon
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

COLOR ASSOCIATION OF CHINA

Prof Haisong Xu
Dept of Optical Engineering
Zhejiang University
Hangzhou 310027
CHINA
T: +86 571 8795 2652
F: +86 571 8796 8967
chsxu@zju.edu.cn
www.fashioncolour.org.cn

HUNGARIAN NATIONAL COLOUR COMMITTEE

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

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
procor@procor.org.br
paulo-felix@uol.com.br
www.procor.org.br

SUOMEN VÄRIYHDISTYS SVY RY

Harald Arnkil
Lecturer, Colour Studies
Aalto University School of Art & Design
Hämeentie 135 C
FIN-00560 Helsinki
FINLAND
T: +358 50 315 2159
harald.arnkil@aalto.fi
www.svy.fi

GRUPPO DEL COLORE

Prof Maurizio Rossi (Coordinator)
Facoltà del Design
Politecnico di Milano
Via Durando, 38/A
20158 Milano
ITALY
T: +39 02 2399 5697
F: +39 02 2399 5698
maurizio.rossi@polimi.it
www.gruppodelcolore.it

COLOUR GROUP OF BULGARIA

Dimiter Dobrevski (President)
Dr Elena Krasteva (Secretary)
Bulgarian Academy of Sciences
Institute of Electronics
72 Tsarigradsko Chaussee Blvd
1784 Sofia
BULGARIA
T: +359 2979 5865
colorgroup@abv.bg
elenakra@yahoo.com

CENTRE FRANÇAIS DE LA COULEUR

Annie Mollard-Desfour (President)
Patrick Callet (Vice-President)
Laurence Pauliac (Secretary)
41 rue Pajol
75018 Paris
FRANCE
annie.mollard-desfour@dbmail.com
lpauliac@hotmail.com
www.cf-couleur.fr

COLOR SCIENCE ASSOCIATION OF JAPAN

Dr Taiichiro Ishida
Dept of Architectural Engineering
Kyoto University
Kyotodaigaku-Katsura, Nishikyo-ku
Kyoto 615-8540
JAPAN
T/F: +81 75 383 2929
ishida@archi.kyoto-u.ac.jp
www.color-science.jp

COLOUR RESEARCH SOCIETY OF CANADA

Assoc Prof Doreen Balabanoff (President)
Dept of Environmental Design
OCAD University
100 McCaul Street
Toronto, Ontario M5T 1W1
CANADA
T: +1 416 546 8855
dbalabanoff@faculty.ocadu.ca
www.colourresearch.org

DEUTSCHER VERBAND FARBE

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

KOREAN SOCIETY OF COLOR STUDIES

Prof Choi Gyung-sil
Dept of Spatial Design
Art & Design Building C, Room #505
Ewha Womans University
52 Ewhayeodae-gil
Seodaemun-gu, Seoul
KOREA
T: +82 2363 9932
kscs2008@hanmail.net
www.color.or.kr

MEMBER COUNTRIES

ASOCIACIÓN MEXICANA DE
INVESTIGADORES DEL COLOR
Dr Georgina Ortiz
Calle B #22, Mz 10, Col. Educación
CP 04400, Delegación Coyoacan
MEXICO
T: +52 155 5622 2264
F: +52 155 5622 2256
geortiz@servidor.unam.mx
amexincsocios@gmail.com
www.amexinc.mx

SLOVENSKO ZDRUZENJE ZA BARVE
Assoc Prof Vojko Pogacar (President)
Primoz Frangez (Secretary & Treasury)
Faculty of Mechanical Engineering
University of Maribor
Smetanova ulica 17
SI-2000 Maribor
SLOVENIA
T: +386 2 220 7715
F: +386 2 220 7994
vojko.pogacar@uni-mb.si
www.dks-drustvo.si

COLOR ASSOCIATION OF TAIWAN
Prof Tien-Rein Lee
55 Hwa-Kang Road
Yang-Ming Shan
Taipei 111-92
TAIWAN
T: +886 2 2861 0511 ext. 10105
F: +886 2 2861 5624
trlee@mail.pccu.edu.tw
www.color.org.tw

STICHTING KLEURENVISIE
Board Members: Kim van Savooyen
and Louise Buvelot
The Dutch Colour Foundation
Rotsoord 3
3523 CL Utrecht
THE NETHERLANDS
T: +31 6 4511 4352
kim.vansavooyen@kleurenvisie.nl
louise.buvelot@kleurenvisie.nl
www.kleurenvisie.nl

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

THE COLOR GROUP OF THAILAND
Prof Dr Aran Hansuebsai
Dept of Imaging & Printing Technology
Faculty of Science
Chulalongkorn University
Phyathai Road
Bangkok 10330
THAILAND
T: +66 2218 5588, +66 2 218 5581
F: +66 2254 6530, +66 2 255 3021
aran@sc.chula.ac.th
www.thaicolourgroup.org

GŁÓWNY URZĄD MIAR
Mr Lukasz Litwiniuk
Optical Radiation Standards Laboratory
Central Office of Measures
ul. Elektoralna 2
PL-00-950 Warszawa P-10
POLAND
T: +48 22 620 0241 ext. 9549
vprbl@gum.gov.pl

STIFTELSEN SVENSKT FÄRGCENTRUM
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

INTER-SOCIETY COLOR COUNCIL
(Secretary) Ann Laidlaw
acl99colors@yahoo.com
ISCC Office
7820B Wormans Mill Rd., Suite #115
Frederick MD 21701
USA
T/F: +1 866 876 4816
isccoffice@iscc.org
www.iscc.org

ASSOCIAÇÃO PORTUGUESA DA COR
Prof Rui Barreiros Duarte
Faculdade de Arquitectura da UTL
Rua Sá Nogueira
Pólo Universitário - Alto da Ajuda
P-1349-055 Lisboa
PORTUGAL
T: +351 213 615 000
F: +351 213 625 138
rbdapp@gmail.com
apcor@apcor.org
www.apcor.org

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

ASSOCIATE MEMBER
INTERNATIONAL ASSOCIATION OF
COLOR CONSULTANTS/DESIGNERS
NORTH AMERICA (IACC-NA)
Ms Carolyn Richardson
T: +1 480 368 9337
cmr11@cox.net
www.iaccna.com

INDIVIDUAL MEMBERS

In addition to the categories of regular member and associate member, Article 4 of the AIC Statutes defines the category of individual member: *'Persons may be affiliated with the AIC as individual members if they are interested in the aims of the AIC and show they have knowledge in the field of colour. Individual members may take part in the activities of the AIC and receive the information and documents intended for regular members. They shall, however, have no right to vote. They cannot make part of the AIC Executive Committee unless they belong to and are nominated by a regular member.'*

Applications for individual membership are scrutinised by members of the AIC Executive Committee to ensure that the applicant demonstrates an appropriate professional standing and experience in one of the disciplines of colour. An individual member may be based in a country that already has a regular member society. Individual members are encouraged to participate in the annual AIC meetings and to contribute to the AIC Study Groups. Every individual member receives the AIC e-news by email and a printed copy of this Annual Report.

Name	Country	Email address
Olumide Akomolafe	Nigeria	olumide_akomolafe@yahoo.com
Alison Bourne	UK	alison@colourbreathing.com
Michel Cler	France	contact@ad-chroma.com
Dr Andrew Chalmers	New Zealand	chalmers@manukau.ac.nz
Prof Dr Maria João Durão	Portugal	mariajoaodurao@gmail.com
Prof Dr Ana Marija Grancaric	Croatia	amgranca@ttf.hr
Dr Yulia Griber	Russia	Julia_Griber@mail.ru
Dr Susan Habib	Iran	lapismaple@gmail.com
Assoc Prof Esther Hagenlocher	USA	ehg@uoregon.edu
Anishka Hettiarichchi	Sri Lanka	anishka_h@yahoo.com
Ingrid Estefania Calvo Ivanovic	Chile	contacto@proyectacolor.cl
Latika Khosla	India	latika@freedomtreedesign.com
Dipl-Ing Arch Ines Klemm	Switzerland	ik@latrace.cc
Markus Maas Kotterink	The Netherlands	algemeen@nederlandskleurencentrum.nl
José María Macías	Mexico	chemacias@gmail.com
Dimitris Mylonas	UK	dimitris.mylonas@yahoo.com
Dr Larissa Noury	France	larinoury@gmail.com
Dr Ole Ingolf Jensen Nyren	Sweden	nyren@brevet.nu
Dr Leonhard Oberascher	Austria	ecd@leoncolor.com
Dr Zena O'Connor	Australia	zena.designresearch@gmail.com
Peter Paizs	USA/Hungary	paizspeter@gmail.com
Dr Renata Pompas	Italy	renata.pompas@libero.it
Arch Rita Rao	Italy	rita.rao@fastwebnet.it
Dr Alan R Robertson	Canada	alan.robertson40@gmail.com
Kevin Smet	Belgium	kevin.smet@kahosl.be
Mette Terkildsen	Denmark	info@danskfarveinstitut.dk
Prof Dr Theano F Tosca	Greece	ftosca@otenet.gr
Assoc Prof Rengin Ünver	Turkey	runver@yildiz.edu.tr
Dr Dipl-Ing Andrea Urland	Slovak Republic	a_urland@yahoo.com
Prof Arne Valberg	Norway	arne.valberg@ntnu.no
Prof Arch Pietro Zennaro	Italy	pietro.zennaro@iuav.it





The AIC Interim Meeting was held 22–25 September in Taipei, organised by the Color Association of Taiwan (CAT). The conference explored colour as an interface of perception, nature and man-made environments. On 21 Sept a joint CAT–AIC meeting was hosted by CAT with two pre-conference workshops by the NCS Colour Institute and RAL Color Systems.



In total 262 visitors from 28 countries attended a programme of 164 presentations (45 oral papers, 4 keynote lectures, and 115 posters) out of 244 submitted abstracts, conducted in twelve thematic tracks and two poster sessions. Four keynote lectures were delivered by Prof Steven Shevell, University of Chicago; Prof Tien-Rein Lee, Chinese Culture University; Dr Axel Venn, University of Applied Sciences–Arts, Hildesheim; and Prof Monica Kuo, Chinese Culture University. The conference venue at the Chinese Culture University (CCU) provided state-of-the-art communication technology by cell phone apps, continuously updated information on the conference website and Facebook presence, and live streaming.



The AIC Executive Committee Meeting was held on 22 September, while conference participants and spouses were invited to join an excursion to three different well-known natural and cultural spots. During the Opening Ceremony on 23 September, AIC President Berit Bergström announced the

winner of the Logo Competition for the International Colour Day: Hosanna Yau (Hong Kong). Attendees then enjoyed a flute solo given by famous master Chung-Sheng Chen, and a concert by three well-reputed musicians, all graduates of CCU, playing traditional Chinese instruments. That evening, the Welcome Reception on 8th Floor of the CCU Da Xiao Building, offered entertainment by a jazz band, a calligraphy master, a magician, and a traditional puppet performance.



On 24 September, a visit to the National Palace Museum was arranged. The museum hosts the world's most famous collection of 677,687 objects of traditional Chinese Art, and attracts more than 2.5 million visitors each year. Afterwards, 170 participants enjoyed a ten-course gourmet dinner of Taiwanese cuisine delicacies at the Conference Banquet held in Ding Xian restaurant on the 86th Floor of the Taipei 101 Tower, with an amazing view over Taipei city at night, and an entertaining programme of aboriginal dance, Chen-style Tai Chi Chuan, Feather-Fan and Po-Jie traditional dances, and Bingo with exclusive prizes. Two after-conference tours on 26–27 September were led to the beautiful National Parks of Yang-Ming-Shan and Taroko Gorge.

The AIC 2012 Conference Proceedings were published on CD and can be ordered as printed version on demand. CAT wants especially to thank the International Scientific Committee for its indispensable efforts in shaping the AIC 2012 programme, and all experts, participants and sponsors for their valuable contributions. For more information see: www.aic2012.org

IN MEMORIAM



Dr John Gage, who died on 10 February aged 73, was an art historian committed to exploring the significance of colour in painting. He made his mark with the book *Colour in Turner: Poetry and Truth* (1969), published shortly after completing his PhD. His singular achievement was to show how Turner's use of colour, and his eccentric but systematic

inquiries into colour theory, were not only supremely visual but also seriously intellectual. From 1979 to 2000 John held a position in the Dept of History of Art at Cambridge University. His magisterial book *Colour and Culture: Practice and Meaning from Antiquity to Abstraction* (1993) has become a standard work of reference. A critic said: "Rarely has the academic mind made itself more approachable ... And rare indeed are the occasions when the ordinary reader can, as here, consult one of the first charts of intellectual *terra incognita*." John Gage was awarded the Turner Medal by the Colour Group (GB) in 2009 and in the same year was a keynote speaker at the AIC Congress in Sydney. He combined deep knowledge of colour with charm and subtle humour. – Lindsay MacDonald



Dr Gerhard Rösler, President of the Deutsche farbwissenschaftliche Gesellschaft (DfwG), died after a short illness on 21 December. With great respect and thanks we look back on his achievements in the 14 years of leading our society. He assumed the office of Vice-President in 1998 and was elected in 2001 as the President of the DfwG. As third President he followed Prof

Manfred Richter, who in 1974 initiated the founding of the DfwG, and Prof Heinz Terstiege. Dr Gerhard Rösler finished his studies in electrical engineering/cybernetics at the Technical University of Munich as Diplom-Ingenieur. He received his doctorate (Dr-Ing) from Ruhr University in Bochum in 1979 for 'Fast spectral colour measurement'. Thereafter he built a new department of 'Electrical optics' at John+Reilhofer, which was bought in 1989 by Macbeth, the well-known US company for colour measurement devices. In 1997 there was a merger of Gretag CCS and Macbeth to form Gretag-Macbeth, and in 2006 a further merger with X-Rite. Under his leadership of the department of online colour measurement, Dr Rösler became responsible for the worldwide activities in colour measurement in production. In addition to his professional activities and the office of President of DfwG, he was active in standardisation bodies as Chairman of FNF/FNL2 'Colorimetry' and FNF24 'Colour tolerances in car paints' and he worked as member and creator of standards at ASTM, CIE and VDA. All of us will miss his open minded personality, and his extraordinary expertise and charisma, which was based on his deep love of colour. – Frank Rochow



Silvia Rizzo passed away on 9 July. She was a teacher of sculpture at the Klee-Barabino School of Arts (Liceo Artistico) in Genoa, and a member of the AIC Study Group on Environmental Colour Design. She was a Visiting Professor at New York University (with offices in New York and Venice). She organised several international conferences in Genoa

on colour design and on the relationship between colour and culture. A major focus of her research was arts education practices and educational methodology. The various papers published in AIC conference proceedings sum up her professional concerns very concisely. She shared her insights with us in many AIC meetings: Kyoto, 1997; Warsaw, 1999; Seoul, 2000; Rochester, 2001; Maribor, 2002; Granada, 2005; and the AIC Midterm Meeting in Zurich, 2011. At the International Interdisciplinary Conference on Colour and Pattern Harmony in Budapest, Hungary, 11-13 June 2012, she presented *The Color Maze*, considered as an artwork by UNICEF, which is a colour design project applied to an urban space in Genoa that stimulates children's reflections on the knowledge and harmony of colours. We will miss her precious contributions and presence. – Verena M Schindler



Prof Lorenzo Plaza Montero, a distinguished member of the Spanish colour community, passed away 15 August at the age of 89. He was one of the signatories of the founding document of the International Colour Association (AIC) in 1967 on behalf of the Spanish Colour Committee. AIC was not his first act, as he previously founded

the Spanish Colour Committee two years before in 1965. He was one of the pioneers of colour studies in Spain, together with Antonio Cruz and Mariano Aguilar. After his stay with Deanne B Judd in USA at the National Bureau of Standards (NBS), he became a senior researcher in the Instituto de Óptica in Madrid, National Research Council, where he was its Director from 1966 to 1974. He was also President of the Optical Society of Spain in the period 1972–75. His activities in the field of colour were diverse and very intense, both in research and promoting colour in many fields such as psychology, physics, arts, etc. He was also very active in AIC congresses and meetings, being a member of the Executive Committee from 1978 to 1981. A distinguished researcher in the field of Visual Optics and Colour, he was a sharp, inquisitive, unconventional scientist, and several generations have benefitted from his legacy. All who knew Lorenzo remember his enthusiasm when he tackled any subject and his capacity for encouraging people to new challenges. The Spanish Colour Community and all of his 'old friends' will sorely miss him. – Javier Romero and Manuel Melgosa



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

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 from the artistic community in the diffusion of their works.

4th National Meeting of Color in Arts

Intended to promote dialogue, discussion and exchange of ideas between artists, critics, curators, researchers and art historians, the 4th National Meeting of Color in Arts was held on 22 June in the National University Institute of Arts (IUNA) in Buenos Aires, organised by GAC and the Area of Arts Critics. A panel on the topic ‘Experiences in the field of color in arts’ was presented, in which various experts shared their knowledge and experiences: Jorge Iglesias (visual arts), Gustavo Aprea (film), Eli Sirlin (lighting), and Gumersindo Serrano Gomez (multimedia arts). Also 20 oral papers were presented on topics such as colour in personal work, colour in dramatics arts, colour in multimedia, colour in performative languages, colour in art history, colour in contemporary art, colour in art theory, colour in education, and colour in art techniques. A book of abstracts was published.

Exhibition of Visual Arts

The Visual Arts Area of the GAC continued its creative programme with an exhibition made in conjunction with the leather company Pielcolor. It was held on 27 April in the Metropolitan Design Center of Buenos Aires, with the title ‘Color, art, interaction and theory’, under the auspices of the Secretary of Culture of the Nation. It was shown again from 20 September until 20 October in the Museum of Art of the National University of San Marcos, Lima, Peru. GAC artists who presented works in this exhibition included: Silvia Barrios, Daniel Delgado, María Eugenia Bravo, Jorgelina Herrero Pons, María Paula Giglio and Omar Burgos.

ARGENCOLOR 2012, the 10th Argentine Color Congress

It was held from 29 August to 1 September in Resistencia city, Chaco Province, at the School of Architecture and Urbanism of the National University of North-East. The main topics were:



Some members of the organising committee and invited lecturers at ArgenColor 2012 in Resistencia, Chaco.

colour in culture, colour in food, colour in architecture, colour technology, colour vision, and colour education. Participants from different Argentine provinces, as well as from Spain, Brazil, Colombia, Mexico, France and Uruguay presented 6 plenary lectures, 53 oral papers, and 9 posters.

