

**ASSOCIATION
INTERNATIONALE
DE LA COULEUR**

**INTERNATIONALE
VEREINIGUNG
FÜR DIE FARBE**

**INTERNATIONAL
COLOUR
ASSOCIATION**

NEWSLETTER

2005

NO. 19

EDITED BY

Paul Green-Armytage

Department of Design
Curtin University of Technology
GPO Box U 1987
Perth 6845
Western Australia



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EDITOR'S NOTE

Circumstances that delayed publication of last year's Newsletter have overflowed into 2005. As a result, this edition contains reports of activities within member organizations during 2004 but there are also reports that refer to events of 2005. This applies especially to President Paula Alessi's report in which she quotes from the closing speech she gave at the AIC Congress in Granada earlier this year. Paula's speech conveys very well how rewarding the Congress was for those who attended. I have included a page of photographs which I hope will complement Paula's words.

This Newsletter celebrates the presentation to John Hutchings of the AIC Deane B. Judd Award for 2005 when I had the honour of reading the citation. The presentation took place during the Granada Congress and it was followed by the AIC Assembly. The minutes of the Assembly are included in the Newsletter. I have also taken the opportunity to introduce the members of the new Executive Committee who will take office in 2006. Reports from the study groups refer to activities in 2005 and I am particularly delighted to be able to include a report from our newest member, the Portuguese Colour Association.

Near the end of her report Paula gives the sad news that the colour community has lost two very prominent scientists, Fred W. Billmeyer, Jr. and Vera Golob. I am glad to be able to include tributes to them both.

Acknowledgements:

I would like to thank all those who sent reports and photographs, especially Frank Rochow for the picture of the group in Porto Alegre, Paula Alessi for the picture of Fred Billmeyer with his students, and Dunja Legat for the picture of Vera Golob.

In editing this Newsletter I have made the same kinds of minor changes as in previous issues and, as usual, I must apologise if I have misspelt any names. This is my last Newsletter before I retire from the Executive Committee. It has been a rewarding task and I have enjoyed learning about all the activities of the member organisations.

Last word:

An advantage of being editor is that you get to have the last word. It has been a great privilege and pleasure to serve on the Executive Committee and I really valued our association. I want to use my last word to pay tribute to my colleagues, especially Paula Alessi and Frank Rochow. I was very glad when my countryman, Ken Pidgeon, grabbed the microphone during the Banquet in Granada and gave us all the opportunity to acknowledge the tremendous contributions that Paula and Frank have made to the AIC.

Website:

The contents of this Newsletter will be posted on the AIC Website. Our webmaster is Gerhard Roesler. Alternative addresses are:

www.AIC-colour.org

and

www.AIC-color.org

Paul Green-Armytage

PRESIDENT'S REPORT



I would like to begin my last President's report to you by citing the closing speech I gave at our 10th AIC Congress in Granada, Spain.

“To the Distinguished members of la Sociedad Española de Óptica, the members of the Comité Español de Color, the members of the University of Granada and the Members of the Granada Local organizing committee:

It has been an honor and a pleasure to be a participant of this 10th AIC Color Congress. You are to be congratulated for hosting an AIC Congress with one of the largest number of participants in AIC history (470 participants, 538 with accompanying persons, all from 36 countries). You are also to be commended at the highest level for being the first Congress organizers to provide the participants with the final proceedings, both in the form of books and with a computer CD, on the day of registration. I always thought that this was an impossible task. I am happy, proud and thankful to announce that you proved me wrong.

As I reflect back on the valuable week we have all just experienced, I feel that we have been, as Thomas Kinkade put it, “Living in the light of unfolding miracles.” This week our unfolding miracles have taken many forms. One special miracle for me, as a color scientist, was when I jumped ‘out of my box’ and into the ‘very creative world’ of color education. I learned about the innovative ways our color educators are using to track color perception, both through the ‘hands-on’ experience and through the personal computer experience. As I advised at the opening ceremony, I hope other people took a risk, jumped out of their box, and found a new creative revelation unfold in a miraculous way. The almost 20 symposia on all aspects of color not only provided a forum for exploring the details of a topic both from a keynote speaker and other distinguished experts, but also created the perfect atmosphere for stimulating discussions that often times led to miraculous discoveries. The sessions that did not feature symposia were essential elements to fill in the gaps and create a more complete color experience in both the scientific and artistic disciplines. The poster paper sessions were very well attended due to the miracle of delectable food and drink. Banning the use of laptops was an excellent idea in view of the miraculous computer network that provided a continuous flow of presentations from one to the next, session after session.

Probably one of the most treasured miracles for many participants was sitting down over lunch or coffee break with a colleague from another corner of the world whom you haven't seen for four years and either reminiscing or exchanging ideas which may have prompted a new light bulb to go off in your head. Another miracle for me, and I hope for others, was meeting the person behind the name or email address. Isn't it wonderful when someone comes up to you says ‘Hello, I'm Mr. So and so, it's a great pleasure to finally meet you face to face.’

A special miracle of being an AIC congress participant is the opportunity to immerse oneself in a different culture for one week. This miracle is truly a gift that most people never experience in their lifetime. This week we lived life together the Spanish way and, as I did, I hope you treasured every minute. The Andalusian dinner was a most

enjoyable cultural experience. It truly was a unique pleasure to savor the food and drink indigenous to the Andalusian region of Spain. The folklore dancing was a delight to watch as we saw incredibly skillful flamenco dancers tapping their feet and their castanets. The Wednesday afternoon trip to the Alhambra and the Generalife gardens was truly a breathtaking experience. As we walked through the palace and gardens on the guided tours, it was possible to better understand, and almost relive, the history of Spain through its ruling by the Sultan Joseph, Queen Isabella, King Ferdinand and later Charles V. The use of color in the architecture of the ceilings, walls, patios, fountains and gardens made the Alhambra a most fitting place to be enjoyed by our color-interested participants from around the world. In addition, it gave us a day to rest our minds as our bodies relaxed among the beauty.

Of course, how could I leave out the gala banquet we had the pleasure of enjoying Thursday evening. We had outstanding food, many delightful wines and champagnes, and of course the best company imaginable. It felt good to see everyone let loose on the dance floor after a very intense week of meetings.

I would like to close with personal thank you comments to my very dear Spanish colleagues. First I extend a huge thank you to the Program Co-chairs, Juan Luis Nieves and Javier Hernández-Andrés for their patience with my embarrassing tardiness on all deadlines. I sincerely apologize to you, Juan Luis and Javier and I warmly thank you for the red carpet treatment you extended to me and all other authors. Next, I would like to extend a very warm thanks to my dear friend, Manuel Melgosa. I have known Manuel since 1996. I have always found him to be very polite and one of the most kind, warm and genuine people that I have ever met. After 18 hours of travel, when I saw his glowing face at the baggage claim exit doors, he was my miracle. Manuel, thank you for being my miracle. Finally, last but not least, I must extend sincere gratitude to Prof. Javier Romero, not only on my behalf but also on behalf of the entire AIC Executive Committee (EC). Javier, thank you for the miracle of you. You have been the mastermind behind this very successful 10th AIC Congress. Your dedication to this effort has not stopped since 2001. You have taken the EC with you every step of the way over the last four years. We appreciate

your meticulous attention to every last detail. Your leadership of the Granada local organizing committee has resulted in making this congress a smashing success. Your dedication to AIC is unending as you willingly agreed to be nominated as Secretary/Treasurer for the next four years. That is no small task. Thank you for offering to give more of yourself to AIC for the next four years. Lastly and most importantly, thank you for your precious smile, which is always showing in the good times and the not so good times.

After having been here for one week, I now know why it was absolutely a necessity for AIC to hold a congress in Granada. This is a city full of color both inside and out. The landscape filled with olive trees is very green. The sky is very blue. The colors of the Alhambra are found everywhere decorating the city. More importantly, when I get close to the people of Granada, I feel colors like yellow, orange and red radiating warmth inside all of the people's hearts. That warmth has made us all feel welcome, like Granada has been our home away from home. Finally, after walking through the streets of Granada among the brilliantly colored flowers, I know the true meaning of 'the Spanish rose.' I will quote Thomas Kinkadee one more time. 'Life takes on a rosy glow when viewed through the lens of gratitude.'

Today all AIC participants are looking through the lens of gratitude to thank the Granada organizing committee for this miraculously successful meeting. And do you know what we see? We see the rosy faces of our Granada colleagues smiling back. Thanks for your smiles, warmth and your hard work. We will remember this congress forever."

Now, I would like to close citing some milestones that our AIC EC has achieved over the last four years. First, we have increased our membership with two new regular members; the Finnish Color Association and the Portuguese Color Association. We have gained five new observers: three from Turkey and two from India. Through the very conscientious efforts of our Secretary/Treasurer, Frank Rochow, we have instituted a very successful auditing process to verify our financial records each year. We have formed a new AIC Study Group, Color Perception for the Elderly. We have successfully survived the sad, but unavoidable resignation of our first Vice President, Paul Green Armytage from 2001-2003, named a new Vice-

President, José Caivano to serve from 2003-2005 while keeping Paul as an ordinary member on the EC. We have had three very successful meetings: the 2002 Interim Meeting in Maribor, Slovenia on Color and Textiles, the 2003 Midterm meeting in Bangkok, Thailand on Color Management, the 2004 meeting in Porto Alegre, Brazil on Color and Paints and this 10th AIC Congress in Granada, Spain. Thank you to all our hosting regular members for these successful meetings. We have identified the hosting countries, topics and dates of meetings for the next four years, so we all know what we have to look forward to. We have proposed modifications to the statutes to make them more consistent and to help AIC run more efficiently. We have cultivated our AIC website due to the efforts of Gerhard Roesler and Frank Rochow. Many thanks for the long dedicated hours spent by Paul Green-Armytage and his student, Marneee Rinaldi, to produce a very professional newsletter each year of which we are very proud.

Now it is time for me to extend some personal thanks. First, I would like to thank our former AIC President, Prof. Mitsuo Ikeda for being my mentor when I served as Vice President for four years. With his leadership, support and advice, my Presidency became an easier and more natural role to assume. Next, I would like to thank Frank Rochow, our Secretary/Treasurer for being my right-hand man for the last four years. Frank was my invaluable link to the past, my confidant and my constant source of support throughout AIC day-to-day operation. His valuable advice went far beyond his Secretary/Treasurer duties. I would also like to thank my first Vice President, Paul Green Armytage. Paul you are a very wise and compassionate man. I valued your advice whenever I asked for it. I admire your dedication to AIC by offering to remain on the EC when you had to resign as Vice President. José Caivano, I would like to thank you for so willingly serving as AIC Vice President for the last two years. José, you have worked very hard chairing the AIC Judd Award selection committee, coordinating the study groups and helping with the technical program of our 2004 meeting in Brazil. Joaquín Campos, thank you for serving as our CIE liaison to Division II and your constant support. Whenever I sent out emails asking for comments, you were often the first to reply. I really appreciated that. Prof. Aran Hansuebsai, thank you for chairing the 2003 AIC Interim Meeting Bangkok. This meeting was a

huge success due largely to your efforts. Participants happily received the final proceedings at registration, which was a fantastic feat to accomplish. Also, thank you for helping us with the printing of the newsletter. Prof. Hiro Yaguchi, thank you for being the CIE liaison to Division VIII. Your constant support in all AIC matters was always appreciated. As you can see from the comments I have made about my AIC EC colleagues, although we came from all over the world, we were an inseparable team. I never made decisions in isolation. After much correspondence by email, all AIC decisions came from the mutual agreement of all EC members. I usually conveyed the messages, but the decision came from us all. Frank, Paul, José, Joaquín, Aran and Hiro, I value the relationships we have shared over the last four years. We have become friends, and I will treasure the time we have spent together for the rest of my life.

Before closing, I must share some sad news. During this past year we have lost two very prominent color scientists; Professor Fred W. Billmeyer, Jr. and Professor Vera Golob. I owe my entire color science career to my teacher and constant mentor, Professor Fred Billmeyer. He will be greatly missed. It is comforting to know that he has left his mark on the color science world through his students who remain to carry on his legacy. Professor Vera Golob was my very dear friend and a special colleague. She was instrumental in making the 2002 AIC Maribor meeting a success. She was very dedicated to her students. We will miss her smiling face. Please send your prayers to both the Billmeyer and Golob families.

I must address my final comments to you, the AIC members. It is with great sadness that I say this is the last time I will be addressing you as President. But I am also very happy because over the last four years, I feel you have become my extended family. Thank you for making AIC what it is today. I am excited about the leadership for the new EC. Please get to know them and enjoy them as you have enjoyed us. I wish you all the very best and I look forward to sharing color journeys with you in the years ahead. I will not say good-bye. I will say, "Until we meet again at our next AIC meeting".

Sincerely Yours,
Paul J. Alessi
AIC President

COMPILED DATA OF AIC ACCOUNT 2004

Opening Balance January 1st, 2004:

UBS	6.239,37	CHF
Cash	890,21	CHF
<hr/>		
Total	7.129,58	CHF

Income 2004:

UBS	1.587,55	CHF
Cash	260,00	CHF
<hr/>		
Total	1.847,55	CHF

Expenditure 2004:

UBS	118,50	CHF
Cash	25,24	CHF
<hr/>		
Total	143,74	CHF

Closing Balance December 31st, 2004:

UBS	7.708,42	CHF
Cash	1.124,97	CHF
<hr/>		
Total	8.833,39	CHF

Breakdown of transactions 2004:

Income from members and observers:	1.582,05	CHF
Bank fees, interest, copies, etc.:	-138,24	CHF
Newsletter including mailing:	0,00	CHF
Judd Award:	0,00	CHF

AUDITOR'S REPORT

Stockholm 2005-04-21

E-mail: office@rochow-berlin.de

Dipl. Ing. Frank Rochow
AIC Secretary/Treasurer
c/o LMT Lichtmesstechik GmbH
Berlin
Helmholtzstr. 9
D-10587 Berlin
Germany

Audit report

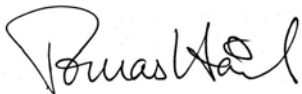
AIC 2004-01-01 – 2004-12-31

I have copies of the AIC accounts, bank statements and additional comments, relating to the twelve months period ending on December 31st, 2004.