10th Congress of the International Association of Visual Semiotics, AISV-IAVS 2012

Semiotics is the study of signs and sign processes, designation, indication, communication, metaphor and symbolism. This includes colour coding and semantics. GAC co-organised with the International Association of Visual Semiotics the 10th AISV-IAVS Congress ‘Contemporary dilemmas of visibility’. It was held 4–8 September at the Faculty of Law, University of Buenos Aires. By the deadline of submission of abstracts, 563 proposals had been received. After evaluation by the scientific committee 440 abstracts were accepted in the first round, while 330 abstracts of registered authors were finally included in the programme and 313 were effectively presented at the conference. There were 174 papers in the oral sessions (some arranged as round-tables or working groups), 86 printed posters, 32 digital posters, and 21 invited lectures (14 lectures in parallel sessions and 7 plenary lectures). The number of registered participants was 396, representing 28 countries: Algeria, Argentina, Australia, Azerbaijan, Belgium, Brazil, Canada, Chile, Colombia, Cyprus, Ecuador, Estonia, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Mexico, Portugal, Spain, Sweden, Turkey, United Kingdom, United States, Uruguay, and Venezuela. To have a look at the authors, titles and abstracts of the papers, please visit www.aisv2012.org and download the programme and book of abstracts. The proceedings of the Congress, with the full papers, will be published during 2013.



Poster presentations and two of the rooms for oral papers, at the 10th international Congress on Visual Semiotics (AISV-IAVS).

AUSTRALIA



The past year has seen a fluctuation in our membership across Australia. As in other global areas we have seen the shrinkage and/or closure of industries which has affected all States. However each of our main divisions has introduced knowledgeable speakers across a broad range of colour related topics with continued success. Meetings across our active divisions have seen an inspiring group of speakers sharing their passion for colour and their knowledge in workshops, seminars and site visits. Student memberships continued to increase, in particular in New South Wales with a concerted CSA involvement with design schools showing strong initiative in setting up colour awards related to specific curriculum projects.

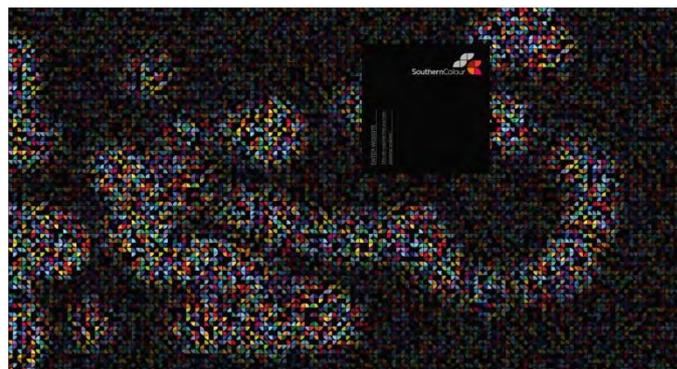
Western Australia had a kaleidoscope theme throughout the year with a number of discussions on traditional paint finishes and wallpapers, textile art, and the crafts of dyeing and weaving of Cambodia. How colour vision evolved in various species and the role of genes in that process was discussed by Prof David Hunt. A new test for tracking the loss of sensitivity to short-wave light is being developed by Ross Littlewood in conjunction with Paul Green-Armytage. Each year the WA Division holds a weekend away in one of the many wonderful spots in the area – this year in Kellerberrin, a small town in WA's wheat belt area. Members were able to view Janelle Cugley's work on the relationships between colours, textures, patterns and local identity.



Through colour, texture, patterning, rhythm and form are revealed the environmental and cultural references of place (Janelle Cugley).

Queensland experimented at a monoprinting workshop, visited a gallery and saw a demonstration of wax art on photographic paper, heard about the healing properties of colours, reflected on the colours of the Ukraine and its folk art and embroidery, tried its hand at silk painting, investigated colour in fruits and vegetables, and experienced the emotional impact of colour.

Victoria enjoyed several site visits throughout the year, notably Langridge Artist Colours, a small but highly successful company manufacturing artists' paints and associated colouring materials.



The Rainbow Serpent? Home page of Southern Colour (Melbourne).

Meetings in Victoria are often shared with other related groups such as the Artisans' Guild, supporting traditional trades and skills, and the surface coatings industry. Victoria group also visited Southern Colour, one of the largest printing works in the Southern Hemisphere, to see in action the production of paint colour cards and catalogues, both areas where the accurate reproduction of colour is critical. We were impressed by a visit to the home of Amanda Richmond and Andrew Fedorowicz who had renovated a heritage property 'Ecklin' with particular reference to colour schemes and decor.

A large proportion of the membership in NSW is from design fields, particularly interior design and decoration. Visits to trade showrooms with informed speakers discussing their product ranges throughout each year are always major highlights for members. Local paint companies are very supportive to our divisions.

The CSA website at www.coloursociety.org.au provides a terrific introduction to the Colour Society of Australia, and our journal *e-Spectrum* distributed to all financial members collects regular accolades. Articles and photographs are submitted by members, and we certainly seem to be a well-travelled lot. As usual, with the editing and compilation of such a publication, our editor regularly needs to chase contributions of a technical nature.

With the number of graduates, new designers and others joining at present, we are looking forward to positive growth – rather an exciting prospect with so many technical innovations arriving on the scene. Colour is here to stay!



Heritage colours and textures of the Victorian period at 'Ecklin'.

PRO COR

Associação Pró-Cor do Brasil

The results obtained by the actions of Associação Pró-Cor do Brasil in 2012 can be considered positive in the face of great challenges. It was through the determined work, persistence and future vision of well-disposed people and Brazilian institutions about the role of colour in Brazil.

On 12 June through the intercession of Antonio Carvalho Barbosa, PRO COR was received at the office of Bruno Covas (Secretary of State for the Environment of the Government of São Paulo) in view of the exhibition held by Prof Dr Paulo Felix M Conceição (President of PRO COR BRASIL) about the social, economic and psychological impacts of colour in the urban living environment. Bruno Covas undertook to intercede for the formalisation of 'BRAZIL COLOUR DAY' with São Paulo Congressman Dr Fernando Capez.

During 17–21 September, with the support of ABRAFATI (www.abrafati.com.br) and SITIVESP (www.sitivesp.org.br), PRO COR attended the International Symposium and Trade Fair for Paints: FEITINTAS 2012 (www.feitintas.com.br). Karl Johann Bertilsson of NCS (www.ncscolour.com) delivered the lecture 'How to Sell Colour'. He noted that: "Trade today does not deal more with simply selling products, it is essential to create a concept which is established in the communication process between what is seen and who sees."



BRAZILWOOD (Batik Painting). Luiz Mendes, Brazilian Harvests.



XIV TEMPERANCE. XINGU INDIAN MAID, Brazil in Tarot Cards, Israel Pedrosa, 1991.

On 19 December the Governor of the State of São Paulo Dr Geraldo Alckmin, sanctioned the 'Law 14.913 to introduce the 'COLOUR DAY, September 21st' in the Official Calendar of São Paulo. This victory brings great expectations to all sectors involved in colour, and may contribute to and strengthen the commitment of PRO

COR BRAZIL to collaborate in the Application for UNESCO endorsement of the 'International Colour Day' on March 21st.

More good news for next year: the Protocol of Intents has been signed between Associação Pró-Cor do Brasil and SENAI /CETIQT (The Brazilian National Service for Industrial Training /Technology Center for the Chemical and Textile Industry). The document seeks to join efforts of both institutions to promote knowledge of colour in the fields of industry, art, fashion and design, as well as actions to encourage scientific-technical and cultural cooperation between academics, experts and industries involved in the field of colour.

PRO COR took a Stand at FEITINTAS and hosted the exhibition Colour & Music of Nelson Bavaresco. The Artist created a series of prints by blending vibrations of musical notes with corresponding chromatic designs. Visitors learned the work of Goethe from exhibition of the video: 'Light Darkness and Colour' (youtube.com/watch?v=GiCl1HVLgBI). Visitors were also encouraged to sign The Colour Manifest, in support of Law 526/2012 of Dr. Fernando Capez: 'COLOUR DAY: September 21st' at the State Legislative Assembly.

The Brazilian architect Bya Barros, conducted the workshop 'Colours driving sales'. She advised the audience to use colour in corporate projects and consumer goods through a pleasing combination of light, colour, music and movement.



THE BASSIST (Detail) Chord 80 of an engraving serial chrome musical, Nelson Bavaresco, 2011.



BULGARIA

ГРУПА ЦВЯТ БЪЛГАРИЯ COLOR GROUP BULGARIA



In 2012, the Association of Color Group – Bulgaria continued its scientific and popularising activities in the domain of colour science, while organising and holding several scientific forums, and through its publishing activities.

The main event was the third National Scientific Conference on Color and Light in Architecture, held in June. This forum was dedicated to the 70th anniversary of the University of Architecture, Civil Engineering and Geodesy, and was organised together with the Dept of Architecture of this university and the Dept of Design and Architecture of the New Bulgarian University. In more than 30 lectures the main topics were in the domains of colour and light in the urban environment; colour and architectural design; light modelling of space; art lighting; design of lighting bodies; design of furniture; colour building materials and elements for finishing works. A special presentation was made by our long-term partners from Baunit, who showed their newest system of colour modelling of architectural space and their colour palette. The conference was accompanied by an exhibition of student projects. The conference proceedings and materials of the exhibition were published on CD (ISSN: 1314-6564).



Out in the Plein Air on Burano Island, Venice

In November CGB organised and held in Italy a photographic *plein air* on the topic 'Colors of Venice'. A series of images was made as a result of terrain works, and shown in two thematic exhibitions, within the frame of the

National seminar 'Photocolor 3' (December 4–15) and later at gallery "205" in Sofia (February 16–28, 2013).

Our successful partnership with Technical University of Sofia continued in December with the National scientific seminar

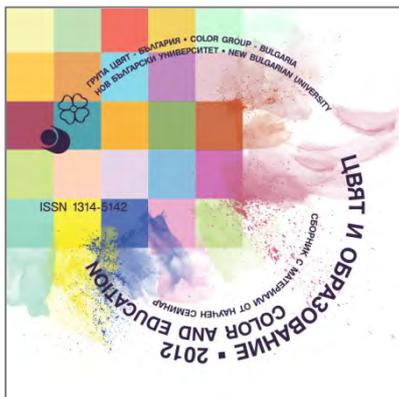
'Photocolor 3'. This was accompanied by a documentary photographic exhibition of the archive of German researcher Kurt Schindler. The event was held with the Sofia University 'Saint Kliment Ohridski' under the European Erasmus programme. The exhibition was the first public showing of pictures from this large archive under the direction of Dr Matilde Olarte Martínez from the University of Salamanca, Spain.



The monastery of Dryanovo, painting by student Alexander Tasev

Another accompanying exhibition showed thematic photocycles dedicated to Venice, which resulted from the photographic *plein air* and the thematic module 'Venice' of the International project 'Art and life environment' in 2011–12. Special participation in the exhibition was of students of St Cyril and St Methodius University of Veliko Tarnovo, with projects from the summer workshop in the village of Stambolovo. The proceedings of 'Photocolor 3' were published on CD (ISSN: 1313-9509).

On 20 December the traditional National seminar 'Color and Education' was held at the invitation of the New Bulgarian University within the framework of the fifth Fest 'Education – Training – Results'. This continued the efforts of our Association to develop and popularise the problems of colour science in the Bulgarian educational system, as well as to encourage adequate training of teachers in this domain. The programme included several topics: global representation of the problems of culture; methodological and applied educational aspects of colour sciences; presentation of educational projects; problems of the impact of the environment within the context of colour sciences; colours and art. The lectures were published on a CD of the series 'Colour and Education 2012' (ISSN: 1314-5142).



In 2012, two issues (No. 25 and No. 26) of the Bulletin of Color Group – Bulgaria were published. The new website of the Association at <http://bgcolorgroup.org/> is now under construction and will soon be available.

Our colleague Nikolay Alexandrov published his book *Fundamental Theory of Colours*: (ISBN: 9786191521104).



Two CD publications of proceedings: (left) 'Colour and Education', designer: Elena Dimitrova; (right) 'Photocolor 3', designer: Radka Yordanova.



The Chilean Colour Association (ACC) is where Chilean professionals and other interested people find a place for discussion, research, and work in the

field of colour. It has been a member of the AIC since 2009. In July, the second annual seminar *Diálogos de Color* was held, in which were three oral presentations. In the first, María de los Ángeles Briones and José Allard from the DET-UC presented a project about the use of colour in branding to spread information of the most popular touristic Chilean places. Then Francisco Ceric lectured about colour vision and colour illusions. Finally, Bernardita Bráncoli presented a heritage project in which she has rescued some coloured pre-Columbian illustrations, painted over rock walls in the north of Chile. Over 30 people attended.



45 people attended this historical event. During her week here in Chile, Berit also had time to give colour advice to some local projects and to attend meetings with colour and design teachers.

ACC around the World

This year, members of the ACC attended a number of international colour meetings. In September, Ingrid Calvo was invited by the Italian Colour Group to be part of the Scientific Committee of the VIII Conferenza del Colore, held in the city of Bologna. In October, Paz Cox, María Rosa Domper and Elisa Cordero gave oral presentations at the 2do Encuentro Mexicano del Color held by Amexinc. Paz Cox and María Rosa Domper presented two papers about new methodologies to capture and specify colours for design projects. Elisa presented a project about colour application in social housing.



Berit Bergström (right) demonstrates NCS Colour Atlas to Paz Cox.

NCS Workshop

In August, the ACC invited the President of the AIC, Berit Bergström, to visit Santiago of Chile and give a NCS Workshop. This event lasted two days and was held at the Universidad Católica de Chile. Berit presented the Natural Colour System and taught attendees how to read and use the system in design projects, through the realisation of practical exercises which help students to learn the system and to get involved with it. This workshop also represented the first time that the NCS was officially introduced into Chile, a country where other colour systems are more popular, and because of that,



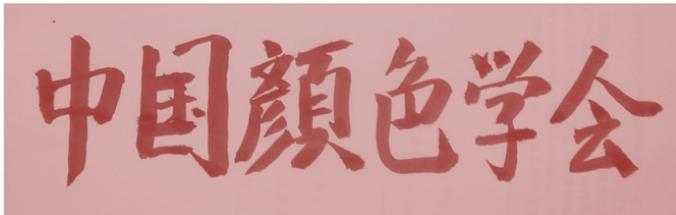
AIC2016 Interim Meeting in Santiago, Chile

In 2013, interest began to grow, among members of the ACC, in making Chile the capital of colour. In September, at the AIC2012 meeting in Taipei, the ACC presented a formal application to host the AIC2016 Interim Meeting in Santiago of Chile. This included some information about the Association, the theme proposed for the meeting, and the touristic features of the city and the country. A few days later, Berit Bergström, on behalf of the AIC Executive Committee, informed us that the application was accepted. We will very pleased to receive you in Santiago for AIC2016! (see also page 45)



NCS Workshop in Santiago on colour ordering and specification.





The Color Association of China is one of the committees of the Chinese Optical Society (COS), specialised for vision and colour. As the National Color Association it joined AIC in 1986, together with Division 1 (vision and colour) of the China Illuminating Engineering Society. Its objectives are to encourage research in colour science and its application in different aspects, and through seminars to exchange information and new technology related to colour.

As one of the series of discipline development research studies hosted by the China Association for Science and Technology (CAST), the Report on Advances in Chromatics was published in April. The authors of this report are experts in the field of colour science and design from Zhejiang University, Tsinghua University, China Academy of Art, Suzhou University, Beijing Institute of Clothing Technology, Xi'an Polytechnic University, Sun Yat-Sen University, and others. This report includes a comprehensive analysis of chromatics study for existing and prospective stages. It also includes several special reports on topics of colour science and technology, garment colour, textile colour, urban construction and environmental colour, industrial product colour, and interior colour design.

Popularisation activities of colour science into the campus were conducted in May in Chongqing Technology and Business University, Chongqing Southwest Yucai College, Shanghai Institute of Visual Art of Fudan University, Donghua University, Shanghai Foreign Language College, and elsewhere. The campus tour lectures covered many different topics of personal appearance, textile and garment coloration, urban architecture and environment, indoor decoration, light stage design, graphic design, advertising design, and psychology. Overall more than 800 participants benefitted from these lectures.



Popularisation activities of colour science into the campus in May 2012 in Chongqing and Shanghai.

The 2012 Asia Color Education Forum took place in Jilin College of the Arts on 26 October. The theme of this forum was 'Diversified Conception of Color Education', reflecting the novel ideas and new achievements of colour education and application throughout Asia. The 2012 International Color Design Forum was held in Chongqing University on 16 November, at which some famous colour designers from Germany and the Netherlands gave wonderful talks on colours of the urban environment, clothing and culture. The first Global Visual Culture Forum was successfully carried out in Beijing on 21 November, of which the theme was 'Colors to Perceive China'. Based on colour, experts from different fields interpreted the Chinese culture and the ideology of Chinese people, which collectively helped to demonstrate a colourful and true 'Impression of China'.



The first Global Visual Culture Forum in Beijing in November.

The 7th award ceremony of 'Color China' was held in the Great Hall of the People in Beijing on 30 November, which announced the awards of colour application, colour education, colour culture, and colour technology. The annual symposium of 'Color Design and Product Innovation' took place in China Science and Technology Hall in Beijing on 31 November, bringing together scholars of colour science and specialists of colour technology in China to discuss deeply and communicate their achievements and experiences in the theory and practice of colour principles and applications.



Prof Guanrong Ye (left) and Prof Haisong Xu (right) gave invited speeches at the annual symposium of 'Color Design and Product Innovation' in Beijing in November.



The Centre Français de la Couleur was created in 1976 and is the French representative of the AIC. CFC is, above all, a centre for the exchange of ideas, on a national and international level, through enhanced communication and cooperation between those of all disciplines and professions involved in the culture of colour. The CFC makes available to its members various means of communication: seminars, colloquia, publications, website, etc. Newsletters about colour activities and news are frequently sent out to the members.