I have found the documentation to be in very good order, easy to follow and the USB Bank Basel account statements per 31st December 2004 (CHF 7708,42) to agree with the records of income and expenditure for the period mentioned.

The cash balance (CHF 1124,97) has for obvious reasons not been possible to check by me in person but there are no known reasons to believe it is not correct and the accounts are well presented.

Yours Sincerely,
SCANDINAVIAN COLOUR INSTITUTE AB



Tomas Hård

AUDITOR'S REPORT

John Hutchings
food colour and appearance consultant

6 Queens Road
Colmworth
Bedford MK44 2LA
United Kingdom

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

Dipl.-Ing Frank Rochow
AIC Secretary/Treasurer
c/o Lichtmesstechnik GmbH Berlin
Helmholtzstr. 9, D-10587 Berlin
Germany

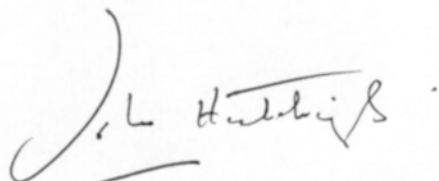
29 March 2005

Audit Report

AIC Accounts for year ending 31st December 2004

I have copies of the AIC accounts and bank statements relating to the twelve months ending 31st December 2004.

I am happy to report that the UBS Bank Basel account statements agree with the records of income and expenditure for the above period. The closing balance in the UBS account at 31st December 2004 is 7708.42 CHF. For obvious logistical reasons I am unable to confirm the balance of 1124.97 CHF shown in the cash account. However, the accounts have been kept in an exemplary manner and there is no known reason to believe that this total is incorrect.



AIC DEANE B. JUDD AWARD



John Hutchings receiving the AIC Deane B. Judd Award for 2005 from AIC President Paula J. Alessi

Vice President's Report

I want to add my congratulations to the winner of the 2005 Judd Award, John B. Hutchings. As chairman of the Judd Award Selection Committee, I can report that three nominations were received in 2004, all three nominees having made outstanding contributions to our understanding of color. I wish to thank the Grupo Argentino del Color, the Hungarian National Colour Committee and the Swedish Colour Centre Foundation for having presented the nominations and prepared the supporting documentation on the candidates.

I wish to especially thank the members of the 2005 Judd Award Selection Committee: Anders Hård, Robert Hunt, Mitsuo Ikeda, Tarow Indow, Daniel Lozano, Yoshinobu Nayatani, Lars Sivik and Pieter Walraven. These eight previous winners of the award gave very careful consideration to the nominations. Finally, I asked each committee member to rank the nominees, and the results were:

- For the 1st position in the ranking: Hutchings (5 votes), 2nd nominee (3 votes).

- For the 2nd position in the ranking: 3rd nominee (4 votes), 2nd nominee (2 votes), Hutchings (1 vote), none (1 vote).
- For the 3rd position in the ranking: 3rd nominee (3 votes), Hutchings (2 votes), 2nd nominee (1 vote), none (2 votes).
- Total of votes received by each candidate: Hutchings: 8 votes (5+1+2); 2nd nominee: 6 votes (3+2+1); 3rd nominee: 7 votes (0+4+3).

The process was clearly a difficult task, but there is no doubt that John Hutchings is a very worthy winner.

The complete list of Judd awardees to date is:

- 1975 Dorothy Nickerson [1900-1985] (USA)
- 1977 William David Wright [1906-1997] (Great Britain)
- 1979 Günter Wyszecki [1925-1985] (Germany, USA, Canada)
- 1981 Manfred Richter [1905-1990] (Germany)
- 1983 David Lewis MacAdam [1910-1998] (USA)
- 1985 Leo Maurice Hurvich [1910-], Dorothea Jameson [1920-1998] (USA)
- 1987 Robert William Gainer Hunt [1923-] (Great Britain)
- 1989 Tarow Indow [1923-] (Japan, USA)
- 1991 Johannes J. (Hans) Vos, Pieter L. Walraven (The Netherlands)
- 1993 Yoshinobu Nayatani [1927-] (Japan)
- 1995 Heinz Terstiege [1934-2001] (Germany)
- 1997 Anders Hård [1922-], Gunnar Tonnquist [1925-], Lars Sivik [1933-] (Sweden)
- 1999 Fred W. Billmeyer Jr. [1924-2004] (USA)
- 2001 Roberto Daniel Lozano [1934-] (Argentina)
- 2003 Mitsuo Ikeda (Japan)
- 2005 John B. Hutchings [1932-] (Great Britain)

The AIC is particularly grateful to DfwG (Deutsche farbwissenschaftliche Gesellschaft, German Society of Color Science and Application) for the sponsorship of the 2005 Judd Award. I hope that this initiative will be followed in the future by other organizations, institutions or companies.

The next Judd Award will be presented in 2007 at the AIC Mid-term Meeting in Hangzhou, China. All AIC regular members are invited to consider

making a nomination. Nominations should be supported by documentation of the nominee's accomplishments – biographical information and a list of publications – and sent by November 2006 to the AIC Vice-President elected for the next term, Berit Bergström (berit.bergstrom@ncscolour.com).

José Luis Caivano
AIC Vice-President

Citation

The AIC Deane B. Judd Award was established in 1975 to honour the memory of Deane B. Judd; it is the highest honour that can be bestowed by the international colour community. The Award recognizes work of international importance in the fields of colour perception, colour measurement, or colour technology. Previous winners have been: In 1975 Dorothy Nickerson; 1977 William David Wright; 1979 Gunter Wyszecki; 1981 Manfred Richter; 1983 David L. MacAdam; 1985 Leo M. Hurvich and Dorothea Jameson; 1987 Robert W.G. Hunt; 1989 Tarow Indow; 1991 Hans Vos and Pieter Walraven; 1993 Yoshinobu Nayatani; 1995 Heinz Terstiege; 1997 Anders Hård, Lars Sivik and Gunnar Tonnquist; 1999 Fred W. Billmeyer Jr.; 2001 Roberto Daniel Lozano; and in 2003 Mitsuo Ikeda. It is now with very great pleasure that I announce the winner of the AIC Deane B. Judd Award for 2005: John Hutchings

John Hutchings is a particularly fitting recipient of the Award since he represents what is, for me at least, the most precious aspect of the AIC: its role as a meeting place for people from different disciplines. John Hutchings is a physicist, but his work in the food industry has taken him outside the discipline of physics and led him to look at the way that colour works in the wider world, in nature and culture.

John Hutchings is the author of the definitive book *Food Colour and Appearance* and is acknowledged as a leading authority in the field of food science and technology. But he is also recognised as a world authority on colour in folklore and on the role of colour in the natural world. In addition, John Hutchings's involvement in the processing and preservation of food has brought him into contact with those who are concerned with the distribution and marketing of food, including the designers who

are responsible for packaging and for the interiors and exteriors of shops, restaurants and pubs.

John Hutchings recognised early on that colour measurement does not tell the whole story and that other aspects of appearance, especially texture, gloss and translucency, play a critical role in determining the acceptability of food. Perhaps his most valuable contribution is his concept of Total Appearance and the way he has elaborated this concept into an information transfer process. Links are made between the physics of a situation, basic perceptions of appearance characteristics such as colour and texture, and what John Hutchings calls 'derived perceptions or visual expectations'. Our expectation that a plate of food will taste good and contribute to our health derives from the total appearance of the food and the environment in which it is presented which, in turn, is determined by the physics of the situation. John Hutchings developed his technique of Appearance Profile Analysis into a tool which can be used to examine these variables in detail and identify the ways in which they are linked.

Total Appearance has two major elements which John Hutchings identifies as 'scene properties and viewer properties'. Scene properties can be pinned down by physics but, for a full understanding of viewer properties, John Hutchings recognised the need to understand the combined influence of our biological and cultural inheritance. This implies wide ranging study and John Hutchings has published his findings about the way that colour vision contributes to our biological survival and to the ways in which we have exploited our colour vision in the social and cultural spheres.

For most of his career John Hutchings worked for Unilever, first as a Research Technician, then as a Production Auditor, and finally as a Research Scientist. He was responsible for teams working on the psychophysics of colour and other aspects of appearance. Materials studied included paints and cosmetics, but most attention was paid to food. In John Hutchings's words; 'These studies required determination of relationships between formulation, production, structure, expert sensory studies and consumer opinion of colour and appearance as required by different parts of the Unilever business.'

Since his retirement from Unilever John Hutchings has worked as a consultant, writer, lecturer and

educator. In 1997 he was the keynote speaker at the biennial conference of the Colour Society of Australia where he was uniquely qualified to address our theme of 'Colour for Life'. A highlight of our conference was the two-part Eating Seminar which John Hutchings conducted. He also presented a lecture on 'The Customer's View of Design' at Curtin University of Technology which was subsequently published by the School of Design in our series of Occasional Papers. His most recent book, *Expectations and the Food Industry*, is addressed to a very wide audience which includes scientists, technologists, architects, designers, marketers and those who work in hospitality as well as their customers. John Hutchings is currently a Visiting Research Fellow at the University of Leeds where he is collaborating with Professor Ronnier Luo.

John Hutchings has been a Fellow of the Institute of Physics since 1985 and a Fellow of the Institute of Food Science and Technology since 1987. He has been a member of the Folklore Society since 1984, serving as Honorary Treasurer between 1986 and 1998. He has been a member of the Colour Group (Great Britain) since 1968, was Honorary Treasurer between 1975 and 1979 and Chairman between 1979 and 1981. He was made an Honorary Member in 2000 and was the Newton Medallist in 2001. He has also been a member of the Inter Society Color Council (USA) since 1984 and was made an Honorary Member of the Grupo Argentino del Color in 2002.

John Hutchings is a longstanding member of the AIC community. He served on the Executive Committee between 1985 and 1989 and has been Honorary Auditor since 1989. He is one of the very few who has attended every AIC Congress since the inaugural Congress in Stockholm in 1969. His contributions are being acknowledged here in Granada in the best way we know. This may be a high point in the career of John Hutchings but we are not satisfied! We want more from him and we are looking forward to welcoming him in Australia at the next AIC Congress in 2009.

Paul Green-Armytage

AIC GENERAL ASSEMBLY

Venue: Congress Center
Granada, Spain

Date: May 11th, 2005

Time: 12:15 - 13:30

Present: Ms. Paula Alessi
(President)
Prof. José Luis Caivano (Vice
President)
Dipl.-Ing. Frank Rochow
(Secretary/Treasurer)
Mr. Paul Green-Armytage
(EC-member)
Prof. Aran Hansuebsai
(EC-member)
Prof. Hirohisa Yaguchi
(EC-member)
Prof. Joaquín Campos Acosta
(EC-Member)

Voting representatives of the following 18 member organizations:

Argentina

Grupo Argentino del Color
María Luisa Musso

Australia

Colour Society of Australia
Ken Pidgeon

Republic of Bulgaria

Colour Group – Bulgaria
Eva Lübbe

People's Republic of China

Color Association of China
Qi Mei

Finland

The Finnish Colour Association
Harald Arnkil

France

Centre Français de la Couleur
Patrick Callet

Germany

Deutscher Verband Farbe
Gerhard Rösler

Great Britain

The Colour Group (Great Britain)
Ronnier Luo

Hungary

Hungarian National Colour
Committee

László Neumann

Italy

Associazione Ottica Italiana
Lucia R. Ronchi

Japan

Color Science Association of
Japan
Taiichiro Ishida

Republic of Korea

Korean Society of Color Studies
Jin-Sook Lee

Poland

Central Office of Measures
Rengin Ünver

Slovenia

Slovenian Colorists Association
Vera Golob

Spain

Comité Español del Color
Manuel Melgosa

Sweden

Swedish Colour Centre
Foundation
Monica Billger

Thailand

The Color Group of Thailand
Boon Lieng

USA

Inter-Society Color Council
Ellen Carter

Agenda of the General Assembly:

1. Welcome note of the President
2. Report of the President
3. Future AIC Meetings
4. Report of the Vice President
5. Report of the Secretary/Treasurer
6. Report of the Auditors
7. Exculpation of the old EC
8. Election of the
Vice President
Secretary/Treasurer
3 Ordinary EC members
9. Proposals and Election of the Auditors
10. Start of discussion on the AIC Statutes
11. Miscellaneous, open discussion from the floor

1. Welcome note of the President

The AIC President, Ms Paula Alessi, welcomes the AIC members to Granada, thanking Prof. Javier Romero, the Comité Español del Color and the Organizing Committee for making this wonderful Congress happen.

2. Report of the President

The AIC President, Ms Paula Alessi, proudly presents and welcomes our newest member, the Portuguese Colour Association.

She further reports that the Fred W. Billmeyer, Jr. Memorial Undergraduate Fellowship in Color Science at RIT has been established. She encouraged participants to contribute to the Fellowship fund.

The modifications to AIC Statutes will be her legacy. These modifications will be brought to a final proposal by the end of her term.

It is with great pleasure that she formally congratulates the recipient of the 2005 AIC Deane B. Judd Award, John B. Hutchings.

3. Future AIC Meetings:

2006 Hosted by the Colour Group of South Africa, October 25-27, Johannesburg, Gauteng, South Africa
Topic: Colour in Culture and Colour in Fashion
Chair: Natasha van Tonder, nvtonder@csir.co.za

2007 Hosted by the Color Association of China (before or after the CIE Meeting), Hangzhou, China
Preliminary Topic: Instrumentation and Textiles (Professor Ye and Professor Ikeda will work on a topic title that involves use of the word color and/or measurement)
Chair: Ye Guanrong

2008 Hosted by the Swedish Colour Centre Foundation, June 15-18, Stockholm, at Scandic Hasselbacken
Topic: Colour in Inner and Outer Space
Chair: Berit Bergström

2009 11th Congress hosted by the Colour Society of Australia, September 20-25, Sydney, Australia, at Luna Park
Chair: Nick Harkness

4. Report of the Vice President

The AIC Vice President, Prof. José Caivano, adds his congratulations to the winner of the Deane B. Judd Award for 2005, John B. Hutchings. He reports that three nominations were received for the 2005 Award. All three nominees have made outstanding contributions to our understanding of colour. José Caivano thanks those who made the nominations and prepared the supporting documentation. He especially thanks the members

of the 2005 AIC Judd Award Selection Committee. Eight previous winners of the Award gave very careful consideration to the nominations. It was clearly a difficult task, but there is no doubt that John Hutchings is a very worthy winner. The AIC is particularly grateful to DfwG (German Society of Color Science and Application) for the sponsorship of this AIC Judd Award 2005. He expresses his hope that this initiative will be followed in the future by other institutions or companies. The next Award will be presented in 2007 at the Mid-term Meeting in China. All AIC regular members are invited to consider making a nomination. Nominations should be supported by documentation of the nominee's accomplishments: biographical information and a list of publications.

5. Report of the Secretary/Treasurer

Frank Rochow lists the current 25 color organizations by name as AIC members. The most recent addition was the Portuguese Colour Association (Associação Portuguesa da Cor) to join AIC as a member. Our longstanding Observer Stephen Coonan (Ireland) informed the secretary about his retirement. We have lost contact with our observer from Panama, Guillermo Marconi.

The AIC Secretary/Treasurer explained the compiled data of the AIC account 2004 as audited and printed in the Newsletter.

Everybody should feel free to send documents they want to be posted on the AIC website directly to our webmaster, Gerhard Roesler, at roesler_gerhard@t-online.de You may also include links to your own websites or interest groups. Because of privacy laws in several countries, we need the formal consent of all members and observers to publish names with e-mail addresses, postal addresses, phone numbers, etc. The Secretary/Treasurer will again provide a form where everybody can fill in all the credentials they want to be published on the AIC website.

6. Report of the Auditors The reports of the Auditors, John Hutchings and Tomas Hård, are displayed to the audience. John Hutchings confirms the correct bookkeeping of the Secretary/Treasurer.

7. Exculpation of the old EC

John Hutchings moves to vote for the exculpation of the current EC. The assembly agrees with 15 votes yes, 0 votes no and 0 abstentions. Please note that only 15 voting members were present in

the General Assembly room at the time this vote was taken.

8. Elections

Vice President
Secretary/Treasurer
3 Ordinary EC members

The AIC Past-President, Prof. Mitsuo Ikeda, takes over the chair of the assembly for the election. He announces the procedure to be by paper ballots in the sequence as requested by the Statutes. First he verifies the representatives who are entitled to vote. 18 such representatives are present in the General Assembly room (see list at the top of these minutes).

The first ballot forms for the election of the Vice President are handed out with the help of John Hutchings. Result of this ballot, counted by Prof. Ikeda and John Hutchings:

Berit Bergström (female) (Sweden)
17 yes

The second ballot forms for the election of the Secretary/Treasurer are handed out, again with the help of John Hutchings. Result of this ballot, counted by Prof. Ikeda and John Hutchings:

Prof. Javier Romero (male) (Spain)
18 yes

Prof. Ikeda now announces that, according to the statutes, the 3 candidates for ordinary EC member with the highest number of “yes” votes will be elected out of the 4 candidates and that

Nick Harkness (male) (Australia)
as the representative of the country hosting the next AIC Congress, is already to be regarded as the fourth EC member.

The third ballot forms for the election of the 3 Ordinary EC members are handed out, again with the help of John Hutchings. Result of this ballot, counted by Prof. Ikeda and John Hutchings:

Prof. Dr. Roy S. Berns (male) (USA)
15 yes

Prof. Dr. Osvaldo da Pos (male) (Italy)
16 yes

Prof. Dr. Ye Guanrong (male) (P.R. of China)
16 yes

These three candidates are elected as ordinary EC members.

Prof. Ikeda thanks the fourth candidate who received the lowest number of yes votes,

Prof. Dr. Todor Kehlibarov (male) (Bulgaria)
6 yes,
for his readiness to serve on the EC.

9. Proposals and Election of the Auditors
The current Secretary/Treasurer, on behalf of the current EC, proposes

Jin-Sook Lee (female) (Korea)
John B. Hutchings (male) (UK)
(both from countries not represented in the EC)

These two candidates are elected with
18 yes

10. Start of discussion on the AIC Statutes
The President, Ms. Paula Alessi, explains the necessity to modify the Statutes:

- Inconsistencies should be corrected (e.g. regular members called national members or national country organizations)
- Hold a GA every 2 years instead of every 4 years
- Emphasize that EC member from Congress hosting country is not elected but appointed
- Have membership dues be voted on by members rather than a reported fixed amount
- Shift Guidelines out of Statutes and into a separate document known as “Standing Rules & Procedures”
- Add more “Standing Rules”:
 - A. Guidelines for AIC Study Groups
 - B. Guidelines for Interim & Mid-term Meetings
 - C. Guidelines for Use of AIC Name & Symbol
 - D. Guidelines for Publication of AIC Proceedings
 - E. Guidelines for AIC Congresses
 - F. *Guidelines for Judd Award Selection Committee*
 - G. *Guidelines for Nominating Procedures*
 - H. *Guidelines for General Assemblies (Mid-term & Congress)*
 - I. *Guidelines for Dues*(F – I = new)

The procedure for modifying the Statutes will be:

- Mailing of proposed changes in March, 2005
- Explanation of proposed changes in Granada
- Send comments and propose changes to Paula Alessi (paula.alessi@kodak.com) by the end of June, 2005

- Incorporate changes recommended by EC and members over the next two years via correspondence
- Official vote to approve the proposed changes at the AIC 2007 Mid-term GA
-

Berlin, August 3rd, 2005



Frank Rochow

AIC Secretary Treasurer

11. Miscellaneous, open discussion from the floor No input is given from the audience

End of the Minutes of the AIC General Assembly, May 11th, 2005

Rochester, August 3rd, 2005



Paula Alessi

AIC President

AIC EXECUTIVE COMMITTEE 2001-2005



*Members of the Executive Committee in Granada.
Clockwise from foreground: Aran Hansuebsai, Hirohisa Yaguchi, Joaquin Campos Acosta, José Caivano, Paula Alessi, Frank Rochow (Paul Green-Armytage took the photograph)*

AIC President

Mrs Paula J. Alessi
Eastman Kodak Company
1700 Dewey Avenue
Rochester, N.Y., 14650-1907
USA
Tel (W): +1 585 477 7673
Fax: +1 585 477 0127
Email: paula.alessi@kodak.com

AIC Vice President

Prof. José Luis Caivano
Universidad de Buenos Aires
Secretaria Investigaciones FADU-UBA
Ciudad Universitaria Pab. 3 piso 4
1428 Buenos Aires
Argentina
Tel: +54 11 4789 6289
Fax: +54 11 4702 6009
Email: caivano@fadu.uba.ar

AIC Secretary/Treasurer

Dipl.-Ing. Frank Rochow
LMT Lichtmesstechnik GmbH Berlin
Helmholtzstr. 9
D – 10587 Berlin
Germany
Tel: +49 30 393 4028
Fax: +49 30 391 8001
Email: offices@rochow-berlin.de

AIC EC Member

Dr Joaquín Campos Acosta
Instituto de Física Aplicada (CSIC)
Departamento de Metrología
Serrano, 144
28006 Madrid
Spain
Tel: +34 91 561 8806
Fax: +34 91 411 7651
Email: jcampos@ifa.cetef.csic.es

AIC EC Member

Mr Paul Green-Armytage
Curtin University of Technology
Department of Design
GPO Box U1987
Perth 6845
Western Australia
Tel: +61 8 9266 2276
Fax: +61 8 9266 2711
Email: p.green-armytage@exchange.curtin.edu.au

AIC EC Member

Prof. Dr Aran Hansuebsai
Chulalongkorn University
Dept. of Imaging and Printing Technology
Phyathai Road
10330 Bangkok
Thailand
Tel: +66 2 218 5588
Fax: +66 2 255 3021
Email: aran@sc.chula.ac.th

AIC EC Member

Prof. Hirohisa Yaguchi
Chiba University,
Faculty of Engineering
Dept. of Information and Image Sciences
1-33 Yayoi-Cho, Inage-Ku
263-8522 Chiba
Japan
Tel: +81 43 290 3472
Fax: +81 43 290 3490
Email: yaguchi@image.tp.chiba-u.ac.jp

AIC EXECUTIVE COMMITTEE 2006-2009



*Members of the Executive Committee for 2006-2009.
Left to right: José Caivano, Ye Guanrong, Berit Bergström, Osvaldo da Pos, Javier Romero, Nick Harkness, Roy Berns*

AIC President

Prof. José Luis Caivano
Universidad de Buenos Aires
Secretaria Investigaciones FADU-UBA
Ciudad Universitaria Pab. 3 piso 4
1428 Buenos Aires
Argentina
Tel: +54 11 4789 6289
Fax: +54 11 4702 6009
Email: caivano@fadu.uba.ar

AIC Vice President

Berit Bergström
Swedish Colour Centre Foundation
P.O.Box 49022
S - 100 28 Stockholm
Sweden
Tel: +46-8-617-4711; +46-733-700-714
Fax: +46-8-617-4747
swedish.colour.centre@ncscolor.com

AIC Secretary/Treasurer

Prof. Dr Javier Romero
Dpto. De Óptica
Facultad de Ciencias
Campus Fuentenueva s/n
Universidad de Granada
E-18071 Granada
Spain
Tel: +34 958 24 42 41
Fax: +34 958 24 85 33
Email: jromero@ugr.es

AIC EC Member

Prof. Dr Roy S. Berns
Chester F. Carlson Center for Imaging Science
Rochester Institute of Technology
54 Lomb Memorial Drive
Rochester, New York 14623-5604
U.S.A.
Tel: +1-585-475-2230
Fax: +1-585-475-5988
Email: berns@cis.rit.edu

AIC EC Member

Prof. Dr Osvaldo da Pos
Department of General Psychology
University of Padua
Via Venezia 8
35131 Padova
Italy
Tel: +39-049-827-6680
Fax: +39-049-827-6600
Email: osvaldo.dapos@unipd.it

AIC EC Member

Nick Harkness
Nick Harkness Pty Ltd
Suite 2 Level 1
187 Marion Street
Leichardt, NSW 2040
Australia
Tel: +61-2-9550-0936
Fax: +61-2-9550-0984
Email: nick@nhpl.com.au

AIC EC Member

Prof Ye Guanrong
Zhejiang University Hangzhou
Institute of Optical Radiation Technique (ORT)
310027 Hangzhou
Peoples' Republic of China
Tel: +86-571-8795-1191, -1183
Fax: +86-571-8796-8967
Email: ygr@moi-lab2.zju.edu.cn ; yg@mail.hz.zj.cn

MEMBER ORGANISATIONS

GRUPO ARGENTINO DEL COLOR

Dr. Arch. Maria Luia F. Mattiello
SICyT-FADU-UBA
Ciudad Universitaria Pab. 3 piso 4
C1428BFA Buenos Aires
ARGENTINA
Tel: +54 11 4789 6289
Fax: +54 11 4702 6009
Email: gac@fadu.uba.ar
Website: www.fadu.uba.ar/sicyt/color/home.htm

COLOUR SOCIETY OF AUSTRALIA

Dr. Ken Pidgeon
Dr. Ken Pidgeon Professional Partners Pty Ltd.
A.C.N. 083 213 496
4 Morning Glory Avenue
5158 O'Halloran Hill S.A.
AUSTRALIA
Tel: +61 8 8381 3192
Fax: +61 8 8381 1546
Email: kpidgeon@bigpond.com

ASOCIACIÓN BOLIVIANA DEL COLOR

Nicolás Petit
Casilla 10305
La Paz
BOLIVIA
Tel: +591-2-772-780-98
Fax: +591-2-2772-516
Email: asociacionbolivianadelcolor@entelnet.bo

ASSOCIAÇÃO BRASILEIRA DA COR

Hanns-Peter Struck
Rua Felipe Neri, 115 apto.4
90440-150
Porto Alegre - RS
BRAZIL
Tel: +55-(51)-331-7424
Fax: +55-(51)-331-7424
Email: hstruck@terra.com.br

COLOUR GROUP - BULGARIA

Krassimir Krastev
Central Post Office
P.O. Box 744
Central Post Office
BG – 1000 Sofia
REPUBLIC OF BULGARIA
Tel: +359 88 977 908
Email: color_bg@hotmail.com

COLOR ASSOCIATION OF CHINA

Prof Ye Guanrong
Zhejiang University Hangzhou
Institute of Optical Radiation Technique (ORT)
310027
Hangzhou
PEOPLES' REPUBLIC OF CHINA
Tel: +86-571-8795-1191, -1183
Fax: +86-571-8796-8967
Email: ygr@moi-lab2.zju.edu.cn ; yg@mail.hz.zj.cn

SUOMEN VÄRIYHDISTYS SVY RY

Ass. Professor Harald Arnkil
Kangastie 9
FIN - 00630 Helsinki
FINLAND
Tel: +358-9-798 117
Fax: +358-9-756 30577
Email: harnkil@uia.fi

CENTRE FRANÇAIS DE LA COULEUR

Dr Robert Sève
Centre Universitaire de Montauban
UIP Arts Appliqués
116 Boulevard de Montauriol
BP 796
F – 82017 Montauban
FRANCE
Fax: +33-(0)5-6391-8184
Email: Robert.seve@free.fr; secretaire@cf-couleur.org
Website: www.cf-couleur.org

DEUTSCHER VERBAND FARBE

Dipl.-Ing Frank Rochow
LMT Lichtmesstechnik GmbH Berlin
Helmholtzstrasse 9
D – 10587 Berlin
GERMANY
Tel: +49 30 393 4028
Fax: +49 30 391 8001
Email: offices@rochow-berlin.de
Website: <http://www.dfwg.de> ;
<http://www.farbzentrum.net>