As every year, in 2012 we organised a Scientific Day, 'Current developments of measurement devices for spotting colour': 23 January, École des Mines ParisTech, Paris (with the support of Mines ParisTech – CAOR, Centre de Robotique – Hautes Études d'Ingénieur (HEI), Lille). Presentations were by members of CFC: Robert Sève «What is colorimetry?» ; Julie Boulenguez «Towards a characterisation protocol of iridescence»; Patrick Callet «Micro/meso/macro pearls /butterflies/pigments». J-P Leclercq presented a prototype goniophotoscope and observation of some samples.

Our Annual Colour Evening was held in Paris, 8 June, in the SPEOS Photographic Institute. Talks were given by Pierre-Yves Mahé on «Spéos Museum, the Maison Nicéphore Niépce», Serge Tornay «Robert E MaLaury, a major figure in the study of naming colours: universals, cultural particularities and perspective» and Patricia Lefevre-Milon «EPOHA. A collection of silks: green tropical 'presenting' colours».



Robert Sève looking at the photographs of Nicéphore Niépce.



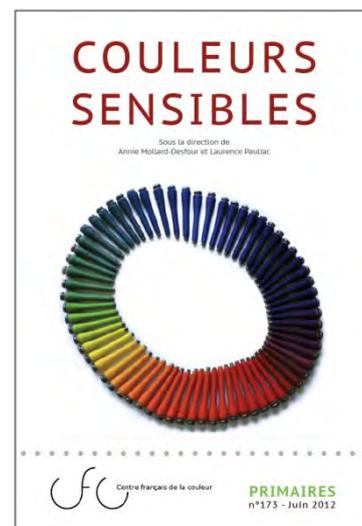
Serge Tornay, presenting his work 'Voir et nommer les couleurs', 1978.

CFC members were invited to many events in France and worldwide in 2012 to give lectures, interviews and present their work (Annie Mollard-Desfour, Anne Varichon, Bernard Valeur, A Grand-Clément, G Lecerf, M Jacquot, Patrick Callet). Some artist members also had exhibitions showing their work (Nathalie Junod-Ponsard, Martine Lafon, Larissa Noury ...).

Numerous interviews in radio, television and print media projected the importance of the CFC (RFI, France Inter, France Culture, Pour la Science, etc.)

In 2012, our magazine *Primaires* (named in reference to primary colours) was completely updated and redesigned. It is now a very big annual magazine that covers many scientific subjects ranging from architectural polychromy phenomena to fluorescent colours with full-page illustrations in colour. *Primaires* n° 173 was published (editorial and publication directors: Annie Mollard-Desfour and Laurence Pauliac).

See: www.cf-couleur.fr/primaires.html



Publications by CFC members in 2012

Robert Sève, «Couleurs primaires?»

Bernard Valeur, «Les couleurs fluo : des couleurs lumineuses»

Philippe Lanthony «L'énigme du daltonisme de Fernand Léger»

Jean-Paul Leclercq, «Du textile à l'architecture, un instrument à développer (rigidité, motorisation) pour la gonioparence : le Goniophotoscope®»

Michel Indergand, «Pour une histoire culturelle de la combinaison 'azur et or'»

Laurence Pauliac, «La couleur dans l'art monumental religieux médiéval»

Michel Indergand, «Voir enfin les couleurs de Saint-Vincent-de-Paul»

Verena M Schindler, «'Environnements polychromes' au Centre Pompidou, exposition présentant notamment des œuvres de France et Michel Cler»

Guy Lecerf, «Le Répertoire de couleurs d'Henri Dauthenay: mémoire et imagination à l'œuvre»

Guy Lecerf, «Vert, fiction, écologie et art des jardins»

Annie Mollard-Desfour, «Petite suite en vert»

Martine Lafon, «Comment le rouge arrive dans la peinture de Mark Rothko»

Irene Ronga, «Son et lumières de publicité : jeu de mots et d'images»

Denise Houssard, «Couleurs et effets spéciaux cinématographiques»

Solenne Jolivet, «Couleurs culinaires»

Fascicule de documentation sur l'indice CIE de rendu des couleurs des sources de lumière (CIE colour rendering index for light sources) [dir. R Sève].

Annie Mollard-Desfour, «Le Vert» sous titre Dictionnaire de la couleur. Mots et expressions d'aujourd'hui, CNRS Éditions.



The 38th Annual Conference of the DfWG was held 9–11 October at RWTH Aachen University. The first day was dominated by meetings of the

DIN FNF24 standards committee and the DfWG working groups 'Multigeometry Colour Measurements' (chaired by Felix Schmollgruber) and 'Fluorescence' (Claudio Puebla). Werner Mieskes gave an introductory talk on 'Evaluation of Colour Tolerances in Automotive Repair Paints' and Katharina Kehren presented her work on 'Visual Perception of Printed Special Effect Colours'.

On the second day the DfWG working groups 'Colorimetry' (Peter Bodrogi) and 'Colour Image Evaluation' (Bernhard Hill) continued the committee work. In the afternoon the paper portion of the DfWG conference started with the paper 'Colour Accuracy of Stereo-multispectral Image Recording' by Julie Klein. Guido Vogt gave an overview on the history of 'Retrieving the Spectral Response Curves'. The link to practical applications of colorimetry was superbly presented by Renate Hiesgen 'Methods for Colorimetric Process Controls' and Georg Meichsner 'Colorimetric Research on Wood Surfaces'. With his paper 'Tolerance Areas for White-Adjustments when using different Spectral Light Distributions' Marvin Böll ended the paper session. The annual DfWG member assembly concluded the afternoon. Thereafter all participants left the university for a visit to Aachen Cathedral to see the impressive treasures including the vault of Charles the Great, the Cross of Lothair and the Persephone sarcophagus. The conference dinner was held in the neighbourhood of the Cathedral.



DfWG participants milling around the Cathedral in Aachen.

The third morning's talk began with 'Comparison of Colour Difference Formulae at Medium Large Colour Differences' by Eva Lübbe. This was followed by Friederike Gessner's 'Colour Perception as a Function of Size of Objects under Evaluation (colour size effects)'. Andreas Kraushaar presented 'Colour Management for Samples with Optical Brighteners' and Peter Bodrogi explained his work on 'Colour Quality of Phosphor-based white LEDs at 2700K, 4000K and 6500K – Colour gamut, brightness, colour rendering and preference'. At the end of the day was a tour through the laboratories of the Institute of Imaging and Computer Vision at RWTH Aachen, where the ongoing research was presented.



The Deutsches Farbzentrum e.V. (DFZ) focussed its annual activities on celebrating the 50th anniversary of the society. The international conference 'Im Medium Farbe' (In the Medium Colour) took place in April. The Committee of the DFZ, Prof Dr Axel Buether, Dr AnneMarie

Neser and Susanne Wied, were pleased to welcome about 250 participants to the Umspannwerk in Berlin. The honorary chairmen Prof Klaus Palm and Prof Klaus Richter reported on '50 Years of Colour in Art and Science', followed by welcoming speeches given by Verena M Schindler (AIC), Daniela Späth (President pro/colore, Schweizerische Vereinigung für die Farbe (Swiss Colour Association), and Silke Albrecht (Vice-President IACC).

The lectures were divided into 6 sections: 'Farbe zwischen Ästhetik und Aisthesis' (Colour between Aesthetics and Aisthesis), Prof Dr Christoph Wagner (Art History, University of Regensburg); 'Farbe in der Musik' (Colour in Music), Neil Harbisson (Barcelona, Spain); 'Farbe in den Naturwissenschaften' (Colour in Natural Sciences), Prof Dr Armin Reller (Resource Strategy, University of Augsburg); 'Farbe im urbanen Raum' (Colour in the Urban Space), Atelier Cler, Michel and France Cler (Architect DESA, artist – Colour Consultants, Paris) and Verena M Schindler (art and architecture historian); 'Farbe in leiblicher Kommunikation' (Colour in Bodily Communication), Prof. Dr. Hermann Schmitz (philosopher, founder of the Neue Phänomenologie, University of Kiel); 'Farbe als Medium' (Colour as a Medium), Raw Color (Eindhoven, Netherlands); 'Farbe im Material' (Colour in Material), Stefan Muntlywer (Switzerland).

The Karl Miescher Prize 2012 was awarded in the categories Knowledge (Stefan Muntlywer, Switzerland) and Design (Daniera ter Haar and Christoph Brach, Raw Color, Netherlands). The conference was accompanied by an exhibition 'Ask me about Colour!' by students of the department Colour Design at the HAWK Hildesheim. Prof Dr Axel Buether (Wuppertal) continues as Chairman of the DFZ, now assisted by Prof Dr Grebe-Ellis (Wuppertal) and Dipl-Des Timo Rieke, Verw-Prof (Hildesheim/Hamburg).



DFZ 50th Anniversary Dinner in the Alte Generatorenhalle, Berlin



There were three strands of activity for the Colour Group during 2012; one was colour out-reach, the main one was organising the regular monthly meetings and the final one was preparing for the AIC2013 International Congress to be held at Gateshead in July 2013.

After four years, the Colour Teaching Fellow Programme of lectures and presentations in secondary schools came to an end. The two Fellows, one based in Scotland and one in London, had achieved total audiences of 3141 people in Scotland and 1671 in England and Wales, with an average cost of under £7 per head. The feedback received from pupils and teachers was overwhelmingly positive and the programme was judged to have been worthwhile. It remains an interesting finding that schools north of the border were much keener to receive out-reach activities than those in the south where indifference and rejection was sometimes encountered.



Lillie Cavonius in front of the Cambridge research centre named after her father.

It has been a long-standing tradition to start the New Year with a meeting on some aspect of colour vision but 2012 saw the venue change from the City of London to the sylvan surroundings of the new Cavonius Centre at Gonville and Caius College, Cambridge. Here the meeting was held in

some luxury, to commemorate the work of C.R. Cavonius. and to hear the Palmer and the CRS Sponsored lectures.

Another all-day meeting was held in March jointly with the Associação Portuguesa da Cor (APCOR) at the Gulbenkian Museum in Lisbon, to celebrate International Colour Day. It was entitled 'Discovering Form through Light and Colour' and CG members were able to enrich the colour experience by taking in the cultural delights of Portugal's capital (page 26).

A third all-day meeting was held in November entitled 'Colour for Business and the Professions', when ten speakers considered various aspects of colour as described in their recently published book 'Colour Design: Theories and Applications'. Topics ranged from the neurophysiology of colour vision to fashion colour on the High Street.

Joint meetings with other societies and institutions can broaden the opportunities of members to hear the very best the World has to offer. In April, two international experts delivered the CG Newton Medal Lecture (Françoise Viénot, Paris) and the UCL WS Stiles Lecture (Laurence Maloney, New York). The proceedings were augmented by the CG's traditional Halsted-Granville tea in the delightful Gustave Tuck Theatre at University College London in Gower Street.

A smaller half-day meeting in London considered the way that metallic surfaces could be coloured for jewellery and how, for example, titanium could be made to exhibit exquisite coloured sheens. The range of research on colour design and perception at Leeds University was the topic of another meeting. As an experiment a new format was tried one afternoon where six artists showed ten slides of their work which they described for ten minutes after which they answered questions from the audience for ten minutes. The meeting was, for obvious reasons, called the '10x10x10 Artists Meeting', and is a format that will surely be seen again.

One crowded event was a special evening showing of a new film *Blue Alchemy: Stories of Indigo* by Mary Lance, a feature-length documentary about indigo, the alluring blue dye that has captured the human imagination for millennia. So inspired were some members of the



Andrew Stockman and Janet Best test their dyeing skills at the Woad Farm in Norfolk.

audience that in the summer the CG organised a visit to a Woad Dyeing Workshop and Farm. It was a rare chance for members to be ancient Brits in Norfolk and to learn something of the ancestral art of woad dyeing.

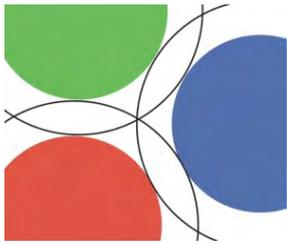
The climax of the formal business year is always the Annual General Meeting – a boring necessity to conduct essential business. But this year Prof Patrick Callet from the Centre Français de la Couleur in Paris came after the official business to talk about his research in simulating the surface appearance of archaeological metallic artefacts. He showed how he could compute from first principles the metallic appearance of objects. He had extended this work to 3D simulation of whole sections of the facade of Notre Dame de Paris in the evening sun to show how the builders had designed for dramatic halo effects around the statues of the kings as the sun's rays glanced off the sides of niches that would in medieval times have been polychrome and gilded.



Patrick Callet's spectral simulation of the appearance of a horse statuette from China with six different formulations of bronze.

Throughout the year the Congress committee has been busy preparing for AIC2013. Keynote speakers and sponsors were approached. Concerns about AV facilities, catering and calls for abstracts were all dealt with and ancillary services booked. The year ended with optimism that 2013 will be a bumper year with interesting meetings and a great Congress.

HUNGARY



The Hungarian National Colour Committee was founded in 1969. Its professional societies are still working continuously, dealing with colour visualisation, colour vision, colour environment design, visual arts, industrial application of colours, measurement of colour, and colour aesthetics. Members of the HNCC have produced numerous research reports, series of educational lectures and organized many exhibitions.

The most significant activity in 2012 was the 5th Colour Specialists' International Conference with the theme 'Interdisciplinary Conference on Colour and Pattern Harmony' held between 11–13 June at the University of Óbuda. Organising partners were the International Foundation Colour and Light established by our Committee, The University of Óbuda and the Association of Hungarian Artists and Industrial Designers. The Conference included 25 oral and 10 poster presentations. Speakers were selected from significant Hungarian and international (English, Austrian, German, French, Italian, Dutch, Chinese, Belgian, Polish, Indian, Ukrainian Taiwanese, American) experts.



People at the International Conference: (left to the right): László Miskei, Árpád Magyar, Antal Nemcsics and Tien-Rein Lee.

The presentations were complemented with valuable discussions and book previews. The number of participants was close to 200, more than half of whom came from abroad, mainly from the USA and China. The interdisciplinary nature of the Conference was boosted by an exhibition connected to the topics of the Conference where artists had the opportunity to engage in professional discussions with the authors about the medium „colour”. The conference proceedings were given to participants on a CD.



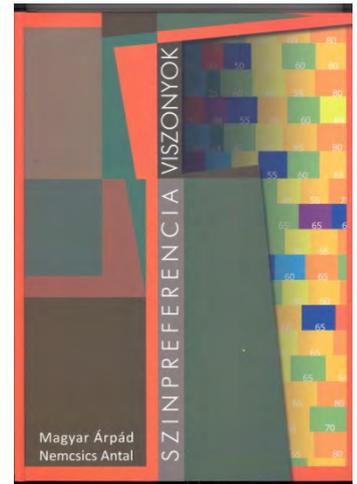
Verena M Schindler speaking at conference.

It has been the task of our Committee to select the six lecturers of the Conference to be invited for delivery of a presentation at the Colour Harmony Symposium of the AIC 12th Congress. The lecturers selected (Hungarian, Italian, American, French and Taiwanese) have accepted our invitation and prepared abstracts.

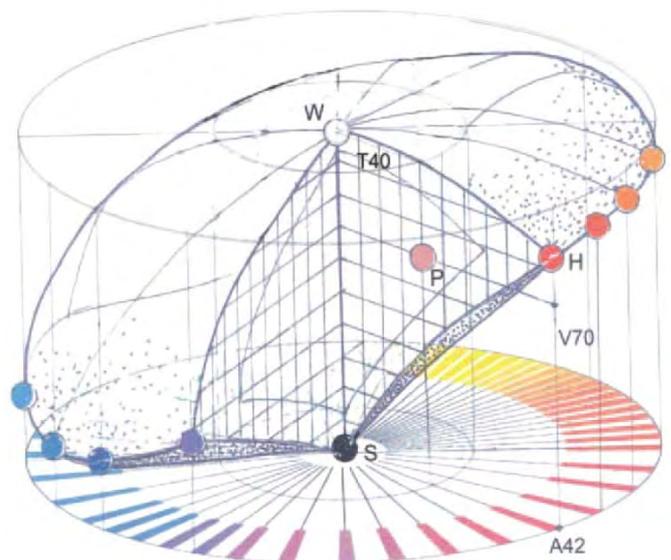
Various conferences were held during 2012 on colour and light, including: Lighting Technology & Coloristic (16 June), Applied Informatics (7 November), Hungarian Web Colour (15 October). Several Universities have also held colour-related scientific meetings for students.

The latest phase of the long-running study of colour harmony by Antal Nemcsics was published in the journal *Color Research and Application* with the title „Experimental Determination of Laws of Colour Harmony.

Part 7: Experiments carried out with eyes adapted to light and dark”. Sixteen artists made judgments of the harmony content of colour compositions using two different methods: first with their eyes adapted to natural daylight, second in a dark room with their eyes adapted to the dark. The results were substantially different, leading to the conclusion that people judge colour harmony relationships differently in a dark environment, for example in a cinema or when watching television, than in daylight.



'Colour Preference Relations' by Árpád Magyar and Antal Nemcsics



Selection of experimental hues in the Coloroid coordinate system.

Members of CIE-MNB are actively participating in eight Technical Committees (TC). In the interest of disseminating information on presentations delivered in Hungarian and foreign conferences, CIE-MNB has organised a number of professional presentations and other events.

Prof János Schanda from the University of Veszprém has been collaborating with a research group at Samsung (Korea). A US Patent Application 2012/0038828A1 was published in February for an 'Apparatus and method for generating a video signal reducing crosstalk between lightness signal and chrominance signal'. The video signals are derived from LMS retinal cone signals generated from an input colour image.



After a debate that started many years before, the members at the Rome conference in 2011 voted to turn the Gruppo del Colore (GdC), at that time

part of SIOF (Società Italiana di Ottica e Fotonica), into an autonomous association with a slightly different name: Gruppo del Colore – Associazione Italiana Colore. Although a fresh new association, its activities date back in 1995 from the SIOF Working Group in Colorimetry and Reflectoscopy founded by Claudio Oleari. Maurizio Rossi has been elected president, Alessandro Rizzi vice-president, Davide Gadia treasurer and Andrea Siniscalco secretary.