THE COLOUR GROUP (GREAT BRITAIN)

Dr Michael Pointer
9 Bishop's Drive
Salisbury
Wiltshire SP2 8NZ
GREAT BRITAIN
Tel: + 44 (0) 20 8943 6716
Fax: + 44 (0) 20 8943 6283
Email: mike.pointer@npl.co.uk

HUNGARIAN NATIONAL COLOUR COMMITTEE

Prof. Antal Nemcsics
Ungvár u. 42
H – 1185 Budapest
HUNGARY
Email: nemcsics.antal@axelro.hu

ASSOCIAZIONE OTTICA ITALIANA

Prof. Lucia R. Ronchi
1, via Suor Maria Celeste
1 - 50125 Firenze (Florence)
ITALY
Tel: +39 55 22 3112
Fax: +39 55 22 2090
Email: n.rositani@flashnet.it

COLOR SCIENCE ASSOCIATION OF JAPAN

Dr. Taiichiro Ishida
Kyoto University
Department of Architecture and Environmental
Design
Kyotodaigaku-Katsura
Nishikyo-ku
615-8540 Kyoto
JAPAN
Tel: +81 75 753 4766
Fax: +81 75 383 2929
Email: ishida@archi.kyoto-u.ac.jp

KOREAN SOCIETY OF COLOR STUDIES

Prof. Yeonhee Lee
64, 2-ka, Jeo-dong, Joong-gu
100-132 Seoul
REPUBLIC OF KOREA
Tel: +82 2 2270 0997
Fax: +82 2 2278 2978
Email: js_lee@cnu.ac.kr

NEDERLANDSE VERENIGING VOOR KLEURENSTUDIE

Erna Tielen
Ottoweg 7
NL - 6866 CE Heelsum
THE NETHERLANDS
Tel: +31 317 311 977
Fax: + 31 317 311 550
Email: info@kleurenvisie.nl
Website: <http://www.kleurenvisie.nl/>

NORSK FARVEFORUM

Harald Anthonen
National College of Art and Design
Institute of Colour
Ullvalsn 5
N – 0165 Oslo
NORWAY
Tel: +47 2299 5680 (direct 5615)
Fax: +47 2299 5585

GLÓWNY URZĄD MIAR

Lukasz Litwink
Optical Radiation Standards Laboratory
Ul. Elektoralna 2
PL - 00-950 Warszawa P-10
POLAND
Tel: +48-22-620-4029; +48-22-620-0241 Ext. 9549
Fax: +48 22 620 5435
Email: vprbl@gum.gov.pl

ASSOCIAÇÃO PORTUGUESA DA COR

Dr Maria João Durão
Faculdade de Arquitectura da UTL
Rua Prof. Cid dos Santos
Polo Universitário – Alto da Ajunta
P – 1349-055
Lisboa
PORTUGAL
Tel: +351-213-615-000
Fax: +351-213-625-138
Email: mjdurao@fa.utl.pt

DRUSTVO KOLORISTOV SLOVENIJE

Prof. Dr. Slava Jeler (President)
Dunja Legat (Secretary)
Vetrinjska 16
SI – 2000 Maribor
SLOVENIA
Tel: +386 (0)2 429-5322; +386 (0) 250-1323
Fax: +386 (0)2 250-1324
Email: legat@uni-mb.si
Website: www.dks-drustvo.si

COLOUR GROUP OF SOUTH AFRICA

Natasha van Tonder
National Metrology Laboratory CSIR
Room 104, Building 5,
P.O.Box 395
Pretoria 0001

REPUBLIC OF SOUTH AFRICA

Tel: +27 12 841 3618
Fax: +27 12 841 2131
Email: nvtonder@csir.co.za
Website: <http://nml.csir.co.za/colourgroup/>

COMITÉ ESPAÑOL DEL COLOR

Dr Manuel Melgosa
Departamento de Optica
Facultad de Ciencias
Universidad de Granada
Departamento de Optica
E – 18071 Granada

SPAIN

Email: mmelgosa@goliat.ugr.es

STIFTELSEN SVENSKT FÄRGCENTRUM

Swedish Colour Centre Foundation
Berit Bergström
Igeldammsgatan 30
P.O.Box 49022
S - 100 28 Stockholm

SWEDEN

Tel: +46-8-617-4711; +46-733-700-714
Fax: +46-8-617-4747
Email: Swedish.colour.centre@ncscolour.com
Website: www.ncscolour.com

PRO COLORE

Simone Hensch
Rebhalde 31
CH – 8903 Birmensdorf

SWITZERLAND

Email: procolore@bluewin.ch;
styleconnection@bluewin.ch

THE COLOR GROUP OF THAILAND

Prof. Dr. Aran Hansuebsai
Department of Imaging and Printing Technology
Faculty of Science
Chulalongkorn University
Phyathai Rd.
Bangkok 10330

THAILAND

Tel: +66 2 218 5588/9; +66 2 218 5581/2
Fax: +66 2 254 6530; +66 2 255 3021
Email: aran@sc.chula.ac.th

INTER-SOCIETY COLOR COUNCIL

Cynthia J. Sturke
C/o Hunter Associates Laboratory, Inc.
11491 Sunset Hills Road
Reston, VA 20190.

UNITED STATES OF AMERICA

Tel: + 1-703-318-0263
Fax: +1-703-318-0514
Email: iscc@coompuserve.com; cstaurke@aol.com
website: <http://www.iscc.org>.

AIC OBSERVERS

Dr Leonhard Oberascher

Kaltnergasse 8
A-5020 Salzburg
AUSTRIA

Dr Alan Robertson

National Research Council Canada
Institute for National Measurement Standards
Inst. for Nat. Measurement Standards
Ontario K1A 0R6 Ottawa
CANADA

Mrs Mette Terkildsen

Dansk Farveinstitutet
Nygardterasser 277E
DK – Farum
DENMARK

Prof. Dr Theano F. Tosca

Aristotle University of Thessaloniki
Dept. of Architectural Design & Visual Arts
priv. 17, Athan Soulioti Street
546 42 Thessaloniki
GREECE

Ms Suma Ahuja

Asian Paints India Limited
Marketing
6A, Shantiagar
Vakola Pipeline Lane
Santa Cruz East
400055 Mumbai
INDIA

Ms Latika Khosla

Freedom Tree Design
Silverene
63 Worli Sea Face Road
Worli
400018 Mumbai
INDIA

Dr Andrew Chalmers

Dept. of Electronics & Computer Engineering
Manukau Institute of Technology
Newbury Street 09
Private Bag 94006
Manukau City, Auckland
NEW ZEALAND

Ing. Guillermo Marconi

Grafica Editora Colon SA
Apartado 6-2797
Estafeta El Dorado, Panama
REPUBLIC DE PANAMA

Dr Dipl.-Ing. Andrea Urland

Spitalska c. 59
811 08 Bratislava
SLOVAK REPUBLIC

Dr Susan Habib

Architect M.S.
6.Sokak 43
Bahcelievler 06500
Ankara
TURKEY

Dr Nilgün Camgöz-Olgunturk

Bilkent University
Faculty of Art, Design and Architecture
Dept of Interior Architecture and Environmental
Design
Oyak 10 Sitesi
16/20 Koru Mah Gayyolu
06810 Ankara
TURKEY

Assoc. Prof. Rengin Ünver

Yildiz Technical University,
Faculty of Architecture
Building Physics Dept.
Besiktas
80750 Istanbul
TURKEY

AIC 2004 PORTO ALEGRE, BRAZIL

Interim Meeting Report
Hanns P. Struck

The AIC Interim Meeting 2004 was organized by the Associação Brasileira da Cor. The topic was *Color and Paint*.

The meeting was held between 3rd and 5th November 2004 at the Pontifical Catholic University of Rio Grande do Sul – PUCRS, Porto Alegre, BRAZIL

There were 45 oral papers (including 5 keynote lectures) and 51 poster papers. There were two commercial exhibitors.

There were 70 registered participants from different countries:

Argentina:	7
Australia:	1
Brazil:	17
Croatia:	3
England:	4
France:	1
Italy:	4
Japan:	7
Norway:	1
Slovenia:	5
Sweden:	9
Spain:	6
Thailand:	2
USA:	3



Delegates at AIC 2004 Color and Paints – Porto Alegre, Brazil

AIC 2005 GRANADA, SPAIN

The tenth AIC Congress in Granada, hosted by the Comité Español del Color, was an outstanding success in every respect.

Highlights of the social program were the Andalusian Dinner, the visit to the Alhambra and Generalife and the AIC Colour 05 Banquet



Left to right: Javier Romero and Javier Hernández-Andrés



Left to right: Grete Smedal, Karin Fridell Anter and Osvaldo da Pos



Left to right: Katsunori Okajima and Keizo Shinomori



Entertainment at the Andalusian Dinner



Decoration on the walls of the Alhambra



Left to right: John Hutchings, Nick Harkness, Berit Bergström and Ye Guanrong at the AIC Colour 05 Banquet



Paula Alessi and friends

AIC 2006 JOHANNESBURG, SOUTH AFRICA



Colour in Culture and Colour in Fashion

Invitation:

On behalf of the Colour Group of South Africa, I would like to invite you to the 2006 AIC Interim Meeting to be held in Johannesburg, South Africa from 24 to 27 October 2006. It will bring together experts from all over the world to exchange the latest information on the trends and developments in colour science, technology, art and design.

The theme of the meeting is *Colour in Culture and Colour in Fashion*. All topics related to this theme will be accepted, including: colour in art and design, colour perception, colour appearance, colour and psychology, colour measurement, colour standardisation, colour education, and many more.

In addition to a stimulating technical programme, you will have the opportunity to experience the countryside of Johannesburg. Beyond the city's leafy suburbs, concrete gives way to an alluring green belt. Here, in the heart of the artistic belt known as the Crocodile Ramble, lies the Misty Hills Country Hotel and Conference Centre, where the 2006 AIC Interim Meeting will be held.

We encourage you to accept this invitation and look forward to meeting you in South Africa.

For more information, please visit our website (www.colourgroupsa.org.za), which will be updated regularly with new information.

Natasha van Tonder
President: Colour Group of South Africa

ISCC/CIE EXPERT SYMPOSIUM

75 Years of the CIE Standard Colorimetric Observer

See the Call for Papers on the website for details of the submission and review process.

In 2006, both the CIE Standard Colorimetric Observer and the Inter-Society Color Council (ISCC) will observe their 75th Anniversaries. To celebrate the occasion, the ISCC and the Canadian National Committee of the CIE are hosting an Expert Symposium on the Standard Colorimetric Observer, May 16-17, 2006, at the National Research Council in Ottawa, Canada. The Symposium will anchor a week of events starting with the Annual Meeting of the ISCC and ending with meetings of CIE Division 1, *Vision and Colour*.

The Standard Colorimetric Observer is ubiquitous when it comes to measuring, specifying and designing products that involve light and colour. Its use is so pervasive in everyday life that the Symposium will appeal to a wide range of professionals, from those who are responsible for colour and colour appearance to those who are research and development specialists in the area – just about anyone with an interest in colorimetry and colour measurement.

The goals of the Symposium are to recall the many advances that have been made since the introduction of the Standard Colorimetric Observer, to understand the current state of colorimetry and colour appearance, and to provide guidance on directions for future work. Specific topics will include:

- Standard Colorimetric Observer – past, present, and future
- Colour matching functions
- Colour appearance
- Temporal and spatial issues in colorimetry
- Colour differences and tolerances
- Colour management
- Instruments and standards

For more information, visit the Symposium website at <http://www.iscc.org/jubilee2006>. Authors are invited to submit two-page extended abstracts of their proposed contributions by January 15, 2006.

IN MEMORIAM - FRED W. BILLMEYER, JR.



Fred W. Billmeyer, Jr., with his wife Annette, surrounded by past students during the 1992 ISCC/AIC meeting, Princeton, New Jersey, USA. Front row left to right: Robert Hirschler, Annette Billmeyer, Fred W. Billmeyer, Jr., James Davidson, Paula Alessi; Middle row left to right: Frank O'Donnell, Daniel Phillips, David Alman, Patrick Chong, Romesh Kumar, Ellen Carter, Roy Berns, Robert Marcus; Top row: Danny Rich.

Fred W. Billmeyer, Jr.

Frederick Wallace Billmeyer Jr., world renowned color educator and researcher, died peacefully on December 12, 2004, at a nursing home in Clifton Park, New York.

Born on August 24, 1919, in Chattanooga, TN, Fred studied chemistry at the California Institute of Technology, receiving a B.Sc. in 1941. He completed his PhD at Cornell University in 1945, studying light scattering in synthetic rubbers under the direction of Nobel Laureate, Peter Debye. From 1945 to 1964 he was associated with the plastics department of the Du Pont Company in Wilmington, Delaware, and from 1951 to 1964 was lecturer in High Polymers in the Chemistry Department at the University of Delaware. From

1964 until he retired he was Professor of Analytical Chemical Engineering at Rensselaer Polytechnic

Institute, Troy, New York. He was also a visiting professor in Chemical Engineering at Massachusetts Institute of Technology.

At Rensselaer Fred established the Rensselaer Color Measurement Laboratory and created a learning environment in which color topics could be studied and researched, the science of color advanced, and the advancements brought to a wide range of industries. The program produced more than 30 M.S. and PhD students. Fred teamed with Max Saltzman to write a '... truly elementary book serving as an introduction to the field of color and the use of color in industry.' The first edition of Billmeyer and Saltzman's *Principles of Color*

Technology was published in 1966. Through a follow-on edition in 1981 and an expanded collaborative edition with Roy Berns in 2000, it remains a seminal text for color professionals around the world.

Fred served as a Director, Vice President, President and Secretary of the Inter-Society Color Council (ISCC). He received the Council's Macbeth Award in 1978, the Nickerson Service Award in 1983, and the Godlove Award in 1993. He was made an Honorary member of the Council in 1987. He was also an active member of the American Society for Testing and Materials (ASTM) and contributed more than a dozen important and widely used consensus standards. Fred served as a trustee to the Munsell Color Foundation, was a life member of the U.S. National Committee of the International Commission on Illumination (CIE) and was active with the International Colour Association (AIC). In 1999 he received the AIC Deane B. Judd Award in recognition of his lifetime of significant contributions to the field of color.

Another of Fred's lasting legacies to the color world was the journal *Color Research and Application*. He was instrumental in establishing the journal in 1976 and served as its Editor-in-Chief for ten years. He was known for contributing an extra measure of time and attention to ensure that the journal represented the best in scholarship and, at the same time, strived to encourage articles from all color fields and from all over the world. It was his leadership and policy that was instrumental in the journal being sponsored by national organizations from seven countries in addition to the ISCC in the United States.

Fred retired from Rensselaer in 1984 after which he held the title of Professor Emeritus. He was the author of some 280 papers in the fields of polymer chemistry and color science, and author or co-author of the books *Textbook of Polymer Chemistry*, *Textbook of Polymer Science*, *Synthetic Polymers*, *Experiments in Polymer Science*, *Entering Industry*, and *A Guide for Young Professionals* as well as *Principles of Color Technology*.

Fred was America's premier educator in color science for over 20 years. Throughout his career he was honored by the many technical organizations to which he contributed. But the legacy that any educator hopes for most is

successful students. Fred, unabashedly, was most proud of his graduates from The Rensselaer Color Measurement Laboratory. Many are today's leaders in color science and technology.

IN MEMORIAM – VERA GOLOB



Prof. Dr. Vera Golob

In the month of May, when nature bursts in its amazing colorful beauty, our highly esteemed and beloved colleague Prof. Dr. Vera Golob suddenly died in her fifty-first year, full of creative energy and plans for future work. Ruthless fate has taken away one of the most eager promoters of coloristic activities in Slovenia, which have become, mostly due to Vera's endeavor, recognized not only in Europe, but also world-wide.

After high school, Vera Golob enrolled at the then Engineering College in Maribor, Slovenia, to study textile technology. She graduated in 1980 with a diploma work entitled *The influence of Temperature and Quantity of Bound Disperse Dyestuff in Textile Printing*, which was a pioneer work in the field of colorimetric evaluation of color in Slovenia, and at the same time, the first step in her future way into the world of coloristic research. In 1983 she started her academic career as a teaching assistant in textile/chemical technology.

With her M.Sc. thesis on *The Validity of the Kubelka and Munka theory* (1989) she only

deepened her knowledge of color science. In 1994 she defended her doctoral thesis *Photoacoustic Spectroscopy in Computer Aided Recipeing with Disperse Dyes* and was promoted to the academic title Assistant Professor in textile technology. Due to her outstanding research performance, she became Associate Professor in the year 2000.

Her research activities were closely interlaced with the program of the Institute of Textile Chemistry at the then Faculty of Technical Sciences, University of Maribor. She was the driving force of the Laboratory for Colorimetry founded in 1984, the Yugoslav Color Centre (1989), and the Slovenian Color Centre from 1991 onwards. She was yearlong head of the Laboratory for Dyeing, Colorimetry and Environment-Friendly Finishing.

Dr. Vera Golob was one of the initiators and founders, and also vice-president of the Association of Colorists of Slovenia, which was formed in 1992 following the criteria of international associations. She was also responsible for the Textile Section and for international cooperation. In 1992, the Association of Colorists of Slovenia became a full member of the AIC (Association Internationale de la Couleur). The Center, later the Association, has organized six international meetings *Color and Colorimetry*, (the first one in 1984) under the leadership of Dr. Vera Golob.

She was a much liked and respected university teacher of courses on textile chemistry, colorimetry, ecology and textile finishing. She was tutor to many university graduates, young researchers and doctoral students.

Prof. Vera Glob was also a successful researcher known to the international colorist community. Many national, i.e. Slovenian, and international projects were carried out under her leadership. She devoted special care to keeping laboratories for experimental work well equipped with advanced apparatus.

She also cultivated a number of fruitful cooperative links with textile industries and institutions in Slovenia and abroad. She was invited as a guest to various foreign universities, faculties, institutes, centers and companies (BAM Berlin, DWI Aachen, Uni Leeds, Ciba-Geigy, etc.)

Her contribution to the development of color science and colorimetry in Slovenia is incorporated in the monographs *Interdisciplinarity of Color, Part 1: Science, Part 2: Application*. She also authored the book *Color and Textiles*, published in Italy.

She presented the results of her extensive research work at numerous international conferences at home and abroad. Our dear colleague has left us a bibliography of 326 units, a legacy of exceptional value.

In addition, Prof. Dr. Vera Golob was active in various high offices on the university level and at the Ministry of Science, Technology and Education of Slovenia, for which she received much acknowledgement.

Stunned by her sudden death, deeply grieved, we cannot but wonder why almighty fate has chosen to take away from us such a rich personality, a researcher so highly esteemed, a university teacher so much liked, and a colleague so warm and friendly. All that remains is our memory of a grand person and a dedicated, tireless researcher. All of us, who have loved her dearly, will miss her very much.

Prof. Dr. Slava Jeler
Slovenian Colorists Association

ARGENTINA

Grupo Argentino del Color

The Argentine Color Group was founded in 1980, and brings together institutions and individuals whose interest is the study of color science and color applications. The goals of the Group are to encourage research on problems related to color, to promote the exchange of information with similar associations abroad, to hold a center of documentation, and to integrate the different fields from which the study of color can be addressed: science, technology, art, design, etc. For further information, visit the website: www.fadu.uba.ar/sicyt/color/gac.htm.

Activities

ArgenColor 2004, 7th Argentine Color Congress: 9-12 November 2004, Buenos Aires, Argentina. The congress was held in the School of Architecture, Design and Urbanism of Buenos Aires University. The general thematic areas were: 1) color science and technology, 2) color and the arts, 3) color in architecture and design, 4) color education. The main languages were Spanish, English and Portuguese.

National Color Workshop 2005: 15-16 April 2005, Mar del Plata, Argentina. Organized by the Argentine Color Group and the Group of Art of the School of Architecture, Design and Urbanism of Mar del Plata University. During the workshop, 69 papers were presented, some of them giving rise to interesting discussions. The abstracts of the papers were published in a compilation by María Paula Giglio, with a foreword by María L. F. de Mattiello.

Next workshop: Color meeting in Olavarria, Buenos Aires province: 14-15 October 2005. Organized by Alicia M. Gaisch and Teresita Kessler at the School of Engineering of Universidad Nacional del Centro, Buenos Aires province. The aim of this meeting is to promote new subjects for discussion, especially related to industrial applications. The invited lectures are:

- María L. F. de Mattiello: *The present relevance of scientific associations*
- José Luis Caivano: *Overview of color research in the context of AIC meetings*
- Roberto Daniel Lozano: *Color and appearance in industry*
- Marcela Rojas: *Relevance of color and its measurement in the graphic industry*
- Juan Bovies: *Affinity of colorants in front of different textiles*

Publications

GAC Revista (journal and newsletter): Three issues were published during this period: Nr. 20 (August 2004), Nr. 21 (December 2004), and Nr. 22 (August 2005), with 32, 28, and 12 pages, respectively. *GAC Revista* is distributed among GAC members, AIC national member organizations, some libraries, and other interested people. We invite other AIC member organizations to send their newsletters in exchange.

Color: Arte, Diseño, Tecnología y Enseñanza, compiled by José Luis Caivano, Rodrigo H. Amuchástegui and Mabel A. López, and published by Grupo Argentino de Color in August 2004; 583 pages containing the full papers of the congress ArgenColor 2002.

Other activities and information

Study groups: Promoted by the president of GAC, three study groups were constituted, related to industry, education and research. They are chaired by GAC members.

With the creation of these study groups, the GAC expects to promote new color researches that will nurture the next scientific meetings.

- SG I, Industry: Chair: Claudio Salvador
- SG II, Education: Chair: Liliana García Ferré
- SG III, Basic Color Research: Chair: María L. F. de Mattiello

Library:

The holdings of the GAC library can be seen at www.fadu.uba.ar/sicyt/color/bibliote.htm. We accept donations of books, journals and newsletters related to color, and encourage the exchange of publications.

Website:

The website of the Grupo Argentino del Color, www.fadu.uba.ar/sicyt/color/gac.htm, contains the following information: the Statutes of the Group, the list of current officers, publications available (including the Proceedings of AIC Color 1989), the newsletters, present and past congresses (including all the abstracts), membership form, library holdings, a link to the color bibliography, and a whole page with links to the AIC and other AIC national members. The GAC will appreciate if other national color associations include links to its website.

GAC representatives: Executive Committee

As a result of the election, the officers of the Argentine Color Group are now:

- María L. F. de Mattiello (president, until 2008)
- Mauricio Rinaldi (vice-president, until 2006)
- Marcela Murgia (secretary, until 2008)
- Cristina Manganiello (under-secretary, until 2006)
- Laura Quaintenne (treasurer, until 2006)
- Ingrid Menghi (vice-treasurer, until 2008)
- Omar Burgos, Hugo Sinelnicof (vocals, until 2006)
- Liliana García Ferré, Fernando de Uribe Larrea, Marcela Römer (vocals, until 2008)
- Roberto Daniel Lozano, Diana Varela (auditors, until 2006)
- Jorge Sánchez (auditor, until 2008)

Grupo Argentino del Color
SICyT-FADU-UBA
Ciudad Universitaria Pab. 3 piso 4,
C1428BFA Buenos Aires, Argentina
Tel. (54-11) 4789-6289.
E-mail: gac@fadu.uba.ar
Internet:
<http://www.fadu.uba.ar/sicyt/color/gac.htm>

AUSTRALIA

Colour Society of Australia

Activities:

The year 2004 was one of slightly reduced activity for The Colour Society of Australia, as it was the year between our biennial conferences, however the individual State committees continued to organise successful monthly or bi-monthly events for members.

The recently reinstated Tasmanian and Queensland Divisions continue to operate with enthusiasm and activity in Western Australia is very evident.

The Victoria Division, who organised our 2003 Biennial Conference, were a little quieter this past year as were activities in South Australia.

Executive Committee:

The National Executive of The Colour Society of Australia continues to reside in Sydney. The President is Ms. Annamarie di Cara (NSW), President Elect Mr. Derek Grantham (Vic), National Secretary Mr. Nick Harkness and National Treasurer Mr Bryan Powell. Dr Ken Pidgeon is Past President.

The Society:

The Colour Society of Australia was inaugurated in 1987 and has Divisions in New South Wales, Victoria, Western Australia, South Australia, Queensland and Tasmania. The membership is drawn from people whose work and interests involve colour. Our objectives are:

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

Publication:

SPECTRUM, the Journal of the Colour Society of Australia, is published three times a year and continues to be of exceptionally high quality. It contains information about events and developments within the Society and the international colour arena, as well as including the texts of papers delivered at the national conferences and divisional meetings and encourages the submission of original material. Significant improvements to its appearance have occurred with the provision of Colourful Covers.

International links:

We wish to interact more with overseas people who are venturing "down under". We have the ability to host visitors from overseas to each of the states, and are keen to foster more movement of colour knowledge this way. If you are planning to visit, and have something relevant to say about Colour, then please make contact with me.

We acknowledge with gratitude the significant contribution to the International Colour community of one of our Past Presidents, Mr. Paul Green-Armytage, who relinquished his position as AIC Vice President in 2004.

We are delighted that the AIC have accepted our bid to conduct the 2009 Congress at Luna Park, Sydney, and look forward to welcoming many AIC delegates and guests to our shores then and are expecting a significant number of our members to be present at AIC 2005 in Grenada.

Australia will maintain a continuing involvement with the AIC Executive Committee when Nick Harkness becomes a member from 2006 onwards.

Ken Pidgeon

REPUBLIC OF BULGARIA

Color Group–Bulgaria

Activities:

In 2004 Color Group–Bulgaria (CGB) carried out the following activities:

Conference on the subject: *Color, Light and Architecture*, organized together with the University of Architecture, Construction and Geodesy, and the Union of Bulgarian Architects. More than 14 reports were presented. The conference was accompanied by an exhibition of work by students in the domain of color in architecture.

In June two large exhibitions were held simultaneously: *The Life of Colors*, organized by Color Group-Bulgaria, and *The Temple of Color*, organized by Prof. Albert-Vanel (France). These large-scale activities presented very favorably its authors and organizers. The exhibition of CGB presented by means of posters, models, installations, pictures, and photographs a wide spectrum of thematic trends: the history of CGB, the history of color science, as well as color in architecture, design, photography, polygraphy, painting, ceramics, textiles, chemistry, standardization, and color education (about 150 posters altogether). Such an exhibition has never been held in Bulgaria and it made a strong impression on the visitors; more than 1000 persons attended it for a couple of days, and it was properly covered by the mass media.

The exhibition of Prof. Albert-Vanel emphasized the role of color combinations by means of examples, taken from the philosophic thought of China, India, Japan, Islam, Judaism and European culture.

At the same time another event took place: the exhibition *Color and Architecture in France* by Mr. Goyeneche, organized together with *l'Institut Francais* in Sofia.

In September CGB organized and held an International conference on the subject *Color and Cultural Heritage: Color in Restoration and Conservation*. Specialists from Japan, France, Germany, Italy, Canada, Great Britain, Serbia and Montenegro, as well as Bulgaria, took part. The scientific reports dealt with a great variety of problems. The organized trip to the Thracian Tomb from the fourth century B.C. deeply

impressed the participants; that became apparent during the round table debate.

In December a conference was held on the subject *Color and Psychology*. 15 reports were presented, with the strong assistance of students and young specialists. At that conference CGB celebrated the anniversary of Associate Professor Todor Kehlibarov, the founder and Honorary President of Color Group-Bulgaria. He received a series of congratulatory addresses, medals, etc. Professor Kehlibarov continues his vigorous activity in the Board of CGB and constantly assists the development of our Group.