The annual conference was held in September 2012 at University of Bologna, organised by Marco Gaiani, Fabrizio Ivan Apollonio and Maurizio Rossi. 205 persons participated with 74 papers presented orally and 61 posters. Topics ranged among colour in measurement/production, lighting, digital management, physiology, psychology, restoration, built environment, design, culture and education. Invited speakers

were Berit Bergström (AIC president), Jean-Luc Capron (Université Catholique de Louvain) and Patrick Collet (École Centrale Paris). Two books of proceedings were published.



On 23 November 23 the GdC with Università di Bologna and Scuola Nazionale di Dottorato di Ricerca in Scienze organised at the Dept of Architecture of Cesena the 'Introductory workshop on the colour perception of representation', moderated by Fabrizio Ivan Apollonio. Speakers were: Andrea Siniscalco, Politecnico di Milano; Alessandro Rizzi, University of Milan; Emma Mandelli, University of Florence; and Marco Gaiani, University of Bologna.

Marcello Picollo and Raimondo Schettini, started a FP7 European COST action on Colour and Space in Cultural Heritage (www.cosch.info). The aim is to collect, quantify and complete documentation of artefacts for conservation and preservation of our cultural heritage. There is a great need to promote research, development and application of non-contact optical measurement techniques adapted to the needs of heritage documentation.

Marcello Picollo, Giovanni Bartolozzi, Andrea Casini, Costanza Cucci, Veronica Marchiafava, Marco Poggesi, Lorenzo Stefani, from the Applied Spectroscopy Group of IFAC-CNR have been developing innovative diagnostic methodologies applied to the cultural heritage field. One example involves non-invasive reflectance measurements acquired with optical fibres that make it possible to determine the composition of pigments and dyes. The group built a hyperspectral scanner in the visible and infrared range (400–1700 nm) that provides 2D image data at high spectral and spatial resolution for high-quality documentation and/or for characterisation of pigments and dyes. The group is also engaged in the study of the contemporary artworks and artists' materials (COPAC, POPART projects).



Renata Pompas and Lia Luzzatto leading a colour workshop

Renata Pompas and Lia Luzzatto went to Switzerland to conduct the colour training course 'The importance of the study of colour' at the CSIA (Lugano). They presented all the complexity of colour, from physical and physiological aspects, to nature and expressions of humanity, from emotion to synaesthesia, from colour naming to mathematical formalisation. The workshop included animations, exercises and interactive dialogues.

Maurizio Rossi (Politecnico di Milano) and Alessandro Rizzi (University of Milan) are organising a Master in Colour Design and Technology starting in 2014 with several grants available. It is a one-year degree programme divided in two parts: the first reviews all the theory of colour and the second takes the student through five project works in the fields of applied urban design, fashion, visual communication, product design and interior design. See: www.polidesign.net/colordesign



VIS-NIR hyperspectral scanner at IFAC-CNR for non-invasive reflectance measurements of art pigments.



2012 Annual Meeting

The 43rd Annual Meeting of the Color Science Association of Japan (CSAJ) was held 25–27 May at Kyoto University. More than 300 participants attended and 109 contributed papers were presented from various fields of colour studies and practices in both Japan and Asian regions. The symposium ‘A new era of lighting – from colour science to design’ was conducted on the first day of the meeting. Five experts from academic, industrial and lighting design fields talked about recent studies on the visual aspects of solid-state light sources and possibilities of upcoming colour and lighting environments. A special lecture ‘Color for the Japanese’ was given by Tamehito Reizei, who is a Japanese art historian and the 25th head of the line of the Reizei family with a long tradition of Tanka poetry.

International Symposium

One of the highlights of the annual meeting was the International Symposium ‘Color science for our better life’ on 26 May. We invited six outstanding speakers: Prof Haisong Xu (Zhejiang Univ, China); Prof Miho Saito (Waseda Univ, Japan); Prof Tien-Rein Lee (Chinese Culture Univ, Taiwan); Prof Young In Kim (Yonsei Univ, Korea); Prof Pontawee Pungrasamee (Chulalongkorn Univ, Thailand); and Prof Ken Sagawa (Japan Women’s Univ, Japan). The topics included perceptual contrast of display, colour as a node of cross-modal perception, traditional Chinese colour theory, colour perception and preference of elderly people in Korea, perceiving object colour by the elderly, similarity and conspicuity of colour in younger and older people. In addition, 23 contributed papers were presented. The CSAJ Presentation Encouraging Prize was given to Aimi Mochinaga (Kyoto Univ.) and Tadayuki Wakata (Waseda Univ.).



Invited speakers of the International Symposium.

Publications

The CSAJ published four issues of *Journal of the Color Science Association of Japan* and one supplement as the abstract book of the annual meeting. Eleven original papers and a number of feature articles were published in 2012.

Asia Color Association (ACA)

During the annual meeting, Prof M Ikeda, the president of CSAJ, held an informal meeting with invited speakers from China, Korea, Taiwan, Thailand and their colleagues to discuss future colour cooperation among Asian regions, through the Asia Color Association. The establishment of ACA was formally agreed at the AIC meeting in Taipei and the first conference will be held in December 2013 in Thailand.

The Special Symposium in Autumn

The CSAJ held the special symposium ‘Make Tomorrow of Beautiful Japan’ on 16 December at Waseda University in Tokyo. This symposium was motivated by challenges facing us for reconstruction of our living environment from the Great East Japan Earthquake. Five experts from colour design, landscape, colour environment, interior design and city planning talked about their recent work and discussed ways of restoring the colour environment in Japan.



Keynote by Prof H Hayashi, the organiser of the symposium.

Awards

16th CSAJ Award: Mitsuo Ikeda (President of CSAJ, Professor Emeritus of Tokyo Institute of Technology).

5th CSAJ Research Award: Takako Kimura-Minoda (Stanley Electric Co.) and Miyoshi Ayama (Utsunomiya Univ.), Evaluation of discomfort glare from color LEDs and its correlation with individual variations in brightness sensitivity, *Color Research and Application*, 36(4), 286-294, 2011.

16th CSAJ Research Encouraging Award: Yunjin Lee (Ewha Color Design Research Institute), A Study on Quantification of Color Combination Feelings: Attempt for Development of Metrics, *Journal of the Color Science Association of Japan*, 35(2), 79-90, 2011.

Local Chapters and Study Groups

Three local chapters (Kanto, Tokai and Kansai areas) and twelve study groups including the new study group ‘Foundations of Environmental Color Control in Japan’ worked actively and organised several meetings throughout the year.

Future Meetings

The 44th Annual Meeting of CSAJ will be held 25-26 May 2013 at Waseda University in Tokyo. The CSAJ website has been relaunched at www.color-science.jp. The organising committee of the AIC 2015 Midterm Meeting in Tokyo has created a new website at www.aic2015.org.



The Korea Society of Color Studies (KSCS) undertook many diverse activities in 2012. Seminars, academic conferences and the Korea Color Awards were held in spring and fall.

Spring Seminar and Academic Conference

'Global Economy and Fashion Color Trend' were dealt with in depth in the Spring Seminar. The Spring Academic Conference was held at Ewha Womans University in Seoul on 2 June. The theme of the conference 'Recycling and Color' was discussed through both workshop and academic thesis presentations.



Fall Academic Conference and International Exhibition 2012

The Fall Academic Conference was held in November with the theme of 'Healthcare Design and Color'. The International Invitational Exhibition was also held during the conference. The theme of exhibition this year was 色 in 色 (Red in Red). Artists from 21 countries participated in the exhibition and 146 artworks were displayed. The artists were from Australia, Canada, France, Germany, Hong Kong, India, Indonesia, Ireland, Italy, Japan, Korea, Malaysia, Netherlands, Norway, Romania, Serbia, South Africa, Spain, Thailand, UK and USA.



Work on display at the International Invitational Exhibition 2012

10th Korea Color Awards

Korea Color Awards have been hosted annually by KSCS since 2003 and the 10th event was held in 2012. This award is aimed to encourage and develop colour industry through giving prizes to excellent colour design projects. Nine projects were given awards this year. 『Samhwa-NCS Collection 950』 of Samhwa Paint and 『Halla Vivaldi Color System』 of Halla E&C Corp won the first prize. Also, 『Green Wall』 of Forestcity and 『Kizcovery』 which was undertaken by Samsung Everland won other prizes.

The Young Nam branch of KSCS also actively conducted various seminars with specialists from each field including 'Color Theory and Practice' education.

YELLOW
Yellow Color Therapy와 마감(Soak, Glossy, Pearl, Metallic type)에 따른 효과 연출



RED
Red Color Therapy와 Color Contrast에 따른 효과 연출



BLUE
Blue Color Therapy와 Illusion에 따른 효과 연출



GREEN
Green Color Therapy와 Metamorphism에 따른 효과 연출

Detail from winning entry by Samhwa Paint.



Detail from winning entry by Halla Vivaldi.



Detail from winning entry by Kizcovery playground colour scheme.



AMEXINC, founded in May 2005, is a Mexican organisation that promotes colour in interdisciplinary researches, exchanging expertise and applications among different areas and contributing to the cultural diffusion of colour in Mexico. At present AMEXINC counts more than 40 professionals of different specialties: psychologists, physicists, graphic designers, home designers, architects, and teachers. The organisation is not exclusively for people with high academic degrees, but is open to all professionals who are passionate about colour and who want to learn more or share experiences and knowledge. AMEXINC was accepted as a member of AIC in 2007.



The motto of AMEXINC is: "For a culture of color experience".

Georgina Ortiz was the first president; she held this position from 2005 to 2011. In 2011, the former vice-president Carlos I Aguirre Velez was elected for period 2011-2014. Nowadays, AMEXINC has four state representatives. Step by step this colour association will surely reach all Mexican territory.

AMEXINC's most important communication media are its web site and Facebook. We are particularly interested in sharing colour information in the Spanish language because of the lack of specialised texts.



Second Mexican Color Meeting

AMEXINC organised the second Mexican Color Meeting at the Mexico City campus of the Tecnológico de Monterrey college 24–27 October. 'Art, Design and Space' was the title of this academic event because we want to encourage colour professionals who work in the visual arts, architecture, urbanism, environment and all areas of design.



Cultural show at annual meeting: Jalisco folkloric dancers

About 40 works were submitted, there were 3 workshops on the first day, with 6 special talks, and about 50 persons attended the oral presentations. There were two cultural shows, one with Jalisco's typical dancers and 'La llorona en Xochimilco'. The cry of "my children, my children" is the lament of 'La Llorona' or 'The Crying Woman', an ancient tale famous in Mexico and Latin America, told for centuries in a myriad of variations. As we were approaching the end of October and the 'Day of the Dead' and Halloween, it seemed an appropriately scary story to share. Our international guests were Verena M Schindler, member of AIC Committee and Chair of the Study Group on Environmental Color Design, and Georges Roque, the French philosopher and art historian.



Verena M Schindler, Jose Maria Macias and Héctor Meneses (principal of Textil Oaxacan Museum) at lunch time.

We also held a round table discussion, organised by Alfonso de Lucas, with the participation of Mexican colour specialists. Some of our members were delegates to the Visual Semiotics Congress held in Buenos Aires, Argentina, and to the 10th annual meeting of the Argentinean Color Group.

AIC2014 Interim Meeting in Oaxaca, Mexico

The next Mexican Color Meeting will be conjoined with AIC2014. AMEXINC warmly invites all colour specialists from around the world to share their knowledge and experiences in the AIC2014 Interim Meeting: 'Color and Culture' in the magical city of Oaxaca, 21–24 October 2014. See page 43.

Kleur & visie



We celebrated the International Colour Day with a 'Dinner in the Dark'. The eye-opening fact during the event was that, apparently, without the help of one of our more dominant senses, our sight, very little of the food we consume is actually tasted.

COLOUR IN LINE: In every painting José Heerkens is searching for a balance between the line and the movement of colour. "There is a need to zoom in on the colour and its appropriate dosage. A colour is everything on its own, but when more colours come together they start to communicate and to relate to each other. This makes colours move. The colour gets its form in the length and width of a line, by the touch and the physicality of paint. The line is an important means to visualize space, and both vertical and horizontal lines are needed. Yet it is the horizontal line that predominates through the painting process: it pulls the image out, to the sides, towards a horizontal space. The vertical lines create the structure or framework on which the horizontals walk with their own rhythm." In the complexity of the process of painting she strives for simplicity and clearness.



KleurCafe 'Colour in Line' with artist José Heerkens.

By popular request, a KleurCafe was held twice at Verfmolen De Kat (built 1646), a mill where pigments and chalk are ground whenever the wind permits. Pieter Keune, chemist and widely-acknowledged expert, gave a lecture on the history and use of old pigments. Their availability in previous centuries determined especially the formulation and sale of paints to the artist and painter as major users of paint. Choice of colours always depended on knowledge of the artist and wealth of the patron.



Pieter Keune explaining the preparation of traditional pigments.

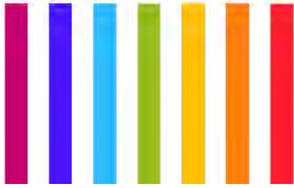
343 DRESSES: the dream of every girl. In developing her ideas to an interactive art project, Mary Younakof integrated her interest in science, colour and culture. Newton's optical colour spectrum provided not only a structure to use the artist's palette, but also the possibility to employ the subtle transitions between colours of the rainbow. In addition, the number seven is a binding element: ROYGBIV. She has made seven dresses in each spectral colour (7x7) worn on 343 consecutive days! Each week she visited a preselected location whose colour matched that of her dress for a video recording and photo session. In doing so, she sought interaction with the residents of Los Angeles. On the street she was approached and spoken to by many youngsters who asked to be photographed with her. Others told her of an experience or object, brought to mind by the colour of her dress. The strongest reactions were to her brightly coloured dresses. When wearing orange passers-by began telling positive stories to her; orange is now her favourite colour.



Mary Younakof in front of her installation of 343 dresses.

Coloured light and laughter give faces another age... With a wide audience as subjects, researchers Marcel Lucassen and Theo Gevers have shown that laughter can make young girls and elderly women appear different from their real ages. Older women look younger, whereas young women looked older. A face in coloured light appears to be younger than in normal daylight, and this was also the case for men. With this in mind, computer systems that automatically estimate the ages of people can be made more accurate.

PORTUGAL



Associação Portuguesa da Cor (APCOR), in collaboration with the Colour Group (GB), organised the event 'Descobrir a Forma através da Luz e da Cor' (Discovering Form through Light and Colour) in March 2012. The event celebrated the International Colour Day, and included the opening of an itinerant exhibition at Sala Rainha Sonja (Cubo), Faculdade de Arquitectura – Universidade Técnica de Lisboa and an International Symposium in Auditorium 3 of the Fundação Calouste Gulbenkian.

The main objectives of the meeting were to encourage cohesion and international openness, and to promote the dialogue between public and private organisations, which have been the developers of original measures in light and colour. Thematic areas covered: Vision and Perception, Art and Photography, Architecture and Design, Image and Multimedia. See: <http://apcor.blogspot.pt/2012/03/disc.html> and <https://www.facebook.com/apcor.org>



Members of the Scientific Committee and Guest Speakers

Member Activities

During 2012 our members were involved in the promotion of various cultural activities such as:

Arch Tiago Saldanha Quadros organised a series of four conferences 'A Cor entre as Formas' (Colour between Forms) held at the Universidade Lusófona do Porto 26 April – 31 May. The programme focussed on aspects of colour, such as "how chromaticism can determine the meaning of a specific volumetric architectural object but also in colour while element descriptive, evocative or symbolic ... in the context of issues such as the theory, the landscape, the city, the architecture and the laboratory".



A COR ENTRE FORMAS

Similarly to previous years, Prof Isabel Braz de Oliveira and Prof Ângela Codoñer co-organised the 3^o Seminário Internacional de Cor (3rd International Seminar of Colour) held at the Universidade Lusíada de Lisboa on 22–23 June. The seminar was open to national and international experts with experience in colour research and project implementation.

Following the event 'Descobrir a forma através da luz e da cor' (Discovering form through light and colour) the Director of the Centro Cultural de Paredes de Coura, Dr Joana Rodrigues, proposed to APCOR the presentation of an itinerant exhibition in Paredes de Coura during July, accomplished by a 'Tertúlia – Café com Temas' (Tertulia – Coffee with Themes) organised by Dr Gabriela Cunha and presented by Dr Helena Soares and Arch Zélia Simões.

We applaud the completion and defense of six PhD theses during 2012 by the following APCOR members:

- Arch João Pernão: 'A cor como forma do espaço definida no tempo: Princípios Estéticos e Metodológicos para o estudo e aplicação da Cor em Arquitectura e nas Artes' (Colour as form of space defined in time: Aesthetic and Methodological Principles for study and application of colour in architecture and in arts).
- Dr Carla Lobo: 'Novas Estratégias de Design para o Desenvolvimento de Revestimentos Cerâmicos: O Azulejo como Caso de Estudo' (New Design Strategies for the Development of Ceramic Coatings: Tiles as a case study).
- Dr Margarida Gamito: 'Cor no Mobiliário Urbano: um factor de Inclusividade, orientação e Identificação' (Colour in urban furniture: a factor of inclusivity, guidance and identification).
- Dr Inês Simões: 'Contribuições para um novo paradigma de representação do corpo no padrão de design – Geração de padrões básicos após o corpo móvel' (Contributions for a new body representation paradigm in pattern design – Generation of basic patterns after the mobile body).
- Dr Ana Couto: 'Experiência Visual do Vestuário: Implicações neurológicas na conceptualização dos afectos' (Visual Experience Clothing: Implications in neurological conceptualisation of affection).
- Dr Cristina Pinheiro: 'Comunicação Visual e Design Inclusivo – Cor, Legibilidade e Visão Envelhecida' (Inclusive Design and Visual Communication – Colour, vision and aging readability).

Publications

APCOR members were involved in the publication of books and articles: Prof Rui Barreiros: 'Duarte Os Paraísos Perdidos de Évum. Sobre a Incomunicabilidade' (The Lost Paradises of Évum. On the incomunicability) and 'Arquitectura, Representação e Psicanálise' (Architecture, Representation and Psycho-analysis); Arch Tiago Quadros: '24 Horas na Vida de uma Exposição, Xangai 2010' (24 Hours in the Life of an Exhibition, Shanghai 2010). APCOR has also established a partnership with corporate member Robbialac and Prof Maria João Durão began to coordinate the editing of a book on scientific research in colour, including contributions from many APCOR members.



Prof Maria João Durão



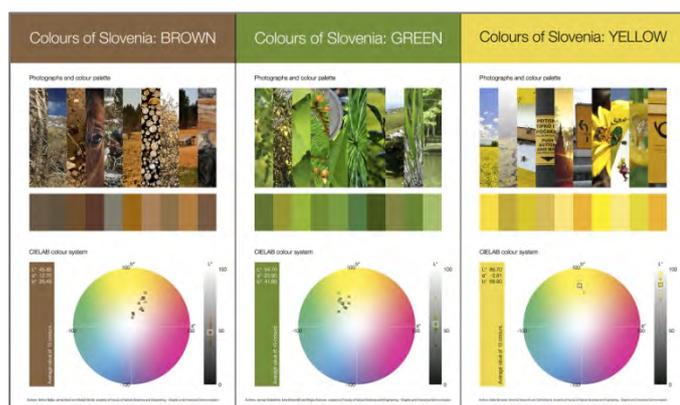
In 2012 Maribor was the European Capital of Culture, advertising itself by colourful signs, which confirmed the importance of colour in visual communication. A great

number of events took place in Maribor and partner cities, and gave us good opportunities to present our Slovenian Society for Colours (SSC) to attract young people to join us.



Times of Change

Since the days when the SSC was led by Dr Slava Jeler times have changed. Some members are still very active, but the formal SSC programme has shrunk due to loss of both members and resources. Still, we have some hope that after this vegetative period the life of the Society will revive. The future of the SSC lies in a different environment, with a swing toward the areas of art, architecture, psychology, sociology, medicine, computer science, etc. We have found, however, that interest in colour doesn't lead to a lot of new members in the sense of professionals with deep understanding. New quality members will accrue only from well-educated students and for that we still need a lot of time and patience.



Colours of Slovenia: Exhibition

This project was performed by students of Graphic and Interactive Communications, University of Ljubljana, under the tutorship of Jure Ahtik, Dejana Javorsek and Sabina Bracko. The idea was to represent the variety and power of colours, which appear in nature and urban surroundings, and are present in our everyday life. Photographs were taken all over Slovenia and the dominant colours positioned in the CIELAB colour space. The results were presented during the 39th International Research Conference of Graphic Arts (IARIGAI) in Ljubljana, 9–12 September.

Member Publications

SSC member Marta Klanjšek Gunde published an impressive number of articles in 2012: Properties of thermochromic printing inks, *Acta Graph.* 23(1); Colorimetric characterization of thermochromic composites, *J. Print & Media Tech. Res* 1(2); Dynamic color of thermochromic printing inks, *Proc. 6th Intl Symp on Graphic Eng. & Design*; Tuning colors in protective metal nitride coatings, *Proc. 55th SVC Tech. Conf.*

Prisoners of Colours: Vojko Pogacar

The idea of being caught up in the phenomena of colours had been prowling through my head for several years already when I attended the AIC meeting in Switzerland in 2011 and saw the projection of exceptional design of coloured line-raster onto the wall, sometimes also over the participants.



The idea of captivity to colours became immediately materialised in my mind. I realised that in fact we all, who are dealing in our lives with colour, must become somehow "the prisoners of colours". We serve life sentenced to colour!



For decades I also wrestled with the confrontation between the RGB and CMYK systems – actually additive and subtractive colour mixing – taking metaphoric form in the chess pieces.



It appears as a proposal that the chess Queen and King might serve well as golden award statuettes for mentioned fields of art, architecture, philosophy, etc. These could become our own AIC Colour Academy Awards...



On 22–23 March, the Colour and Vision Group of the University of Alicante (<http://web.ua.es/en/gvc>) hosted the fourth workshop of the Spanish Network on Colour Science and Technology (www.cyt-color.es/redtematica), chaired by Dr Joaquín Campos (CSIC). This meeting included an invited lecture by Dr Sophie Wuergler (Dept of Psychology, University of Liverpool), with the title ‘Colour constancy across life span’. This meeting was clearly oriented to boost the participation and training of our PhD students as well as the communication among the different participating research groups. It was completed with 12 oral presentations, from research groups belonging to CSIC (Madrid), University of Granada (UGR), Tech University of Catalonia (UPC), University of Alicante (UA), and University of Santiago de Compostela (USC). The contributions in this meeting have been published in the book entitled *Ciencia y Tecnología del Color. Seminario 2012 de la Red Temática*.



Spanish Network on Colour Science and Technology 2012

During 2012 the main activities of the Color Committee of Spain were focused on the planning the Xth National Congress congresonacionaldelcolor2013.blogs.upv.es in Valencia, 26–28 June, 2013. The topic will be multi-disciplinary colour, and it will be chaired by Dr Ángela García Codoñer of the Inst of Heritage Restoration at the Tech University of Valencia (www.irp.webs.upv.es). It is expected that this meeting will attract 150 delegates and will be sponsored by some prestigious companies.

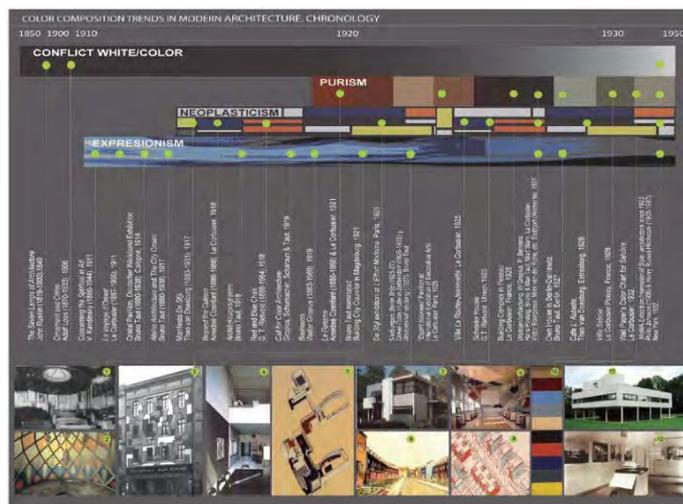
A group from Equipo de Investigación del Color, Instituto de Restauración del Patrimonio, Universidad Politécnica de Valencia, published an interesting study on colour trends in architecture (*Color Research and Application* 37(2):126). They studied three systems in the first half of the 20th Century (Purism and Le Corbusier, Expressionism and Taut, Neoplasticism and Rietveld), investigating the prominence of white, the use of ‘flat colours’ and the conception of colour during the ideation phase. They demonstrated three principles of colour composition in modern architecture: it limits the variety of hues; it not only uses white but also displays colour to conform and transform shapes; colour has ethical connotations and not only aesthetic ones.



Presentation of the book ‘La tienda de las curiosidades sobre el color’ (L to R): Francisco-Sánchez Montes (UGR), Manuel Melgosa (UGR), Maribel Cabrera (UGR), Ernesto Páramo (Parque de las Ciencias).

On 28 April was presented at Parque de las Ciencias (Granada) the book entitled *La tienda de las curiosidades sobre el color*, co-authored by Mark D Fairchild and Manuel Melgosa, published by Editorial Universidad de Granada. This book was explicitly dedicated to the members of the Color Committee of Spain (Sedoptica) and is based on the *Colour Curiosity Shop* website www.cis.rit.edu/fairchild/WhysColor. Various book reviews have been published in the journals *Color Research and Application*, *Atti della Fondazione Giorgio Ronchi*, and *Óptica Pura y Aplicada*.

Various members from our National Committee are participating in CIE Technical Committees, in particular CIE TC 1-55 (Uniform Colour Space for Industrial Colour Difference Evaluation), CIE TC 1-57 (Standards in Colorimetry), CIE TC1-71 (Tristimulus Integration), and CIE TC8-11 (CIECAM02 Mathematics). Moreover, several members of our committee attended AIC, CIE and CGIV meetings, and the X National Meeting of Sedoptica (www.xrnozara.goza.com).



Chronology of colour composition trends in modern architecture.

Finally, we would like to mention the participation of the Color Group of the University of Granada, together with the Universities of Saint Étienne (France), Joensuu (Finland), and Gjøvik (Norway), in the continuing European Master programme ‘Color in Informatics and Media Technology’ (CIMET – see article on page 36). For additional and updated information on the activities of our Committee you are kindly invited to visit www.sedoptica.es/SEDO/color/color.html



The Swedish Colour Centre Foundation has around 150 individual members and 25 organisational members. Its mission is to:

1) Encourage scientific research within the colour field of interest for industry, education and people working with colour; 2) Spread new knowledge and experience within the field of colour; and 3) Be a national centre for colour and colour research.



Gunilla Lagerhem Ullberg, Chief Designer at Kasthall, showing her colourful rugs.

International Colour Day (ICD)

This year we celebrated the International Colour Day on 21 March at Kasthall, together with the Swedish ‘Queen of Rugs’ Gunilla Lagerhem Ullberg. She also celebrated 25 years as chief designer with Kasthall, because since 1987 Gunilla has played a very important part in Kasthall’s international success. Her designs have very strong roots in Scandinavian design language, but stretch its boundaries by combining age-old weaving techniques with modern effect yarns and colour combinations, and of course she loves colours!

Colour Day 2012

The Swedish Colour Centre Foundation’s ‘Colour Day 2012’ took place on 11 May at the Louisiana Museum of Modern Art in Denmark and we were addressed in English by several international lecturers. This year’s theme was ‘Surrounded by



Little Janey-Waney (Alexander Calder 1898-1976). Louisiana Museum of Modern Art, Humlebæk

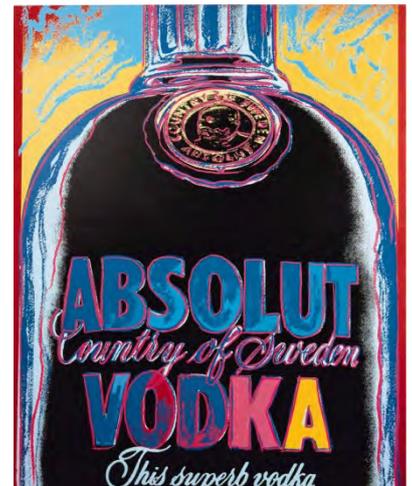
Colours’. We had a great programme with many different views focusing on colour in both interior and exterior environments, as well as how we use colour in our daily lives. The day brought together 100 architects, product manufacturers, and paint industry reps from 11 different countries. The Museum turned out its best in bright sunshine with a sparkling sea and a splendid flowering magnolia, it was altogether an experience

worth remembering. Some highlights from the day were: Architect Wim van den Bergh, Netherlands, brought us Mexico’s colourful world together with the architect Luis Barragán. Per Nimér, from Akzo Nobel, showed us interesting projects within the current pixel architecture. Architect Barry Hughes, HOK UK, talked about colour as a dynamic element in modern architecture and showed prestigious projects. Joakim Lassen, Managing Director of the Danish furniture company Montana, showed how colour can make a difference.

Members meetings

In January we held a members’ meeting with a focus on light and colour. Svante Pettersson, architectural lighting advisor at Philips Lighting, gave a very interesting talk about architecture, colour, form and lighting philosophy. He is also working practically with different exciting lighting projects. This evening he philosophised about the new age of light and what impact it has on our colour perception of a room.

In October we arranged a special visit to the Museum of Spirits, a unique destination located in Stockholm’s two remaining 18th-century naval buildings on the island of Djurgården. Considering the Swedish people’s bittersweet relationship to alcohol, the major exhibition ‘Sweden: Spirits of a Nation’ is designed as a walk through the seasons of the year, given shape through scenery, scents, tastes and music. The main attraction was a presentation of the art exhibition *Face it!*. This was the first major presentation of the famous Absolut Art Collection, including works by Andy Warhol, Keith Haring, Damien Hirst, Ed Ruscha, Annie Leibovitz and other international icons, together with Swedish



Absolut Vodka, Andy Warhol, 1986.

artists such as Linn Fernström, Dan Wolgers and Ola Billgren. The exhibition showed 69 of the total 850 artworks that were commissioned by Absolut Vodka between 1986–2004.

This year’s last event was the annual meeting. After the annual reports we listened to Erika Johansson regarding the form and colour design in Shaker architecture, based on her own experiences as an architectural conservator in New York. She showed colour schemes with examples from Mount Lebanonproject, Mount Lebanon Shaker Village, New York, United States. Shaker, the fastidious architecture and interior design style originating in a strict religious faith, is for many people an inspiration with its timeless design, high quality and solid craftsmanship. Environmental colour designers can bring these same attributes to the application of colour.

Colourspot

Please feel welcome to visit www.colourspot.org We are always keen to get more visitors!

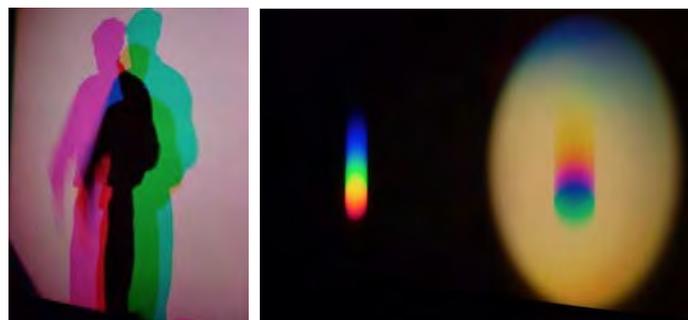


In 2012 the Swiss Colour Association pro/colore celebrated its 20th anniversary.

To commemorate this special occasion an extraordinary event was organised for the summer to complement further interesting meetings during the year. To prepare the meetings as well as the jubilee event board members met for five ordinary sessions. Additional working sessions were necessary to re-work the statutes and discuss pro/colore's future direction. Also in 2012 the pro/colore Head Office was assumed by Sabeth Tödli.

The 21st General Assembly took place on 1 March at the Hotel Glockenhof in Zürich. Attending members elected Daniela Späth as the new pro/colore President and thanked Ernesto Bergantini for his engagement as Interim-President. The Board presented an overview of the year's programme, giving special attention to the jubilee celebration in the summer.

The second meeting was held on 3 May at the Goetheanum in Dornach. This expressive monumental concrete building was erected during the 1920s based on the formal ideas of Rudolf Steiner, the founder of anthroposophy. The complex includes conference and educational spaces as well as an auditorium and theatre. Esther Gerber led pro/colore members through the complex and described its architecture and the interlocking worlds of colour, light and form.



(Left) Coloured shadows in complementary colours; (right) a complementary spectrum from inversion of white and black.

In an annex of the Goetheanum members could observe optical phenomena of light refraction and resulting colours with glass prisms, light sources and filters. In a second part physicist Matthias Rang showed phenomena such as 'coloured shadows', additive and subtractive colour mixing and then – using a sophisticated series of experimental steps – the production of spectral colours from white light according to Newton's theory. In a further step Rang included Goethe's notions that the production of spectral colours is not due to white light alone, but rather the interaction of light and darkness, white and black. He presented a special experiment to prove indirectly (and astonishingly) the correctness of Goethe's thesis: Newton's famous hole in the window shutter that captures a ray of sunlight can also be thought of as

complementary, i.e., as a radiant sky with a black sun. Projecting this image following the same experiment spectral colours appear on a light background, however, the respective colours that appear are complementary to those of the previous experiment.

After a long planning period the anticipated day of the jubilee, 29 June, finally arrived. In beautiful summer weather, the third meeting celebrated the twentieth anniversary of the association at the Swiss Textile College in Zurich. Talks by Axel Venn, Andreas Schwarz and Kurt Derungs attracted a large audience. In his presentation 'Gestaltungstrends der Zukunft' [Design Trends of the Future] Axel Venn (DE) talked about sensuality, esprit and prospective trends. The talk 'Ittens Farbenlehre' by Dr Andreas Schwarz (DE) critically revisited Itten's theory of colour from the perspective of art pedagogy. Dr Kurt Derungs (CH) presented a different view on colours in his talk on 'Die Farben der Göttin' [The Colours of the Goddess] dealing with aspects of colour symbolism in Swiss landscape mythology. Numerous sponsors enriched the celebration.



(top to bottom) Axel Venn, Andras Schwarz and Kurt Derungs at the jubilee meeting.

The fourth meeting on 26–27 October consisted of a two-day tour of pro/colore's member KEIM-Farben. Participants visited the company's production facility, warehouse, shipping, laboratories, research department and workshops at its headquarters in Diedorf (Germany). Employees of KEIM-Farben demonstrated practical applications of coats of paint and glazes with different mineral products on mural and wooden supports. In the evening, after travelling to Augsburg, participants had the opportunity to visit the historic city centre. After a further lecture presentation 'Vom Wert der Malerarbeit' [On the Value of the Painter's Work] on Saturday morning, a guided tour with professionals was planned. Due to autumn weather conditions, however, the visit focused on the Alte Fuggerei, built in the 16th century by the rich Fugger family and the oldest social housing development complex in Europe.



Painting demonstration at KEIM-Farben



中華色彩學會

Color Association of Taiwan

In 2012 the Color Association of Taiwan concentrated all efforts on preparations for the AIC Interim Meeting Taipei from 23-25 September at Chinese Culture University

(CCU). We were delighted to welcome an international audience of experts, entrepreneurs and friends of the worldwide colour community. Hosting AIC 2012 under the slogan 'In Color We Live – Color and Environment', CAT aimed to provide a most pleasant atmosphere of hospitality, and an inspiring platform for international, professional exchange.



5th General Assembly, Color Association of Taiwan (CAT)

The General Assembly was held on 6 May in the Da-Xin Building of the School of Continuing Education, Chinese Culture University, Taipei City. The keynote speech 'Teaching Color' was given by Prof Robert Chung, School of Print Media, Rochester Institute of Technology, U.S.A.

Congress on Color Education 2012

Following the General Assembly, CAT conducted the Congress on Color Education. Prof Ou Yang-ming, Dept of Photo-Electronics, National Chiao-Tung University, spoke on 'Color Application and Teaching in Engineering'. Prof Tseng Ch'i-hsiung, National Yun-lin University of Technology, then introduced viewpoints on 'Color Application and Teaching in the field of Design'. Finally, Prof Chen I-ping, Dept of Applied Arts at National Chiao-Tung University, addressed the topic of 'Basic Color Education'.