President: Krassimir Krastev
Secretary: Margarita Ivanova

Address for contacts:
1000 Sofia, P. O. Box 744,
Bulgaria
E-mail: colorgroup@abv.bg
color_bg@hotmail.com

FINLAND

Suomen väriyhdistys – The Finnish Colour Association

Activities:

The activities of Suomen väriyhdistys (The Finnish Colour Association) during 2004 were characterized by a strong emphasis on issues of environmental colour.

Colour Theory Day under the theme *Old Colours of Helsinki* was held on 16 April 2004. This half-day lecture series, the fifth of its kind and the second to be organized collaboratively by University of Art and Design Helsinki and the FCA, was chaired by FCA's vice-president Esa Laaksonen. The speakers were architect Aulikki Korhonen from Aki Davidsson Architects, engineer Juha Lemström from Engel suunnittelupalvelu Oy, architect Kati Winterhalter from Okulus Architects and chief conservator Pentti Pietarila from the National Board of Antiquities. The talks included case studies of colour restorations of classicist and modernist sites in Helsinki as well as an overview of architectural colour and surface materials in the city through its history. The seminar language was Finnish.

The Association organised three excursions to architectural sites in Helsinki. The Sinebrychoff Art Museum of Old European Art had received in 2003 a Nordic prize for the colour design of its renovation. FCA member, Architect Caterina Casagrande-Mäkelä, who has designed the new interior colours of the Mehiläinen Hospital Group, gave a guided tour of its newly renovated main building in Helsinki. FCA member, architect Mia Bungers introduced the new headquarters and service centre of the Finnish Federation of the Visually Impaired (FFVI), which is noted for careful attention to the needs of its clients and visitors as well as for high aesthetic quality of its architecture.

Website:

The Association's web pages were enlarged to include questions and answers columns as well the possibility for a weblog page. One of the Association's aims has been to help its members bring together their skills and knowledge of

colour on various projects. This year saw fruitful collaboration around three book projects.

Prize:

The Finnish Colour Association's Annual Prize for Excellence in the Use of Colour, the Iris-Prize, was officially launched and received seven nominations by the end of the year. The winner was announced in February 2005.

Executive Board:

The executive board in 2004 consisted of:

Mr. Harald Arnkil (chairman)
Mr. Esa Laaksonen (vice-chairman)
Mr. Lauri Niemi (secretary-treasurer)
Mr. Martti Huttunen
Ms. Mirjam Martevo
Mr. Antti Porkka
Mr. Markku Pääkkönen.

Deputy members were:

Ms. Päivi Hintsanen
Ms. Taru Huokuniemi.

The board met five times during 2005 and the Association's membership grew to almost 80 members.

GREAT BRITAIN

The Colour Group (Great Britain)

The object of the Group is to encourage the study of colour in all its aspects and to promote the education of the public in the field of colour.

The Group was founded in 1940 as a group of the Physical Society, but in 1960 became an independent organisation open to non-physicists as well as physicists. It was registered in 1961, as a company limited by guarantee, and in 1995 became a registered charity.

The Group generally holds meetings on the first Wednesday of every month from October to May on a very wide range of topics; some topics are revisited at intervals and some meetings are held in conjunction with other societies. There is a strong interest in the Group from the artist community – equally there is always a good attendance from scientists at the more art-orientated meetings!

The Newton Lecture is presented every two years and the medal was last presented in December 2003. The J M W Turner Medal is also presented every two years, honouring an artist or art historian eminent in the field of colour – an Award was made in April 2003.

The WDW Travel Awards were instituted by W David Wright and to enable post-graduate students to attend conferences.

In 2003, the Colour Group was privileged to receive a legacy from the estate of the late Dr David Palmer and this generous gift has been recognised in two ways. The first annual David Palmer Lecture was presented in January 2004, and 5 Palmer awards were made to enable people to travel to conferences. In addition, 3 WDWright awards were made during 2004, as well as 2 MacDonald-Green awards funded by the generous donation of royalties from the sale of the book 'Colour Engineering'.

Recent Newton Lecturers

2001 John B Hutchings
2003 Dr Jim Nobbs

Recent J M W Turner Lecturers

2001 Martin Kemp
2003 Roy Osborne

Meetings during 2004:

7 January 2004 – Vision Meeting

Colour constancy in context: roles for local adaptation and levels of reference

Hannah Smithson, Qasim Zaidi

3D shape-colour interactions in a real object similarity task

Yazhu Ling, Anya Hurlbert

Sex differences in colour preference

Anya Hurlbert, Y Ling, L Robinson

What maintains the colour vision polymorphism of New World monkeys?

N I Mundy, A Surridge

DAVID ALLAN PALMER 1933-2000

John Mellerio (University of Westminster)

David Palmer Lecture: The different perceptual worlds in which we live

John Mollon (University of Cambridge)

Modelling anomalous colour vision: the role of photopigment optical density

P B M Thomas and J D Mollon (University of Cambridge)

4 February 2004 – The Measurement of Appearance

Modelling colour harmony

Li-Chen Ou (University of Derby)

Visual appearance - a framework for measurement

Mike Pointer (National Physical Laboratory)

3 March 2004 – Visual Displays

Joint meeting with the Institute of Physics - Printing, Packaging and Papermaking Group
Accuracy of 3D displays

Christine Wall (National Physical Laboratory)

3D medical imaging using VOXEL holography

Hans Bjelkhagen (De Montfort University)

Colour holography

Hans Bjelkhagen (De Montfort University)

Is precision a life or death decision when measuring medical displays?

Christine Wall (National Physical Laboratory)

An introduction to polymer LEDs

Nicky Athanassopoulou (CDT)

31 March 2004 – Colour in Forgeries

The use of colour in security printing

Matthew Sugden (De La Rue Group)

Painting a new old master

Leo Stevenson

12 May 2004 – Annual General Meeting

Colour and Conservation

Ian Bristow

8 September 2004

Joint meeting with the British Computer Society

Electronic Publishing Specialist Group

What designers need to know but often forget about colour in print

Conrad Taylor (Ideography)

Colour interactivity/usability and brand

Daniel Letts & Hazel MacMillan (Wolff Olins)

The eye of the beholder

Christine Rigden (BTextax)

Colour management and interoperability

Craig Revie (ICC)

Colour control in the digitisation of photographs and artwork

Phil Green (London College of Communication)

Display calibration and Internet publishing

Lindsay MacDonald (London College of Communication)

The design of the National Gallery's Poster on Demand system

John Cuppitt (National Gallery)

6 October 2004 – Awards Meeting

Monkeys categorise colours differently to humans

Julia Goldstein (Goldsmiths College)

Background - an essential factor in colour harmony

Helen Gurura (London College of Communication)

From scene to screen: colour accuracy in computer simulations used for psychophysics

Alexa Ruppertsberg (University of Bradford)

Removing Shadows from Stained Glass Windows

Shanmugalingam Suganthan (University of Derby)

11 November 2004 – Mesopic Vision Symposium

Invited talk: In the twilight zone: the complexities of mesopic vision

A Stockman (Institute of Ophthalmology)

Brightness contrast perception in the mesopic region

J P Freyssinier, M Rea and J Bullough (Rensselaer Polytechnic Institute)

Severity of road traffic accidents: the detrimental effect of low lighting

S Plainis and I Murray (University of Crete, UMIST)

Visual performance in night-time driving conditions

M Eloholma, J Ketomäk, P Orreveläinen and L Halonen (Helsinki University of Technology)

A recognition threshold experiment with quasi-monochromatic mesopic visual targets

G Várady, P Bodrogi and J Schanda (University of Veszprém)

Target detection and driving behaviour in a driving simulator at mesopic light levels

J Alferdinck (TNO Human Factors)

Simulating night-time driving in a virtual reality environment

A Szalmás, P Bodrogi and J Schanda (University of Veszprém)

Characterising mesopic spectral sensitivity using reaction times

H Walkey, J Harlow and J Barbur (City University)

Modelling mesopic efficiency curves

A Forbes, H Walkey and T Goodman (NPL, City University)

Spectral effects in escape route lighting

M Mulder and P Boyce (Rensselaer Polytechnic Institute)

Mesopic chromatic contrast sensitivity in anomalous trichromats

E Liggins, I Moorhead, P Ward, I Murray (Rensselaer Polytechnic Institute, UMIST)

The assessment of functional visual performance in the mesopic range

J Barbur (City University)

1 December 2004 – Science Meeting

Artist's eyes - some problems

Robert A Weale (King's College London)

What colour socks am I wearing?

Donald McIntyre

Gloss, and how to measure it

Andrew Hanson (National Physical Laboratory)

Iridescent coloration of bird plumage

Daniel Osorio (University of Sussex)

Website:

Our website is at www.colour.org.uk and we welcome new members from every country, and with any interest in colour.

ITALY

Associazione Ottica Italiana (AOI)

Talking about AIC

The increasing interest for color in Italy is accompanied by the creation of new associations, to give various opportunities to people with common interests: learning, teaching, preparing a vocabulary, organize meetings. Numerous requests are addressed to the AOI, in particular concerning the AIC. Accordingly, in 2004, we pursued the editorial activity started in 2003 by preparing bibliographical material, for (free-of-charge) distribution.

Publications:

The publications currently available are:

- *Luce e Immagini*. Two volumes (700 pages) including the re-printed issues of the AOI Journal *Luce e Immagini* from 1995 on (in Italian)
- S. Villani – ‘Vision and Optometry in AIC Meetings (2000-2003)’. *Luce e Immagini*, N° 4, Dec. 2004 (in Italian)
- *The Advanced Research, seen from the AIC, in the III Millennium: Seoul, 2000; Rochester, 2001; Maribor, 2002 ; Bangkok, 2003*. Of general interest, but particularly requested by Architects and Lighting Engineers, consisting (so far) of three parts:
 - Part I – L. Ronchi, S. Rizzo – *Color and Environment*, Fond. G. Ronchi, Florence, Italy, Vol. 78, 107 pp. (2003) (in Italian)
 - Part II – L. Ronchi – *Color and Language*, Fond. G. Ronchi, Florence, Italy, Vol. 81. 117 pp (2004)(in Italian)
 - Part III – L. Ronchi, C. Oleari, S. Rizzo – *Color in Art, Landscape, and Colorimetry*, Fond. G. Ronchi, Vol. 84. pp.124 (2004) (in Italian)
- Slava Jeler (ed.) *Textiles and Colour*, Fond. G. Ronchi, Florence, Italy, Vol. 82, pp 84 (2004) (in English)
- G. Senini, E.I. Sigurtà, *Color Vision and its use in Psychodiagnostic Clinical Testing- An abridged manual and a glossary*, Fond. G. Ronchi, Vol. 86, (in Press)

Participation in AIC Meeting:

Eight Italians (authors and co-authors) attended, in one form or another, the Midterm AIC 2004 *Color and Paints* meeting in Porto Alegre, Brazil, 2-5 November 2004, that is:

- O. Da Pos, *Why do colors become fluorescent?* (Invited paper, opening session)
- L. Luzzatto, R. Pompas, *Teaching color plans* (Oral paper)
- S. Rizzo, *Making color: pictorial art training for environmental color design* (Poster)
- L. Ronchi, N. Rositani, *Linking painting to visual science: creativity versus quantification in the Lab.* (Poster)
- R. Salardi, P. Rao, *Cultural and scientific association for color* (Poster)

AIC Study Groups:

The interest of various Italians in the ECD, Environmental Color Design Study Group, is certainly favoured by the marvellous chairmanship of Caivano and Co., who, in particular, activated a very fast and efficient method for inter-member communication.

The VIAE, Visual Illusions and Effects Study group is chaired by Osvaldo da Pos (Univ. of Padova, Italy).

AOI Study Groups:

The Study groups quoted in the previous Newsletters, generally resulted in a satisfactory participation. Two new Study Groups started in 2004

- *Light in painting*. This topic is nowadays of great interest. A research program has been presented at the Annual National Meeting of the AIDI (Italian Association for Illumination) (Genova, 14-15 November) by L. Ronchi and P. Soardo in their invited paper entitled *Visual effects of natural light in painting*, with the cooperation of Prof. Laura Felici of the National Institute of Art of Florence, headed by Prof. Marianna Franceshini. The Study Group aims at identifying and detecting the ‘visual effects’, specifically created in the painted scene by natural light, with particular attention to the color. These effect should be preserved both when restoring and when illuminating the canvas..Of particular interest are the ‘indefinable’ colors created by Seurat’s (spatially irregular) pointillism.
- *Climatic environment in Tuscany*. Arch. Mariachiara Pozzana with her group has proposed and is undertaking a research program. First of all they segment Tuscany in a number of sub-regions exhibiting particularly outstanding differences in

appearance in terms of the triad light, color, vegetation). Next, they document the general aspects (geographical, historical, agricultural) of each sub-region. All these data should then find their proper location in a three-dimensional model, on the “axes” of which, the local variables, light, humidity and temperature are displayed. This requires a computer-assisted monitoring of the selected regions, simultaneously, at regular time points, by arranging the proper instrumentation on a number of vehicles (similar to those already existing for the regular control of the territory)

Courses and Seminars:

In Italy, the interest for color, in various fields, is increasing day after day. Accordingly, various courses are conducted, at various levels and with various durations. It would be hard to report about all of them. Here are some examples:

The seminars of Silvia Rizzo, at the Faculty of Architecture of the University of Genova, have been:

- *Experiencing color: from expression to project* – Loggia dei Banchi, March 2004 (in the frameworks of their ‘Color Laboratory’ and ‘Genova, European Capital of culture for 2004’)
- *Travelling across color* – March-April 2004
- *Contemporary Architecture* – May 2004

The AOI President, Prof. Sergio Villani, is pursuing the educational activity in matter of color vision and its use in various professions, In 2004, he has been teaching in the framework of the project entitled *Continued up-to-dating in Medicine* (ECM) sponsored by The Italian Ministry of Education, and organized at the Polytechnical Institute for Optics and Optometry at Termoli (CB). The courses are entitled: *Color and ocular refraction* and *Color vision and pathologies of the visual pathway*. As recommended by the WHO.