Congress on Digital Multispectral Imaging

On 7 June, CAT invited Prof Jussi Parkkinen (Finland) to speak on 'Development of a multispectral image standard' and spectral imaging applications. A workshop on Digital Book Preservation followed, hosted by Prof James Shyu, CCU.



Workshop on digital book preservation, led by Prof James Shyu.

CAT-AIC 2012 Taipei Special Joint Conference

On 21 September, CAT conducted its 13th International Color Congress on Color Design, Applications and Science as a CAT-AIC 2012 Taipei Special Joint Conference before the official opening of AIC 2012. The Congress took place in the Da-Xiao Arena of Chinese Culture University on the Yang-Ming-Shan main campus and was supported by the Ministry of Education and the National Science Council, Taiwan. Prof Lindsay MacDonald, University College London, spoke on 'The Enigma of White', followed by Verena M Schindler, University of Zurich, Switzerland, sharing her reflections on the 'Theory of Colour: History of Colour Systems'. Lotus Wu of Dulux Taiwan then invited the attendees to participate in her project: 'Let's Color Hwa-Kang – Adding Color to Our Life'.

In the afternoon, Berit Bergström, NCS Colour Academy, Sweden, and AIC President, led the NCS Colour Workshop discussing how to use the NCS colour system to navigate in colour space. Afterwards, Dr Wolf D Karl, Chairman and Managing Director of RAL Colour Systems, Germany, and Prof Axel Venn, University of Applied Sciences and Arts, Hildesheim, Germany, conducted the RAL Colour Workshop on RAL quality assurance systems for products and services offered since 1925.

AIC 2012 Taipei: In Color We Live – Color and Environment

From 22-25 September, CAT hosted the AIC 2012 Interim Meeting at Chinese Culture University, Taipei. Chaired by Prof Tien-Rein Lee, the conference explored colour as an interface of perception, nature, and man-made environments. 262 visitors from 28 countries attended a programme of 164 presentations (45 oral papers, 4 keynote lectures, and 115 poster presentations) out of 244 submitted abstracts, held in twelve thematic tracks and two poster sessions. A full social programme included a visit to the National Palace Museum and a banquet in the spectacular Taipei 101 Tower. For a full report please see page 9.



Prof Tien-Rein Lee, Chair of CAT



In the year 2012, the Colour Group of Thailand has been conducting a joint research project with Chulalongkorn University, entitled 'Images and colours relevant to environmental impact categories'.

The challenge is to understand how these images show the impact we have on the environment and how to take steps to remedy the environmental ills. The research also opens up the ability to track colour trends relating to environmental impact. Visualising these trends can lead, we hope, both to better decisions about colour design and to insight into what people will think of the environment.

Objectives of research

Our objectives are: to classify captured images and colours relating to each environmental impact category through an online web application (www.thaicolorgroup.com/photo); to promote the involvement of Thai people in different disciplines who use mobile devices to capture images; to enhance communication between those applying images to environmental problems; and to disseminate knowledge of colour to end-users within public and private sectors.

Research methods

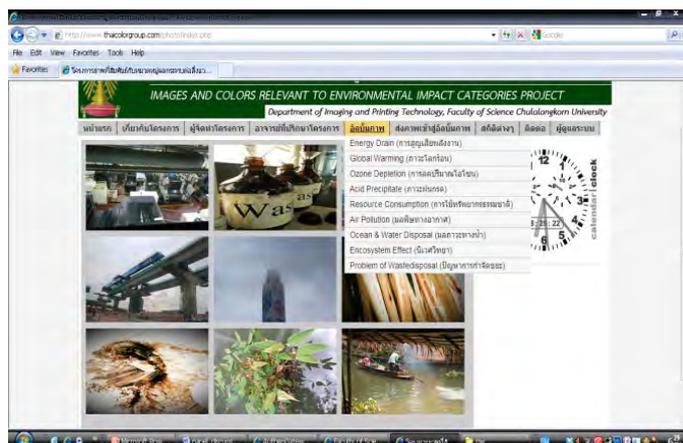
An online survey system through web application was built, both a front-end for people to take the survey, and a back-end administrative panel using an MS-SQL server to record and analyse the responses. The multiple choices relate to nine environmental impact categories: Energy drain, Global warming, Ozone depletion, Acid precipitation, Resource consumption, Air pollution, Ocean and water pollution, Problem of waste disposal, and Ecosystem effect. The website enables people to send their captured photographs and add comments. The five dominant colours of each received image are extracted automatically by Adobe's software *Kuler*, the web-hosted application for generating colour themes. The software can export a colour scheme straight into Adobe *Photoshop* whereby the colour values are identified. Grouping colours together in CIE $L^*a^*b^*$ colour space gives us an overall picture of colour shifts among the environmental impact categories, including their characterisation into hue, lightness and chroma attributes.

Output of the research

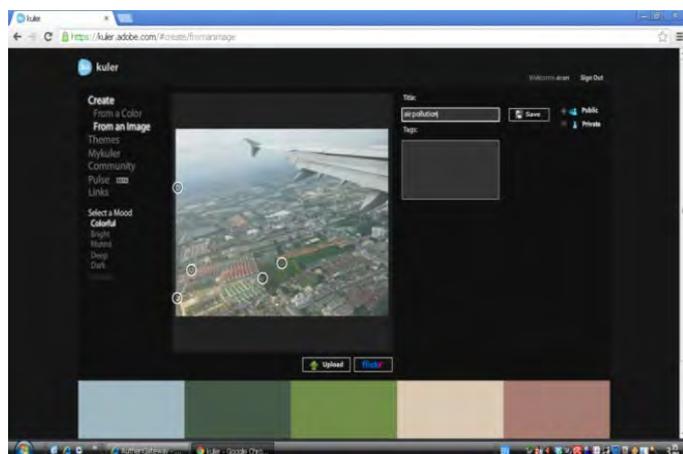
A series of images and colours relevant to the environmental impact categories has been obtained. Visual impact was summarised in terms of the colour image scale. People who have registered on the website or contributed photographs to this research are allowed to log-in and download these images and colours.

Applications

The obtained images and colours can be applied for web designs, digital templates, e-cards and screensavers, advertisements, book covers/pages and CD covers to promote environmental consciousness.



Web page for uploading and annotating images.



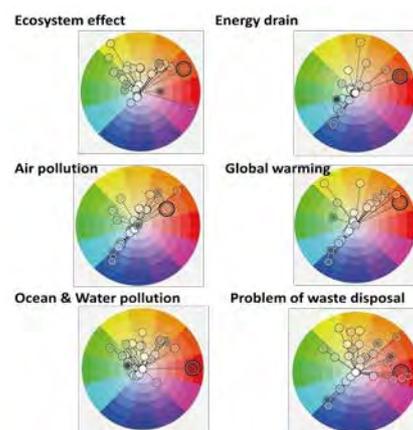
Five dominant colours extracted by Adobe software Kuler.

Asia Color Association (ACA)

The Colour Group of Thailand realises that we need a regional colour association in Asia to organise scientific conferences. This will enable students, young scientists, and young designers to attend, present results of their research, and exchange opinions with people from other countries. It was agreed in May 2012 in Kyoto by representatives from countries in Asia that we establish the Asia Color Association (ACA) to meet the demand and that we will hold the 1st Asian Color Conference in Thailand at Rajamangala University of Technology Thanyaburi during 11–14 December 2013. For more information, please see: www.aca2013.rmutt.ac.th



Colour palettes for environmental impact.



Dominant colours on CIE a^*b^* plane.



The ISCC is the principal professional society in the field of colour in the United States. The Council was founded in 1931 with the goal of advancing the knowledge of colour as it relates to art, science, and industry. There are three classes of ISCC membership: Individual, Member-body, and Sustaining. There are currently nine sustaining members, 17 Member-Bodies, and approximately 200 individual members.

Publications

In 2012, the ISCC News was published six times a year, but as of 2013 it will change to four times a year. ISCC News continues to feature two op-ed columns: Hue Angles (extrapolations from colour themes, edited by Michael Brill), and Mark Fairchild's Metameric Blacks (answers to elementary colour questions). ISCC offers for sale the following technical reports: *Color and Light* by Fred W Billmeyer Jr and Harry K Hammond III; *Demystifying Color* by Robert Chung; *Guide to Material Standards and Their Use in Color Measurement* (ISCC TR-2003-1). The ISCC website also contains a free-access virtual library. Part of this library, Historical Translations, contains Lambert's colour pyramid, König and Dieterici's article on fundamental sensations, Ostwald's researches in colour science, a treatise on pastel painting, Luther's work on colour-stimulus metrics, Runge's colour sphere, and Schrödinger's theory of colours of greatest lightness. Also included is I.H. Godlove's full-length unpublished book, *The Earliest People and their Colors*.

Meetings

The ISCC held a successful Annual Meeting in Manchester, New Hampshire on 16 October, with sessions for education and for its traditional Interest Groups: IG1 (Fundamental and Applied Research), IG2 (Industrial Application of Color), and IG3 (Art, Design and Psychology). To summarise by session:

IG1: Robert Carter described empirical and mathematical constraints on the relation of lightness to luminance, and found that the power law is indeed incredible as a lightness rule. Then John Conant discussed complexities in rendering outdoor versus indoor scenes, and identified physical mechanisms of light scattering. Michael Brill proposed to

replace the chromatic-adaptation step in CIECAM02 by Claudio Oleari's product of general 3x3 matrix transformations that characterise source and destination illuminants. Finally, Hugh Fairman outlined an emergent ASTM method of quantifying instrumental uncertainty for spectrophotometers.

IG2: Tracy Phillips reviewed the 50-year history of the SPE CAD and enumerated some key industry contributors to plastics master batch industry or the SPE Color and Appearance Division. Martin Bide advocated that industries such as textiles and fashion should shift away from oil-based colorants to renewable resources such as synthetic dyes derived from non-fossil feedstock. Awadhoot Shendye outlined metameric issues and the resulting colour differences that can occur when using the Pantone libraries as a colour specification tool.

IG3: Leslie Harrington gave two presentations. The first assessed our readiness to embark on new colour paradigms in design environments. The second outlined how colour in built environments has evolved. The session culminated in a documentary video, *Arc of Light: A Portrait of Anna Campbell Bliss*, celebrating Anna's work in colour, architecture, and mathematics in design (see www.arcoflight.org and pictures below). James Leland reviewed bi-spectral measurement and modelling to characterise fluorescent materials.

Awards

At the 2012 Annual Meeting, the ISCC presented the Nickerson Service Award to Robert R Buckley for his many contributions to the ISCC including Board membership and Presidency. At the 2013 Annual Meeting, the prestigious Godlove Award will go to Joy Turner Luke for her longstanding contributions to colour and science, art and education.

People

The current officers of ISCC are Scot Fernandez (President), Frank O'Donnell (Past President), Ann Laidlaw (Secretary) and Cameron Miller (Treasurer). Due to continuing budgetary vigilance, the ISCC has regretfully decided to discontinue the office-management services of Cynthia Sturke. Starting in January 2013, the ISCC is an all-volunteer organisation.

Upcoming Events

In October, the ISCC will hold its 2013 Annual Meeting jointly with the Detroit Color Council in Detroit, Michigan. Please refer to our website www.iscc.org for a registration form and further information. Also, during the week of 19 June, 2014 the ISCC will hold its Annual Meeting at NIST in Gaithersburg, Maryland, jointly with CIE Division 1 and ASTM E12.



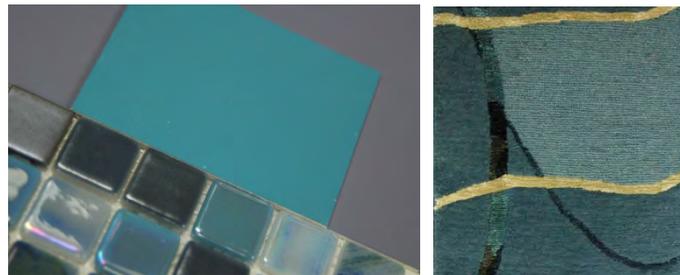
Examples of art works by Anna Campbell Bliss, reprinted from ISCC News #458, July-Aug 2012, p.10: (left) *Light of Grace* (1993) Stained glass window wall; (centre) *Great Color Arc* (1995) Illuminated cast stained glass and aluminium frame; (right) *Passages* (1978-80) Painted chain.

ASSOCIATE MEMBER – IACC-NA



The International Association of Color Consultants/Designers was founded in Hilversum, Holland, in 1957. The founding fathers consisted of approximately 50 architects, designers, educators and scientists from twelve countries. The motivating factor was a shortage of

true professionals and an absence of competent training in the field of colour design. Educational training commenced in 1958 in Salzburg and the establishment of the IACC North American Chapter began in 1991. Additional chapters, under the Federation of Japan, were opened in 2000, 2004 and 2008. IACC Italia was established in 2009.



Coordinating paint, glass tiles and textile rug, created by Barbara Jacobs Color and Design.

Our parent organisation, the IACC, is one of the oldest colour associations in the world and is the only one that accredits architects, interior designers, environmental designers, colour psychologists, marketing specialists and other colour professionals to carry the title of 'IACC-Qualified Color Consultant/Designer'. IACC-NA members are trained through IACC educational seminars that are featured by Munsell Color as one of the top four colour schools worldwide. Seminars may be taken for accreditation or for information only.

Accreditation is achieved by completion of a thesis on colour usage, submitted to Salzburg University for assessment. The IACC-NA is an English language-only group and members worldwide are welcome to join. General meetings are held each year in the spring to review and/or establish new procedures on how to promote effectively the distinguished profession of colour consultant. Members' professions include educators, interior designers, textile designers, environmental designers, architects, artists, residential and commercial colour consultants, paint specialists, graphic art designers, researchers, book authors, and many others.



Colour scheme for Cesar Chavez Middle School, California, courtesy of Kathy Davis Associates.

Members are involved in a myriad of diverse projects from the development of new and exciting patterns in textile to colour systems for a tourist island. The methodology developed by Frank Mahnke is what differentiates the IACC-NA from other methods of studying colour, and gives us the ability to develop new colour concepts, tailored to specific industries. It has been applied to coordinating colour in tiles, paints and rugs, and designing special palettes for boutique paint companies.

In 2012 the main thrust was the construction of a new website www.iaccna.com to enhance our image as colour consultants.



New colour scheme for Bermuda Airport, courtesy of Art Bemis, Bemis Resource Group.

The IACC philosophy is the full integration of the art and science of colour. The IACC goal is to use colour in a more effective way and to create more user-supportive environments through the 'educated' application of colour. IACC's interdisciplinary approach to colour design seeks to create a human-centred balance in the expression of aesthetics, the reality of the psychological and physiological effects of colour, and the presentation of personal taste. As IACC-trained professionals, we exploit both the objective and subjective experiences of colour to their most purposeful advantage to practise environmental design that is not only beautiful but also functional, striving to support the health and well-being of human beings in an architectural space. The IACC colour professional:

- helps a client analyse and realise design goals effectively;
- avoids pre-conceived design notions;
- refrains from subjective personal design opinions.



La Repubblica Restaurant, Balmoral Beach, Sydney, a transformative project by Jacqueline Symond.



Larissa Noury joined the AIC as an individual member in 2011, but she has been attending AIC meetings since 1991, presenting her research on colour in Art, Fashion, Architecture and Urban Design in Moscow, Budapest, Stockholm, Kyoto, Goteborg, Sydney, Mar del Plata, etc. With a PhD in Arts (Bordeaux, 2003)

and Architecture (Saint Petersburg, 1988), she is both an artist and an architect-colourist, and is President of the Couleur-Espace-Culture international association. She is author of two books: *Colour in the City* and *Symbolic: The City in Colours*.

Larissa, originally from Belarus, is an atypical artist who has lived and worked in Paris since 1998. Through both her paintings and her photogravures on tissue, she seeks to create a harmony of tactile light and immaterial colours. Her style is original and inventive. Her work expresses a world born from her high sensitivity: the colour layers are superimposed as strata and give free reign to the imagination. The artistic means employed are at once both unique and universal: a mix of quasi-musical movements, forms and colour harmonies. This alliance characterises all her works, imbued with poetry where love and dreamlike fantasy prevail, reminding us of Monet's impressionism, Chagall's painting by romantic colours or Kandinsky's compositions by improvised movement. She has produced more than 30 one-artist shows and group exhibitions in France, United States, Australia, Spain, Korea, Portugal, China, Malaysia, Cameroon and Russia. Her art graces many private collections and six public museums.



*Between Sky & Earth 1-2-3-4-5-6, Larissa Noury, 2012.
Oil, applied pigments, mixed technique on canvas, 6x40x40 cm.*

As the most original colourist of Montmartre, her artworks embody tactile colours combining freedom with inner strength. They were exhibited around the world during 2012: in January at the French Alliance, Zurich; in March and April in the Arts Centre 'Espace Faubourg', Paris; in May at the French Institute AFSF, San Francisco; in June at the Vietnam Fine Art Museum, Ho Chi Minh City; during June-August at the Citadel of Calvi, Corsica; in September-October at National Ningbo People's Museum, China; and in December at the Montmartre gallery 'ArtEsienne', Paris. She starts 2013 with an exhibition at the internationally famous 'I-Gallery' in Paris.



For her professional projects of environmental colour design (Caen, Low Normandy, Quetigny, Grand Dijon, etc.) Larissa has created polychrome environments corresponding to natural light and geographical specificities including the semantic significance of the historical colour strata. Her strategy of 'ecological colour design' in the city includes indigenous colours and materials, architectural elements and land-scape, urban art and design.

She created a collection of painted dresses with couturier Jean Marie Pujol who was working at the ateliers of Dior and Yves Saint Laurent. She also made a film *Dream of Harmony* which introduces new technology in video-art. The combination of images and music leads to a splendid sense of contemplation: «Music is painting that can be heard, and painting is music you can see.» (Miles Davis)



Larissa has received many important distinctions during recent years: Great Prize of the Union of Architects, Moscow; Grant of the Swedish Institute, Stockholm; Grand Prize of the George Soros Foundation, USA. These were surpassed in June 2012 when she was awarded the silver medal as a colourist, artist and author by the French Academic Society 'Arts-Sciences-Lettres', which was founded in 1915 in Paris. Each year this Academic Society gives prizes to those who, by their skill and creative design, make a special contribution to the development of the sciences, arts and literature.