Lucia R. Ronchi, AOI
FAX: ++ 39. (0)55. 22 20 90
e-mail <n.rositani@flashnet.it>

JAPAN

The Color Science Association of Japan (CSAJ)

Meetings:

- The 35th annual meeting of the CSAJ was held at Nagoya University (Nagoya City) on May 15-16, 2004. Participants in the meeting numbered about 280. Sixty five papers were presented from various fields of color science, design and its applications. The invited lecture was given by Dr. Kenkichi Tanioka (NHK Science and Technical Research Laboratories) on *Development and application of ultrahigh-sensitivity HARP camera tube*.
- Color Forum Japan 2004 was held at Kogakuin University (Tokyo) on Nov. 16-18, 2004.

Awards:

- 2004 CSAJ Presentation Encouraging Awards: Masako Yamada (Waseda Univ) and Kumiko Kikuchi (Chiba Univ).
- 2004 CSAJ Award: Takayoshi Kaneko (Emeritus Professor of Tsukuba University)
- 2004 CSAJ Research Encouraging Award: Shoji Sunaga (Kyushu University)

Study Groups:

In 2004, CSAJ has 11 study groups: Color Design, Environmental Color, Illusion, Curriculum for Color Education, Tutorial Materials for Color Education, Personal Color, Colorimetry, Color Vision, Color in Image, Whiteness, Safety Color

Publications:

- The Journal of the Color Science Association, volume 28, number 1-4 and Supplement, 2004 were published.
- CSAJ News was published bimonthly.

2004 Board Members:

Hiroshi Kansaku	(President)
Hitoshi Komatsubara	(Vice-President)
Shoji Tominaga	(Vice-President)
Hiroshi Hasegawa	(Chair of Kanto Chapter)
Masayuki Otake	(Chair of Tokai Chapter)
Kohji Ogata	(Chair of Kansai Chapter)
Goro Baba	
Taiichiro Ishida	(Liaison with AIC)
Kenji Kitahara	
Mitsuo Kobayashi	
Yoko Matsuda	
Masanori Matsuzaki	
Satoshi Mizutani	
Haruyo Ohno	
Seiichi Onobori	
Hiroaki Sobagaki,	
Takuzi Suzuki	
Tsuneo Suzuki,	
Shinya Takahashi	(Treasurer)
Hirohisa Yaguchi	
Yasuo Ohta	(Audit)
Naoyuki Osaka	(Audit)

PORTUGAL

Portuguese Colour Association

The Portuguese Colour Association (PCA) draws together artists, designers, architects, psychologists, physicians, scientists, technicians and engineers that are interested in a broad range of aspects of colour as educators, researchers, students and professionals. The nature of the PCA is inherently multidisciplinary as it congregates institutions, groups and people with a multiplicity of backgrounds. However, the PCA aims to become growingly cross-disciplinary, and its main challenge is to provide the forum for the exchange of knowledge and ideas for ongoing research, in meetings, conferences, seminars, workshops and exhibitions. In doing so, the PCA creates bridges between and across disciplines while contributing to the development of colour education, research and application.

Mission:

The PCA was founded by a group of researchers and participants in the Master Degree Course of Colour in Architecture, taught at the Faculty of Architecture of The Lisbon Technical University. The inauguration of the PCA-the Encaenia- was celebrated on the 7th June 2003 in the presence of Prof. Dr. Byron Mikellides, Head of the Colour Research Section of the School of the Built Environment at Oxford Brookes University.

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

The PCA fosters scientific research in relevant areas of colour application such as in the study of vision and colour perception, the psychophysiological effects of light and colour, the influence of lighting in the perception of space, and in the studies that involve the complexity of environmental renovation.

The PCA aims to establish links with industry by engaging science and technology in the areas of

colour measurement, colour appearance, digital colour and web design, lighting technologies, optics, chemistry, pigments and materials as well as in the traditional technologies of textiles, ceramics and the *azulejo*.

The PCA also encourages theoretical research and cross-cultural studies in the fields of communication, symbology, aesthetics, anthropology, history, phenomenology, museology, issues that pertain to the domains of ecology and sustainability as well as in the practice of colour education.

Membership:

The members of the Portuguese Colour Association represent the activity of colour in Portugal in the following institutions and fields:

Instituto Superior Técnico

Research in pigments, materials and technologies. Colour measurement. Colour appearance models and applications. Technical exploration of methods of colorimetry (Prof. Dr. António Mouraz Miranda).

Laboratório da Cor da Faculdade de Arquitectura, Universidade Técnica de Lisboa

Multidisciplinary research related to the undergraduate courses of Architecture, Interior Architecture, Design, Fashion Design, Urban Planning. Cross-cultural colour preference studies. Study of colour palettes for historic sites in the cities of Lisbon and Porto. Colour in Interior Spaces: Analysis of Human Behaviour in Working Environments. (Head: Prof. Dr. Maria João Durão).

Laboratório da Cor do Departamento de Física, Universidade do Minho, Braga

Colour vision-physics and psychophysics. Colour perception. Colorimetry methods. Colour appearance models. Colour reproduction. (Head: Prof. Dr. Sérgio Nascimento)

CIFAP- Centro de Investigação e Formação Avançada em Psicologia, Instituto Piaget, Almada e Viseu

Phenomenology and aesthetics. Colour preference and behaviour. Creativity and human performance. (Prof. Dr. Anabela Mendes)

Centro de Ciências e Tecnologias Ópticas - CETO, Porto

Perceptual phenomena and colour vision mechanisms. Physiology and optics. Technological transfer. (President: Prof. Dr. Manuel Pais Clemente)

Câmara Municipal de Lisboa

Colour palettes for historic areas and sites in Lisbon. Definition of colours for heritage studies. Geography of colour. Definition of chromatic palettes for cultural and historic identity. Urban renovation and regeneration. (Arq. Luis Bissau, Prof. of the Master Course of Colour in Architecture, Faculty of Architecture of Lisbon)

Instituto de Oftalmologia Dr. Gama Pinto, Lisboa

Neurology of vision. Joint optical studies on colour vision. Technological transfer and research partnership.

Urban Colour and Renovation Studies, Porto

Study of colour palettes for historic sites. Stratigraphic studies. Applications of colour to the city of Porto and to the Azorean islands. (Arq. Pedro Abreu)

Cinamateca, Lisboa

Partnership in research programs in the art related field of image studies and the cinema. Joint academic debates, workshops and seminars.

CIN Paints

Environmental colour research. Urban renovation and regeneration. Colour in historic sites and places. Colour surfaces and perceptual colour dimensions. Colour measurements. Colour pigments and paints. Colour materials and technologies.

The following members are faculties and schools of correspondent level of education that lecture undergraduate courses. They all educate in the areas of art, design and architecture and therefore, constitute the ideal experimental setting for transference of colour knowledge and research and debate on the complexities of the issues involved in colour education. This link allows for the testing of colour education methodologies and contents and in parallel, provides a historic and symbolic approach to art education which acts as a source for colour knowledge.

- Faculdade de Belas Artes do Porto, Universidade do Porto. Faculty of Fine Arts of Porto.
- ESAD - Escola Superior de Artes e Design, Matosinhos College of Art and Design.
- ESAD - Escola Superior de Artes e Design, Caldas da Rainha, Instituto Politécnico de Leiria College of Art and Design.
- IADE - Instituto de Artes Visuais, Design e Marketing, Lisboa Institute of Visual Arts, Design and Marketing.
- Faculdade de Arquitectura, Universidade Técnica de Lisboa Faculty of Architecture, The Lisbon Technical University.
- Escola de Artes, Leiria School of the Arts (Paulo Lameiro) Education for very young children. Core areas of study: music, theatre and dance. Colour in education: workshops and activities. Research on colour and lighting in working places and performing spaces; relations between colour and music composition, synaesthesia, and musicotherapy.

Research projects:

Topics of ongoing research projects for master thesis on Colour in Architecture, by the members:

Colour Materiality/ Materials and Technologies

- The role of colour in the discovery of new materialities (Zélia Simões)
- Environmental mutations from the action of light and colour (Filipa Santos)
- Matter, brightness and colour: Characteristics of the Azulejo and its importance in spatial perception (Carla Ferreira)
- Texture and aesthetic experience in architecture (Manuela Soares)

Geography of Colour

- Landscape colour analysis (Verónica Fernandes)
- Colour for the renovation of the urban image (Sandra Caldas)
- Colour management for social housing in 21st c. Lisbon (Cristina Pinheiro)
- Chromatic study for the historic centre of Palmela (Maria João Leandro)
- Colours of Porto (Helena Soares)

Colour Education

- Colour for Design Education (Margarida Gamito)

- Colour as a discipline in the Course of Architecture (Ana Marques)
- Influence of the exhibit space on the observation of a painting (Ivete Oleiro)

Phenomenology of Colour

- Metamorphosis of colour by the action of light and its importance in the perception of space (João Pernão)
- Colour in Health Facilities (Carlos Santos)
- Colour as a means for transforming exhibition spaces (Felipa Costa)

Aesthetics of Colour

- Le Corbusier and colour: A response to Modernism (André Almeida)
- Colour as means of experimentation for the European avant-gardes of the 20th c. (António Quadros Ferreira)
- Colour and concept: the work of Pancho Guedes (Luisa Marques)
- Colour in nautical architecture (Rui Potricka)

PCA Officers:

Board of Directors:

Maria João Durão	Chairman ..
Luis Bissau	Deputy Chairman
João Nuno Pernão	Secretary
André Mesquita	Treasurer
Margarida Gamito	Director

Audit Committee:

Carlos Santos	Chairman
Helena Soares	Director
Luisa Marques	Director

Officers of the General Meeting:

Felipa Vasconcellos	Chairman
Cristina Pinheiro	Secretary
Alexandra Quintas	Secretary

Professor Maria João Durão, PhD
 The President of the Portuguese Colour Association
 FACULDADE DE ARQUITECTURA
 UNIVERSIDADE TÉCNICA DE LISBOA
 Rua Prof. Cid dos Santos
 Polo Universitário .. Alto da Ajuda
 1349 - 055 Lisboa .. PORTUGAL
 Tel +351 213 615 000 .. Tel +351 213 625 128
 Fax +351 213 625 138 .. E.mail apcor@fa.utl.pt

SLOVENIA

Drustvo Koloristov Slovenije

During the year 2004 the Slovenian Colorists Association (SCA), at its Executive Committee meetings, meetings of the Education and Reserach Commission and of the Commission of International Cooperation and at the meetings of the Editorial board, discussed and carried out the activities in the program for 2004. These were:

Activities:

Regular activities:

- Distribution of the monograph *Interdisciplinarity of colour* part 1, part 2.
- Staff education
- Seminar organization
- Publishing of the monograph entitled *Colour and textiles*, published in Italy
- Participation in international meetings
- International activities

Seminar on *The meaning of colour in the 21st century*

The Slovenian Colorists Association organized on 10th of June, 2004, the meeting of experts entitled *The meaning of colour in the 21st century*. The meeting participated 47 experts from slovenian universities and industry.

SCA Regular meeting:

The SCA regular meeting was held on 10th of June, 2004. After the opening of the meeting the president's report, treasurer's report and other commission's reports were discussed. Also new members of the executive committee were elected.

International activities:

- international activities (AIC, IFATCC, DfwG, DFZ),
- active cooperation in International Newspaper Color Quality Club
- establishing new contacts and relations,

Our members took part in some international symposia and other annual regular meetings. Also this year SCA contacted some other associations abroad. With the help of Dr. Lucia Ronchi we successfully published in Italy the book *Colour and Textiles*.

Our members took part in some international symposia and their papers were published in different proceedings in 2004:

Publications:

Scientific monograph:

JELER, S. (ur.) *Textile and colour*. Firenze, Edizioni Tassinari, 2004. 84 str. ISBN 88-87057-26-5

Scientific articles in monograph:

STRNAD, Simona. 'Microspectrophotometry'. V: JELER, Slava (ur.). *Textile and colour*, (Fondazione Giorgio Ronchi, 82). Firenze: Editione Tassinari, 2004, str. 75-82. [COBISS.SI-ID 9362454]

GOLOB, Vera. 'Evaluation of colorant properties and textile-colorant systems'. V: JELER, Slava (ur.). *Textile and colour*, (Fondazione Giorgio Ronchi, 82). Firenze: Editione Tassinari, 2004, str. 59-73. [COBISS.SI-ID 9361942]

GORENSEK, Marija. 'Dyes and textile colour'. V: JELER, Slava (ur.). *Textile and colour*, (Fondazione Giorgio Ronchi, 82). Firenze: Editione Tassinari, 2004, str. [5]-19. [COBISS.SI-ID 1448816]

DIMITROVSKI, Krste. 'Colour designing multicolour fabrics'. V: JELER, Slava (ur.). *Textile and colour*, (Fondazione Giorgio Ronchi, 82). Firenze: Editione Tassinari, 2004, str. [39]-57. [COBISS.SI-ID 1449328]

SESLAR ZALOZNIK, Vera. 'We wear the colours inside (and we wear them outside)'. V: JELER, Slava (ur.). *Textile and colour*, (Fondazione Giorgio Ronchi, 82). Firenze: Editione Tassinari, 2004, str. [39]-57.