Award ceremony for the silver medal of Arts-Sciences-Lettres.

CIMET CONSORTIUM



Color in Informatics and Media Technology (CIMET) is an international higher education consortium placing colour at the centre of scientific studies and research. In 2008 the CIMET project became reality through the European Erasmus Mundus Programme, which was designed to promote the EU as a global 'centre of excellence' in learning. After years of hard work between the four partners (University Jean Monnet, France, University of Granada, Spain, University of Eastern Finland and Gjøvik University College, Norway) CIMET obtained its label and the colour experience started for the first cohort of students.

Other specialised paths and initiatives have since been created (Franco-Norwegian Master in 3D Multimedia Technology, Franco-Spanish ImOptics path). The consortium has also been enlarged with the addition of new associate partners:



Toyohashi University of Technology, Japan; Monash University Sunway Campus, Malaysia; Institute of Technology Bandung, Indonesia; and the company Chromasens based in Germany.

The CIMET Master course was designed to address industrial needs and challenges in the fields of photonics and optical technologies, digital imaging and computer vision, computer science and media technologies. The colour element in these fields has an important place and is becoming increasingly important. CIMET training is highly relevant to a wide range of industry sectors (for example lighting, lasers, displays, cameras, printing), and to all research and development activities involving computer science.



CIMET students and academics at IPCV, July 2012, Koblenz.

Since 2008, CIMET has trained a total of 111 students from 36 different countries and invited 27 Erasmus Mundus scholars to participate in CIMET teaching and research activities. After graduation, alumni are either continuing on to study at doctoral level (2/3 approximate ratio) or working (1/3 approximate ratio) in specialist laboratories and companies in Europe and beyond. Over the years, the multitude of CIMET trained graduates originating from all around the world, alongside the academic specialists involved in the programme, have contributed to the creation of an incredible volume of specialist knowledge, research projects and the development of new international interactions and networks.

CIMET students, alumni and academics have actively participated with articles, papers, presentations and posters in many international conferences and events, such as:

- European Conf. on Computer Vision (ECCV), October 2012 in Firenze, Italy, where seven alumni had papers accepted.
- 20th Color and Imaging Conf. (CIC) in November 2012 in Los Angeles, California, where several members attended.
- 8th edition of the Intensive Program in Computer Vision (IPCV), organised in 2012 at Koblenz, Germany.
- COSCH 'Colour and Space in Cultural Heritage' project coordinated by Institut für Raumbezogene, Mainz, Germany.
- 6th European Conf. on Color in Graphics, Imaging and Vision (CGIV) in Amsterdam, Netherlands in May 2012, five papers.
- IS&T/SPIE Electronic Imaging Conference, January 2012, San Francisco, USA where three CIMET alumni presented papers.
- Raju Shrestha, former CIMET student, was invited to give a talk on his work at a workshop in Stanford University.
- Electronic Imaging (EI), January 2011, San Francisco, USA, where five CIMET alumni presented a paper.
- 25th Intl. Conf. of Image and Vision Computing (IVCNZ and ACCV), November 2011, New Zealand, 2 papers presented.
- European Signal Processing Conf. (EUSIPCO), August 2010, Aalborg, Denmark, one CIMET student presented a paper.
- Digital Image Computing Techniques and Applications (DICTA) December 2010, Sydney, Australia, a paper.
- Color and Imaging Conf. (CIC) November 2010, San Antonio, Texas, where a CIMET student presented a paper.
- Colour Research for European Advanced Technology Employment (CREATE), June 2010, Gjøvik, Norway.
- European Workshop on Visual Information Processing (EUVIP) July 2010, Paris, France, CIMET students attended.
- 5th European Conf. on Colour in Graphics, Imaging and Vision (CGIV) June 2010, Joensuu, Finland, many students attended.

CIMET 'family members' are contributing more and more to the world of Computer Vision. This was evident at ECCV 2012 (one of the main conferences in the field of Computer Vision), 7–13 October, Firenze, Italy, where 7 CIMET alumni gave papers. The varied topics included: Aesthetic Measures Applied to Color Photographs of Artworks, and Natural Scenes; Text Recognition for Object Recognition; Frequent Item Mining for Image Classification; Base Materials for Photometric Stereo; Lighting Estimation in Indoor Environments from Low-Quality Images; Reclamation of Lost Art; Evaluation of Digital Inpainting Quality; and Depth Features Fusion for 3D Structure Estimation in Urban Environments.



Students in the 4th cohort 2011-13

Contact: master.cimet@univ-st-etienne.fr
Information: www.master-erasmusmundus-color.eu

SG-CE members around the world were very active in 2012. Here are some examples of their many and varied activities in colour education.

Students of Urban Morphology, at the Faculty of Architecture, Planning and Design at the National University of Córdoba, Argentina, are developing intellectual strategies for understanding and design of urban form, where colour is a defining feature in the image of the city. The Natural Colour System (NCS) is used as a tool for specifying colour. In these practices students recognise different colour arrangements and verify their performance in urban perceptual space definition, inducing them to think in terms of coloured space, and rethinking the geometries that give rise to form.



Students working with NCS during the Morphology III Workshop (Courtesy Adriana Incatasciato, FAUD, UNC, Argentina).

The NCS Colour Academy in Sweden initiated in 2012 the first activities to implement a complete global colour education programme. As presented at AIC in Taiwan, the objective is to offer high-level colour education worldwide, which will eventually lead to a number of different Colour Titles. As an initial step in China the Colour Academy launched the first of these colour courses in collaboration with Tongji University in Shanghai. In 2013 the focus will be on Scandinavia, Germany and China, but other regions such as Middle East and America will also be addressed.



Berit Bergström, President of AIC, Director of the NCS Colour Academy, with students of the first course of the global colour education programme, at Tongji University, Shanghai, China.

The Laboratorio Colore of Politecnico di Milano launched in 2012 a new programme of short-term colour courses with the title *Let's Colour*. These are intended for professionals coming from design, architecture, engineering and production fields, interested in studying aspects related to the design of colour components, and are orientated to practice and application. The programme offers four training days:



- Basic Colour. Understanding and communicating colour.
- Tools to manage the colour components in a project.
- Colours, finishes and decorative effects for interiors.
- Colour in healthcare environments.

Given the success and interest in these themes and approach to colour education for professionals, *Let's Colour* will continue in 2013 with five training days, and a new workshop will be offered about 'Colour in urban spaces'.

Valentina Vezzani helping students with exercises of Itten's colour circle and simultaneous contrast.



Renata Pompas (Italian expert in colour and textile design) and Lia Luzzatto (Italian expert in colour and communication) gave a training course on 'The importance of the study of colour' at the CSIA – Centro Scolastico per le Industrie Artistiche (Lugano, Switzerland). They presented a range of colour topics from physical and physiological aspects, to nature and humanity; from colour emotions to synaesthesia; from colour naming to its mathematical formalisation. The workshop was enlivened with many animations, exercises and interactive dialogues (see picture on page 21).

The AIC Study Group on Colour Education currently has 79 members from 32 countries, but many important institutions and high-level professionals involved in colour education are still not participating. Membership in the Study Group is open to anyone interested, and we are continuing a campaign to recruit colour education professionals from around the world. If you are not yet a member, but would like to participate in our work, please email the SG Chair.

SG CHAIR: Robert Hirschler
 Attila u 93-95, 1039 Budapest
 HUNGARY
 T: +36 1 240 1094
robert.hirschler@yahoo.com
www.aic-colour.org/sgroups.htm



AIC STUDY GROUP ON ENVIRONMENTAL COLOUR DESIGN (ECD)



Everyone who participated in the AIC 2012 Interim Meeting in Taipei experienced the most wonderful time at the Chinese Culture University

(CCU) where we could enjoy an amazing view over the city, valley and surrounding mountains. Two contributions to the pre-conference workshop on colour planning and fifty-seven papers by SG ECD members were presented at AIC 2012, under the theme 'In Color We Live: Color and Environment'.

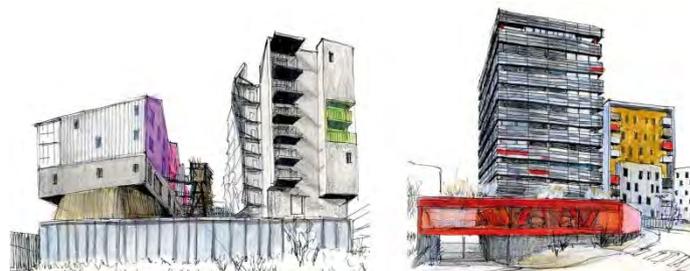
SG ECD Meeting at AIC 2012

Some thirty people attended the SG meeting on 23 September including SG ECD members: José Luis CAIVANO, María Luisa MUSSO, José Domingo SANDOVAL (Argentina); Leonhard OBERASCHER (Austria); Doreen BALABANOFF, Brian FUNT (Canada); Harald ARNKIL (Finland); Klaus RICHTER (Germany); Osvaldo DA POS, Renata POMPAS, Pietro ZENNARO (Italy); Takayuki KUMAZAWA, Mahshid BANIANI (Japan); Gyoung-sil CHOI (Korea); Barbara MATUSIAK (Norway); Veronica CONTE (Portugal); Jaume PUJOL (Spain); Karin FRIDELL ANTER, Ulf KLARÉN (Sweden); Verena M. SCHINDLER (Switzerland); Monica KUO, Yen-Ching TSENG and CHANG Hwei-Lan (Taiwan). Further participants included Andrew LAI (USA) and Hyensou PAK (KOREA). Ten new members from nine different countries were acknowledged in Taipei: Anne PETIT, Benjamin GOFFETTE (France); Sari YAMAMOTO (Japan); Juyeon KIM (Korea); Yulia GRIBER (Russia); Kine ANGELO (Norway); Gertrud OLSSON (Sweden); Yi-Hsuan TU (Taiwan); Sara RAKEI (Turkey); and Esther HAGENLOCHER (USA).

Spotlight presentations were given by Monica Kuo, Veronica Conte and José Luis Caivano and the Chair further discussed other contributions from last year's AIC conference in Zurich. Osvaldo da Pos provided the two volumes of the AIC 1983 Proceedings as digital files. On the occasion of the celebration of the 30th anniversary of the SG ECD in 2012, the Chair published a partial summary of SG ECD members' papers from AIC Proceedings over the period 2002–2011.



SG ECD Chair with member Yen-Ching Tseng (Taiwan)



Anne Petit (France): (above) Coloured sequences and associated chromatic patterns; (below) Cartography, L'île de Nantes, July 2012.



New books by SG ECD members

- ARNKIL, Harald (Ed). 2012. *Colour and Light. Concepts and Confusions*. Helsinki: Aalto University School of Art Design and Architecture, Department of Art.
- BELMONTE, Pilar. 2012. *Ver el color/Seeing color*.
- CAIVANO, José Luis and María del Pilar BUERO (Eds.). 2012. *Color in Food. Technological and Psychophysical Aspects*. Boca Raton, Florida, USA: CRC Press, Taylor & Francis.
- DELONG, Marilyn and Barbara MARTINSON (Eds.). 2012. *Color and Design. An Anthology*. New York: Berg.
- FAIRCHILD, Mark D (author) and Manuel MELGOSA LATORRE (translation). 2012. *La tienda de curiosidades sobre el color*. Granada: Editorial Universidad De Granada.
- MCLACHLAN, Fiona. 2012. *Architectural Colour in the Professional Palette*. Abingdon: Routledge.
- MOLLARD-DESFOUR, Annie and Laurence PAULIAC. 2012. *Couleurs sensibles*. Primaires, No. 173. Paris: Centre Français de la Couleur.
- RICHTER, Klaus. 2012. *Colour, Colour Vision, and Elementary Colours in Colour Image Technology/Farbe, Farbsehen und Elementarfarben in der Farbbildtechnologie*. Berlin.
- RONCHI, Lucia. 2012. *On the Interacting Visual and Non-Visual Effects*. Florence: Fondazione 'Giorgio Ronchi' CXIII.
- WURMFELD, Sanford. 2012. *Farbe/Color*. In: *Jakob Bill — Eine Retrospektive/Jakob Bill—A Retrospective*. Museum Haus Konstruktiv Zurich. Heidelberg and Berlin: Kehrer.
- ZENNARO, Pietro (Ed). 2012. *Chromoland. Architectural Color and Light Design*. Verona: Knemesi.

SG CHAIR: Verena M Schindler
 Atelier Cler Études Chromatiques
 64, rue Vergniaud
 75013 Paris, FRANCE
 T: +33 1 45 80 91 15
ecd.studygroup@yahoo.com
www.aic-colour.org/sgroups.htm



AIC STUDY GROUP ON COLOUR VISION AND PSYCHOPHYSICS (CVP)

The purpose of this Study Group was originally 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, and to share useful information among the members concerning colour perception of the elderly. At the SG meeting in AIC2012, however, we decided that we would change the SG's name to 'Colour Vision and Psychophysics' to expand our domain. From 2013, therefore, we will deal with a broader range of topics from colour vision models to universal colour design, while still including colour perception of the elderly.

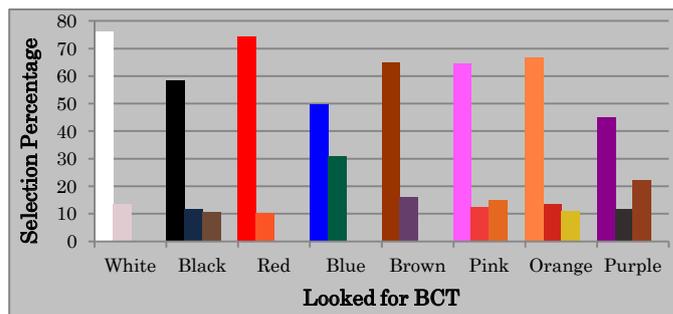
Activities in 2012

1. The number of SG members rose to 72 from 16 countries.
2. A symposium is planned at AIC2014 and/or AIC2015.
3. The SG homepage is at: www.okajima-lab.ynu.ac.jp/CPESG
4. SG members published/presented some relevant papers.

Okajima *et al* published 'Intelligent Support Tool with Dynamic Image Processing for Color Universal Design' (*J Color Science Assoc of Japan*). To support designers, they proposed a new system in which visual-modification can be conducted automatically, based on several visual characteristics. The system detects low-visibility regions in images via clusters given by a *k*-means algorithm. Generally, the decrease of perceived luminance is caused by aging, where low brightness regions in images can become indistinguishable from others. Since the colour gamut of people with colour vision deficiencies is also reduced, specific colour combinations may be difficult to distinguish. Comparing colour differences between clusters in the original and simulated images, the system can detect low-visibility regions that should be compensated. The sign image recoloured by the proposed algorithm (below) has more visibility than the original for both the elderly and dichromats.

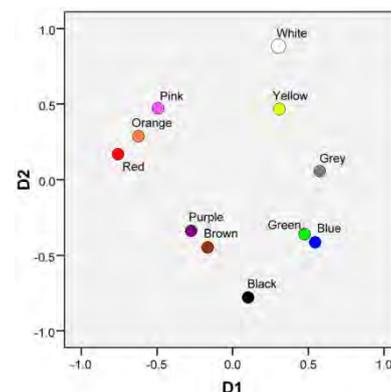


An example of colour transformation for the elderly and dichromats.



Percentage of right and wrong responses in the mapping search task.

Another research group (Lillo *et al*) published 'Basic Color terms use by aged observers' (normal and tritanomalous according clinical standards), *Spanish J Psych*, with results of two visual search tasks: a mapping task required observers to select every stimulus that could be included in a specific basic colour term (BCT); a best representative task required observers to select the stimulus that most accurately identified a BCT. The figure above shows the BCTs usually given for naming the stimuli pointed to by the elderly tritanomalous observers when looking for examples. MDS analysis showed important differences between the three groups of participants (normal young, normal elderly, tritanomalous elderly). The yellow-blue dimension was less prominent for normal elderly group than for the normal young. Such a yellow-blue dimension did not appear at all for the tritanomalous elderly group. The figure (right) shows that the tritanomalous group required only two dimensions: one chromatic and one achromatic. The eleven BCTs can be represented in the 2D plane provided by MDS analysis, with dimensions D1 (red-cyan) and D2 (black-white).



SG CHAIR: Dr Katsunori Okajima
Dept of Env't and Information Sciences
Yokohama National University
79-7 Tokiwadai, Hodogaya, Yokohama
240-8501 JAPAN
okajima@ynu.ac.jp



SG Secretary: Prof Manuel Melgosa
Facultad de Ciencias
Universidad de Granada
E-18071 Granada
SPAIN
mmelgosa@ugr.es



AIC STUDY GROUP ON THE LANGUAGE OF COLOUR (LC)



The purpose of this AIC Study Group on the Language of Colour (LC) is to discuss and share information on studies regarding linguistics, semiotics and cognitive science. Key topics are colour naming, categorisation, colour synaesthesia, and semantics of colour grammar and syntax.

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men to say “purple”; and (c) Women on average respond 20% faster than men in naming colours. SG-LC members are encouraged to do the experiment at www.colournaming.com

4) Paul Green-Armytage proposed a project for ‘Alternative Definitions for Terms Relating to Colour’. The intention was not to establish a set of ‘official’ AIC definitions, but to compile a collection of definitions, as used in practice by workers in different disciplines. To carry out the project, the AIC Wiki-workspace might be used. In the ensuing discussion, various comments were made on this proposal. Simply listing or collecting definitions is not useful. There should be additional comments from others or observations about how many people from particular domains actually use the definitions. Overall, Paul’s original proposal did not get enough support from the members. The AIC Wiki-workspace already has a page named ‘Annotated terms’. The SG members could add terms and definitions on this page. All attendees agreed.

5) Organising contributed data. To help search the contributed data, we need to introduce an index and keywords that appropriately describe the contents. It would be best to let the authors themselves suggest the keywords relevant to their contributions.

6) A survey to produce possible projects and experiments for future activities. A few people filled in the form, but there were no notable opinions.

Further discussion on the Language of Colour will be held during the study group session at the AIC 2013 Congress in Newcastle, based on a selection of relevant papers presented by LC members.

SG CHAIR: Prof Dr Jin Sook Lee
 Chung Nam National University
 Dept of Architectural Engineering 220
 Kung-Dong, Yusong-Gu 305-764
 Taejon
 KOREA
 T: +82 42 821 6573
 F: +82 42 821 8739
js_lee@cnu.ac.kr



SG CO-CHAIR: Dr 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



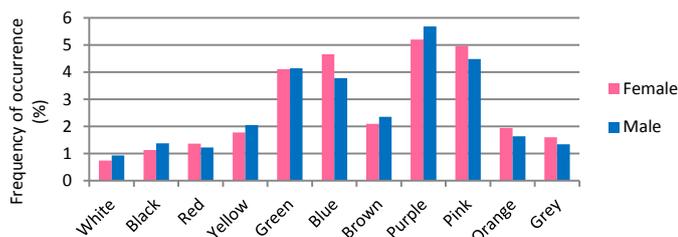
Meeting of SG-LC during AIC2012 in Taipei

Meeting in Taipei

At the meeting of the LC Study Group at AIC 2012 Taipei 18 members from six countries attended: Jinsook Lee (Korea), Osvaldo Dapos (Italy), Lindsay MacDonald (UK), Nick Harkness (Australia), Keiko Miyazaki (Japan), Hirohisa Yaguchi (Japan), Valérie Bonnardel (UK), Changsoon Kim (Korea), Yunah Cho (Korea), Wonjung Choi (Korea), Jinhee Park (Korea), Hyemi Lee (Korea), Misun Lee (Korea), Soyeon Kim (Korea), Hanna Kim (Korea), Jiyoung Park (Korea), Jiseon Ryu (Korea) and one man from Thailand.

Activities

- 1) At present SG-LC has 87 members from 17 countries.
- 2) The Chair is currently sending membership invitations by email to the authors of theses related to the LC study field presented at the AIC meetings over the last 2 years.
- 3) A presentation was given on the ‘online colour naming experiment’ by Lindsay MacDonald. This research project, led by Dimitris Mylonas over the past six years, has gathered colour names from over 5,000 respondents in 11 languages: English, Greek, Spanish, Catalan, German, Danish, French, Italian, Chinese, Mandarin and Korean.



Frequency of occurrence of basic colour terms: female vs male.

In a recent analysis of the responses in the English language it was found that: (a) Women use more words than men to describe colour; (b) Women are more likely to say “blue”, and



The Terms of Reference of CIE Division 1 are: 'To study visual responses to light and to establish standards of response functions, models and procedures of specification relevant to photometry, colorimetry, colour rendering, visual performance and visual assessment of light and lighting.' An Activity Report giving details of the membership and current activities of the various Technical Committees in Division 1 can be downloaded from: <http://div1.cie.co.at/>.

During the past year CIE Division 1 has developed a strategy for the future which can be summarised as follows:

- To implement smoothly a new Code of Procedure to make each Technical Committee and Reporter more productive in a controlled time-frame.
- To continue to develop aspects of traditional colorimetry:
 - new colour matching functions to extend to different age observers and viewing fields;
 - new uniform colour space to improve on CIELAB, CIELUV;
 - a colour appearance model more comprehensive than CIECAM02.
- To go beyond colour topics to include appearance aspects:
 - gloss, texture, translucency;
 - colour emotion and harmony;
 - methods of linking colour science with colour design.
- To bring theory into practice, for example:
 - to study visual performance in real world situations, for example lighting in indoor and outdoor conditions;
 - to allow development of practical tools in real applications;
 - to develop an appearance model for lighting.

2012 Meetings

CIE Division 1 held its annual meeting in Taipei on Wednesday, Thursday and Friday, 26–28 September: this followed the very successful AIC2012 interim meeting. Included was a Colour Science Symposium attended by nearly 100 industrialists and students. The location was the International Building of the National Taiwan University of Science and Technology. Five Technical Committees held meetings as well as the full Division 1 meeting. As always at these events, there was time for networking to meet old friends, and make new ones too, as well as a social programme with an event each evening.



CIE Division 1 in session at National Taiwan University, Taipei.



Location of Evening Tour – The Color Imaging Illumination Center of the National Taiwan University of Science and Technology.

Also in 2012 a symposium 'Predicting Perception' was held at Heriot Watt University, Edinburgh, UK, on 17-19 April, chaired by Mike Chantler (Heriot Watt), Mike Pointer (University of Leeds) and Julie Harris (University of St Andrews). This event was organised as a continuation of the work programme of TC1-72 Measurement of Appearance Network: MAPNet.

New Publication

The only publication from CIE Division 1 during the past year was CIE S014-6/E:2012 Colorimetry – Part 6: CIEDE2000 Colour-difference Formula. This CIE Standard document will now progress to become an ISO Standard.

New Work Items

Several new Technical Committees were recommended. TC1-88 Scene Brightness Evaluation will investigate current research on brightness estimation and recommend a method to predict the brightness of specified regions of a scene from a luminance image of that scene. TC1-89 Enhancement of Images for Colour Defective Observers will study, evaluate and recommend image enhancement techniques for colour defective observers. TCs 1-90 and 1-91 will assess the colour rendering capabilities of solid state light sources, in particular light-emitting diodes (LEDs). TC1-90 Colour Fidelity Index is to evaluate available indices based on colour fidelity for assessing the colour quality of white-light sources with a goal of recommending a single colour fidelity index for industrial use. TC1-91 New Methods for Evaluating the Colour Quality of White-Light Sources will investigate new methods for evaluating the colour quality of white-light sources with a goal of recommending methods for industrial use. In addition, a Reporter was appointed to liaise with ISO TC130 Graphic Technology on matters concerned with colorimetric calculations.

Next Meeting

The next meeting of CIE D1 will be at the University of Leeds, United Kingdom, on July 5–6 2013. It is planned that a symposium will be held on the previous day, Thursday 4 July. These meetings will take place immediately prior to the AIC2013 Congress.

– Dr Mike Pointer, Secretary of CIE Division 1

AIC 2013 CONGRESS – NEWCASTLE, UK

8 – 12 July 2013

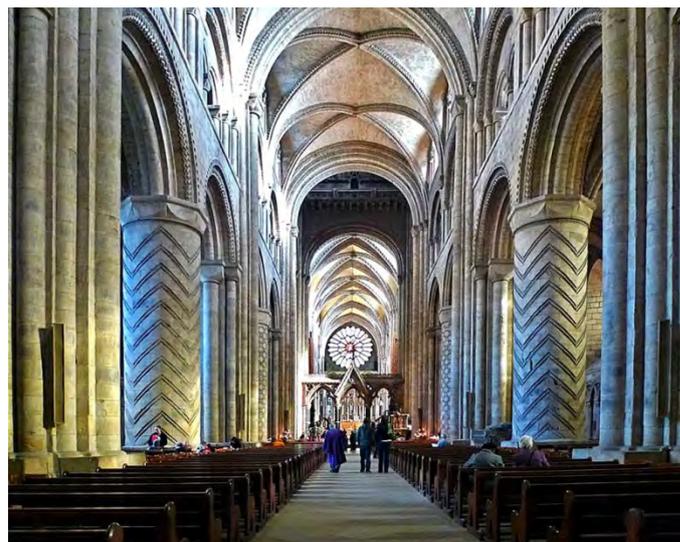
The Colour Group (Great Britain) is proud to be the host society for the 12th quadrennial Congress of the International Colour Association (AIC). The Colour Group, through the vision of Prof W.D. Wright, was closely involved in the foundation of the AIC in 1969 and hosted the 2nd Congress in York in 1973 and also an interim meeting in Cambridge in 1995. So it is an honour to be hosting an AIC Congress again in the UK.



In response to the Call for Papers we received over 600 submissions from authors in 59 countries. These were reviewed by the International Technical Programme Committee, consisting of 150 experts representing all disciplines of colour. The conference programme contains over 140 oral papers in three parallel sessions throughout the week, plus over 400 posters and nine Special Symposia:

- 1) Lighting: New Technologies and Colour Rendering
- 2) Colour in Fashion and Textile Design
- 3) Environmental Colour Design
- 4) Multispectral Colour Science
- 5) Colour Vision: Perception and Neuroscience
- 6) Museum Lighting: Conservation and Appearance
- 7) Colour Harmony: From Perception to Built Environment
- 8) Sustainable Coloration
- 9) Colour Aesthetics

Keynote speakers include Andrew Parker (Oxford), Fiona Jenvey (MudPie), Hilary Dalke (Kingston), Stephen Palmer (Berkeley) and John McCann (USA). Roy Berns (RIT) will receive the AIC Judd Award. This Congress will provide a unique colour forum for researchers and practitioners across all fields of colour, including architecture, engineering, art, media, design, printing, computer science, psychology, lighting, textiles and fashion. We anticipate more than 600 delegates from all over the world, with a stimulating mix of all the best in contemporary colour. Other features throughout the week will include the display of artwork contributed by delegates, printed on large 'pop-up' banners, and an exhibition of commercial colour products and services.



The nave of Durham Cathedral, looking towards the altar

The spectacular venue will be The Sage Gateshead, designed by Lord Norman Foster and located on the south bank of the River Tyne, overlooking the city of Newcastle. Nearby are the Millennium Bridge and the Baltic Mill gallery of contemporary art. A full afternoon will be devoted to an excursion to Durham Cathedral, a World Heritage site, with an opportunity to see the famous Lindisfarne Gospels. Special events will include a gala reception and exhibition of colour artworks by international artists in the Hatton Gallery, and an orchestral concert themed on colour-music synaesthesia performed in the Sage by the renowned Northern Sinfonia, with a specially commissioned light show using newly developed technology.



The breath-taking scenery of the parkland around Alnwick Castle

The Congress banquet will be held in the gardens of Alnwick Castle, followed by a traditional ceilidh. The glorious rolling countryside of Northumberland provides many opportunities for visiting nearby sites such as the Angel of the North, Bamburgh Castle, Hadrian's Wall and Lindisfarne Priory. A special social programme will be organised for accompanying persons. This will be a Congress to savour and to remember! For more information, please visit the Congress website at www.aic2013.org



– Lindsay MacDonald and Stephen Westland
AIC2013 Congress Co-Chairs



The Sage Gateshead, on the bank of the River Tyne

21 – 24 October 2014

The Asociación Mexicana de Investigadores del Color, AMEXINC is the association that brings together professionals in Mexico who study, work and are passionate for the subject of colour. It was legally constituted as a Non-Profit Civil Association on 11 May 2005 in Mexico, Distrito Federal and in 2007 it became a member of the AIC.

One of the objectives of AMEXINC was to hold a meeting every three years to reunite scholars of colour in order to release their investigations and advances in the field. To achieve this objective, we have organised two Meetings, both in Mexico City. The first was in September 2009 with the theme 'Culture, Research and Praxis' and the second in October 2012, with the subject 'Art, Design and Space'.

A new opportunity to share colour studies is now open in Mexico. AMEXINC invites colour specialists to contribute their knowledge and experiences in the AIC2014 Interim Meeting, combined with the 3rd Mexican Color Meeting in the magical city of Oaxaca, in the hotel Misión de los Ángeles, 21–24 October 2014. See www.aic2014.org

The theme 'Color and Culture' is highly relevant to today's world because colour generates a series of symbolisms that promote a better understanding of the cultural environment. These expressive manifestations go beyond the normal socio-economic-political framework. Culture provides a way of interpreting the world which has produced countless knowledge through time by diverse human groups with their own characteristics. Culture has enabled people to build an identity with objective and subjective aspects: production and consumption patterns, ecological characteristics of societies (objective); and ideas, values, perceptions (subjective). In all of these colour plays an important part, and has inspired worldwide researches to analyse the relationships between colour and both objective and subjective elements.

Therefore it is important to know how culture influences the use, applications, myths and beliefs in the identity, nationality languages and symbolism of colour for the members of each culture, as well as the reinterpretation of colour over time: what were the pigments used in ancient eras and their meanings? where do the folkloric manifestations in which colour is important come from? are there global colours with the same meanings? how does colour technology modify social behaviours? We invite contributions in the areas of:

- Folklore expressions about colour
- History of colour
- Archaeology studies about ancient pigments
- Colour as an identity mean
- Natural dyes applications in regional communities
- Visual semiotics and psychology
- Cultural heritage and restoration studies
- Global colour marketing in local cultures
- Colour technology influence in culture
- Arts, popular arts and crafts



Guelaguetza traditional celebration.



Restoration of old textile.



People make art and crafts according to beliefs. Mexico invites the entire world to this conference to share knowledge and experiences in psychology, sociology, history, anthropology, restoration, natural pigments, design, art and all disciplines to understand the relationship between colours, local/global culture and identity.

Demographically, Oaxaca stands out because of its high percentage of indigenous peoples, accounting for 53% of Mexico's total native language speaking population. These traditions and the abundance of raw materials make Oaxaca a leading producer of handcrafts, including wood, wool, leather, clay and pottery. Another major craft is textiles, with embroidery an important part of native clothing.



Oaxaca has good transport links. Federal highway 135 leads from Puebla to Oaxaca City. Frequent buses depart from Mexico City to Oaxaca City. Oaxaca-Xoxocotlan Airport (IATA code OAX) is approximately 7 km (4.3 mi) south of Oaxaca city centre. At that season in Mexico it will be autumn, with a pleasant temperature range from 56 to 78 °F (13 to 26 °C).

AIC 2015 – TOKYO, JAPAN

19 – 22 May 2015

The Color Science Association of Japan (CSAJ) is pleased to invite you to Tokyo for the Midterm Meeting of the AIC. In 1997, we held the 8th AIC Congress in Kyoto, the historical capital of Japan. Many of you might have a good memory of that event. Eighteen years have passed since then, and we would like invite you next time in 2015 to Tokyo, the exciting modern capital of Japan.



The theme will be 'Color and Image'. The word 'image' has a very wide meaning: not only a visible presentation, such as in imaging devices, displays, pictures and so on, but also a visual representation of anything in the mind. So for this meeting any topics related to colour should be correlated to image. All the following fields and topics will be welcome at AIC2015:

- Colour Science
- Computational Colour Image
- Colour Imaging and Video Processing
- Colour in Computer Graphics
- Colour Reproduction
- Colour Image Quality
- Multispectral Image Science
- Colorimetric Imaging
- Digital Archiving of Art
- Colour Vision / Psychophysics / Physiology
- Perception of Material / Surface Quality
- Colour Image Design
- Colour Environmental Design
- Colour, Image and KANSEI
- Visual Colour Communications

This meeting will provide a forum for presentation and discussion, bringing together researchers, academics, students, artists, architects, industrialists, engineers, designers, computer scientists, lighting experts, media types, exhibitors and business leaders. We anticipate that more than 300 delegates will come from all over the world.



The 634 metre tall Tokyo Sky Tree and Mt. Fuji

The venue will be one of the International Conference Centres in downtown Tokyo. You can easily access Tokyo from two International Airports: Narita Airport, which handles the majority of international flights, is located 60 km north of central Tokyo, while Haneda Airport is located more centrally. Today, the city offers to visitors a seemingly unlimited choice of shopping, entertainment, culture and dining.



Imperial Palace, main residence of the Imperial Family

Tokyo's history can be appreciated in districts such as Asakusa, and in many excellent museums, historic temples and gardens. Contrary to common perception, Tokyo also has a number of attractive green spaces in the city centre and within relatively short train rides at its outskirts.

May is the best month to visit Tokyo as the vegetation has become lush, the temperatures are still comfortable and tourist spots tend to be pleasantly uncrowded. Before, during and after the Meeting, you will enjoy an exciting city Tokyo. More updated information is available at www.aic2015.org

– Prof Hirohisa Yaguchi, Chair, AIC2015 Organising Committee



Akihabara, district for electronic and otaku goods.

18 – 22 October 2016



On behalf of the Chilean Color Association (ACC, Asociación Chilena del Color), we are delighted to invite you to participate in the AIC2016 Interim Meeting in Santiago, Chile. The conference theme will be: ‘Colour in urban life: images, objects, spaces’. This theme is of worldwide interest, since the urban space in modern cities covers three scales (home, common spaces and public space), and in all of them there’s a multiplicity of images and objects that encourage different choices of colour, according to their different uses:

- Images and objects at home: colour preferences are configured to personalise spaces or uses.
- Images and objects in common spaces: the colour choices usually correspond to the identity of the specific group that uses the space, and also to the different nature of activities performed in it.
- Images and objects in public space: it is essential to apply efficient and objective colour decisions, considering colour as a powerful communication tool for the understanding of the city.

The colours of images, objects and space fill our lives. They configure these three scales, affecting the welfare of people who inhabit cities and become a powerful communication tool and also a source of aesthetic pleasure. Thus the aim of the AIC2016 Interim Meeting is to share experiences regarding the use of colour in images, objects and space, from different perspectives and disciplines, to contribute to a better usability and also a better quality of life in our cities.



Santiago de Chile – at the foothills of the Andes

Santiago is Chile’s capital city. The imposing Andes Mountains rise majestically around it, with their snow-capped summits and hills sloping down to the very heart of the city. Its setting in the centre of a fertile valley and pleasant Mediterranean climate make it modern and lively all year round. Santiago is the country’s political, economic and cultural centre, in addition to being one of South America’s main financial hubs, where tourists may enjoy beautiful beaches and picturesque resort towns. Only one hour away there are several ski resorts with spectacular views.



The avant-garde architectural lines of the modern constructions that make up the business district blend in full harmony with turn-of-the-century buildings, such as ‘Palacio de La Moneda’ (Government House), and the Civic Center. This blend of modernity and tradition has given Santiago – Chile’s gateway city – its distinctive seal as a secure and clean cosmopolitan city that is open to welcome its visitors. For those who love amusement, culture, entertainment, shopping and much more, Santiago offers all these alternatives along with the necessary infrastructure to spend some unforgettable days.



Santiago has fine international-level hotels and convention centres, a wide variety of restaurants offering a vast and diverse gastronomy, and a lively nightlife. Its privileged climate makes the valleys surrounding the city, such as the Maipo, excellent grounds for the production of the famed Chilean wine. Amazing features that, together with the hospitality and professionalism of its people, make Santiago the perfect city to host AIC2016.



El Perseguidor, Club de Jazz en Santiago de Chile

Please visit our website at www.aic2016.org for further information. We hope you will take this opportunity to share your colour knowledge and experience. See you in Chile!

– Paz Cox, Ingrid Calvo, Maria Rosa Domper
Organising Committee of AIC2016



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