Original scientific articles:

GOLOB, Vera, CELAN BENKOVIC, Sonja, GOLOB, Darko, FAKIN, Darinka. 'Influence of anionic dye sorption properties on the color of wool top'. *Tex. res. j.*, 2004, 74, 7, str. 587-592. [COBISS.SI-ID 8913174]

GOLOB, Vera, OJSTRSEK, Alenka. 'Removal of vat and disperse dyes from residual pad liquors'. *Dyes pigm.* [Print ed.], 2005, vol. 64, iss. 1, str. 57-61. <http://dx.doi.org/10.1016/j.dyepig.2004.04.006>. [COBISS.SI-ID 8922390]

DIMITROVSKI, Krste, GABRIJELCIC, Helena. 'Correction of colour values of woven fabrics using changes to constructional parameters'. *Autex research journal*, 2004, vol. 4, no. 4, str. 187-191. <http://www.autex.org/No4-2004/0091.pdf>. [COBISS.SI-ID 1439856]

Scientific conference articles:

DIMITROVSKI, Krste, GABRIJELCIC, Helena. 'Influence of foundation reflectance on colour values of woven fabrics'. V: 25. medzinárodná konferencia Quo vadis textrinum, Strbské Pleso - Vysoké Tatry, 27.-29.4.2004. *Zbornik prednások*. Zilina: New Management Conferences: Česká odborná skupina tkalcovská, 2004, str. 15-24. [COBISS.SI-ID 1337456]

GOLOB, Gorazd. 'Upravljanje bojama - problem, izazov, rjesenje? = Color management - problem, challenge, solution?'. V: 8. *svjetovanje tiskarstva, dizajna i grafickih komunikacija Blaz Baromic, Lovran, Hrvatska, 23. - 24. rujna 2004 : zbornik radova : proceedings*. Zagreb: Sveuciliste u Zagrebu. Graficki fakultet, 2004, str. [135]-140. [COBISS.SI-ID 1399920]

Abstract of scientific conference article

POGACAR, Vojko. 'Twelve periods of seasonal color typology': oral paper. V: CAIVANO, José Luis (ur.). *Interim Meeting of the International Color Association, Porto Alegre, Brazil, November 2-5, 2004. AIC 2004 Color and Paints: book of abstracts*. [S.l.]: Brazilian Color Association, 2004, str. 81. [COBISS.SI-ID 9198870]

Members of SCA executive committee and other association SCA bodies 2004-2008:

Prof. Dr. Slava Jeler	President
Prof. Dr. Vera Golob	Vice President (till 2005; from 2005 Prof. Dr. Marija Gorenssek)
Dunja Legat	Secretary
Vera Mavrin	Treasurer

Andrej Zizek	Head of Architecture section
Doc. Vojko Pogacar	Head of Art section
Prof. Vera Seslar	Head of Design section
Mag. Gorazd Golob	Head of Graphic section
Mag. Natasa Barle	Head of Coatings and polymer section
Prof. Dr. Maks Tusak	Head of Psychology of colour section
Prof. Dr. Vera Golob	Head of Textiles section (till 2005; from 2005 Dr. Darinka Fakin)
Dusan Bozic, dr. med.	Head of Medical section

SCA home page:

SCA informs its members through the SCA home page on Internet (www.dks-drustvo.si).

Annual work plan 2005:

- organizing of the Slovenian colour experts meeting,
- preparing of the SCA regular meeting
- organization of seminars and lectures for our members,
- organization of an expert excursion,
- research program conducting,
- international activities (AIC, IFATCC, DfwG, DFZ),
- cooperation in the Commissions of the Association of the engineers and technicians of Maribor,
- member informing through the SCA home page on Internet (www.dks-drustvo.si).

Slovenian Colorists Association

Vetrinjska 16
2000 Maribor
Slovenia

President: Prof. Dr. Slava Jeler
slava.jeler@uni-mb.si

Vice president: Prof. Dr. Marija Gorenssek
marija.gorenssek@ntftex.uni-lj.si

Treasurer: Vera Mavrin

Secretary: Dunja Legat
legat@uni-mb.si

SPAIN

Comité Español del Color

The Color Committee of Spain (Optical Society of Spain)

Activities:

The *VII National Color Conference* was held at the Universidad Pública de Navarra (Pamplona, Spain), 19-21 May 2004, organized by Dr. Begoña Hernández's team (Optics Group, Department of Physics). The event was attended by about 140 people. A total of 91 papers were presented (36 oral, 55 posters), in addition to three invited lectures: *Color in my paint and in everyday life* by Pedro Salaberri (local painter), *Multi-channel visible spectral imaging: principles and applications* by Dr. Francisco Hideki Imai (Pixim Inc., USA) and *Myoglobin oxidation and meat colour* by Dr. Michel Renerre (INRA, France). A meeting report about our *VII National Color Conference* has been published in the journal *Color Research and Application*, **30**, 77 (2005). Some of the works presented at this meeting have also been published in a special section of the official journal of the Optical Society of Spain: *Óptica Pura y Aplicada*, **37** (1). At the end of this Meeting, the General Assembly of the Color Committee of Spain agreed that the two next National Color Meetings will be held in 2007 (Chair: Dr. Joaquín Campos, CSIC, Madrid) and 2010 (Chair: Dr. Francisco Martínez Verdú, University of Alicante).

A first meeting of the thematic network on *Acquisition, characterization and management of color images*, chaired by Dr. Joaquín Campos (CSIC, Madrid), and granted by the Spanish Ministry of Science and Technology, was held in Pamplona on May 18, 2004. This event included a special lecture about *Future Trends in Color Imaging* from Dr. Francisco Hideki Imai (Pixim Inc., USA), as well as presentations about main activities carried out by members of the network at the Spanish universities of Alicante, Granada, Politechnical of Catalonia, Zaragoza, and Metrology Department (CSIC, Madrid). Mention should also be made of the financial support for the exchange of young researchers, who have spent short research periods in different laboratories involved in the network.

The Color Committee of Spain renewed its endorsement of the American journal *Color Research and Application* (John Wiley), where 7 papers from Spanish authors were published in

2004. As mentioned in the AIC Newsletter No. 17 – 2003, for a long time our Committee strongly promoted the explicit inclusion of the topic 'color' among those included in the scope of the Journal of Optics A: Pure and Applied Optics (European Optical Society). We are happy to know that this goal has been achieved, and we hope it can be useful to color researchers worldwide.

Different members of the Color Committee of Spain have participated as invited speakers, session chairs, and members of the Scientific Committees of three relevant color meetings held during 2004: CGIV 2004 (Aachen, Germany, 5-8 April), AIC 2004 (Porto Alegre, Brazil, 3-5 November) and ArgenColor 2004 (Buenos Aires, Argentina, 9-12 November).

We cannot finish our report without a special mention to the 10th Congress of the International Colour Association, *AIC Colour 05* (<http://www.ugr.es/~aic05/>), which will be held in Granada (Spain), 9-13 May 2005, chaired by Dr. Javier Romero (University of Granada). The 7th International Symposium on Multispectral Color Science (MCS'05) will also be held in conjunction with *AIC Colour 05*. Both the Organizing and Scientific Committees of *AIC Colour 05* are making a through and strong work, leading to more than 420 accepted papers. We hope this scientific event will be very successful for all attendees, as well as being a landmark in the history of the Color Committee of Spain, since it was a founding member of the International Colour Association.

Board of Directors:

- Dr. Jaume Pujol (Universidad Politécnica de Cataluña), President.
- Dr. Angel I. Negueruela (Universidad de Zaragoza), Past-President.
- Dr. Joaquín Campos (CSIC), President-elect.
- Dr. Manuel Melgosa (Universidad de Granada), Secretary.

Website:

For additional and updated information on the activities of our Committee you are kindly invited to visit our web site:

<http://sedo.optica.csic.es/color/color.html>

SWEDEN

Stiftelsen Svenskt Färgcentrum Swedish Colour Centre Foundation

History:

In 1964, the Swedish Colour Centre Foundation was founded by IVA (Royal Academy of Engineering Sciences), The Swedish Design Council and industry to carry out interdisciplinary research and development within the colour field. Dr Anders Hård, the creator of the NCS-system, was appointed to lead the work together with well-known colour researchers such as Dr Lars Sivik (psychology) and Prof. Gunnar Tonnquist (physics) and, of course, Prof. Sven Hesselgren and many other influential architects, designers, teachers and industrial personalities.

Objectives:

The task of the Swedish Colour Centre Foundation is today:

- to encourage scientific research within the colour field of interest for industry, education and people working with colour
- to spread new knowledge and experience within the field of colour
- to be a natural centre for colour and colour research

Colour Day 2004 – A Big Colourful Anniversary!

The Swedish Colour Centre Foundation celebrates 40 years and NCS 25 years!

To mark these two jubilees this year's Colour Day 2004, arranged by The Swedish Colour Centre Foundation, was something very special, thanks to our sponsors. The theme of 2004 was *Colour and Experience* and, on this day October 21 in Stockholm, we gathered 220 participants. We ended up the day with a big celebration party with banquet, fashion show, music and laser show in an explosion of colours.

On the varying seminar program, we had the pleasure of introducing our key note speakers Dr Leonhard and Fatumata Oberascher to our Swedish audience. Dr Oberascher presented their studies in colour and emotion and he also gave the audience the opportunity to take part in the study with a short questionnaire about colour and associations.

The Colour Day was opened by Tomas Hård, the president of the Scandinavian Colour Institute AB, with a lecture titled *Looking back for the*

future – Colour Centre 40 years and NCS 25 years! He gave the historical background to the Swedish colour research with exciting visions for the future. Other lectures on this colour day were *Lighting up the dark* from an artist point of view, a lecture about synaesthesia and one about *Colourful near-to-death experiences*. After that we left the inner soul and went back into practical reality with lectures about *Colour as an environmental factor in traffic planning*, *Interior and colour design of cruise liners* and *Colour experience in small and big scale*. The day ended with an interesting panel discussion and some interesting thoughts from our chairperson of the day, Dr Rolf Back.

Members' meetings:

- In February, this year's first meeting, we had a talk about philosophy of the colours in Feng Shui.
- In May we had a presentation of a research project regarding different design factors which influence your well being within working environments, where colour is one important factor.
- In September we had a talk about *India – the Land of Colour?* from a journey to Mumbai, Chennai, Bangalore and Pannaji in Goa together with an NCS Colour Meter.
- In November we had our annual meeting where we informed our members about *AIC 2004* in Porto Alegre in Brazil.

The future:

The Swedish Colour Centre Foundation has also this year arranged a couple of workshops to discuss how we can expand and inspire new members. We have created an activity plan for 2002-2008 with a vision, goals, and new members. We are constantly working with this plan so we can reach our goals.

This coming year we will also start the planning for the AIC Interim Meeting 2008. It will be in Stockholm June 15-18, 2008 and will be about colour and experience.

Berit Bergström
Secretary
Swedish Colour Centre Foundation
PoBox 49022
S-100 28 Stockholm
Sweden

UNITED STATES OF AMERICA

The Inter-Society Color Council

The Inter-Society Color Council was founded in 1931 to advance knowledge of color as it relates to art, science, and industry. Each of these fields enriches the others, furthering the general objective of color education. There are three classes of membership: Individual, Member-Body and Sustaining. Delegates are appointed to represent ISCC member-bodies, which are national organizations whose members have a professional interest in color. The ISCC has a large number of individual members and any person or organization who desires to support the goals of the ISCC can become a sustaining member.

Publication:

The ISCC publishes a newsletter six times a year under the editorship of Prof. Gultekin Celikiz and Associate Editors Cynthia J. Sturke and Mary McKnight featuring accounts of various meetings, activities, book reviews, and articles of interest about color. This past year the ISCC has started to distribute the Newsletter as a PDF via email to all ISCC members who have email addresses on file with the Council Office.

Awards Luncheon:

The ISCC held their 2004 Annual Awards Banquet and Business Meeting in Gaithersburg, Maryland and welcomed their newly elected Board Members Britt Nordby of Creanova, Dr. Frank O'Donnell of Sherwin-Williams and Dr. Michael Vrhel of ViewAhead Technology. Honorary Memberships were given to Fred Simon and Theresa Commerford and the Nickerson Service Award was deservingly presented to Ralph Stanziola. Louis D. Silverstein received the Macbeth award for his contributions to color rendering through liquid-crystal technology in electronic displays and image capture devices.

The 2005 Annual Awards Luncheon and Business Meeting was held in Cleveland, Ohio and Stephen Glasscock of Hallmark, Nurhan Becidyan of United Mineral & Chemicals, and Gerald Dimas of Color Communications, Inc. were installed as newly elected members of the Board of Directors. The Godlove Award was presented to Alan Robertson for his lifetime contributions to the study of color science. Ralph Stanziola was granted honorary membership in the ISCC.

Project Committees:

The ISCC has two current Project Committees:

- #52 Comparative List of Color Terms II, chaired by Ellen C. Carter,
- #54 Colors of Maximum Contrast, chaired by Hugh S. Fairman.

Upcoming events:

The ISCC looks forward to the ISCC/CIE joint annual meetings to be held in Ottawa, Canada on May 14-15, 2006 at the National Research Council. At that time, the presidential gavel will be passed from Dr. Joanne Zwinkels of the NRC-NIMS to Dr. Robert Buckley of Xerox. In addition to the ISCC meeting, CIE Division 1 will hold an Experts Symposium, 16-17 May on the Standard Colorimetric Observer and the determination of color matching functions. The year 2006 marks the 75th anniversary of that well known CIE standard. Then CIE Division 1 and its technical committees will hold their annual meetings, 18-19 May, all in the same venue in Canada, co-hosted by the Canadian National Committee of the CIE. For more information see the ISCC web page (www.iscc.org) or that of CIE Division 1.

The ISCC and its member body IS&T are holding a special topics conference on 11-12 November 2005 immediately following the annual Color Imaging Conference in Scottsdale, Arizona. This special conference is on the topic of Precision and Accuracy in the Determination of Color in Imaging. For more information see the ISCC or IS&T web sites (www.iscc.org or www.imaging.org).

website:

<http://www.iscc.org>

COLOUR EDUCATION

The Study Group on Colour Education of the International Color Association (AIC) is an international network of scientists, teachers within the field of colour (colour theory, colour design, colour psychology etc.) and other professionals like designers and architects with a specific interest in colour education. The aims are: the exchange of knowledge and experiences among its members, the stimulation of teaching and research, to inform about coming congresses, seminars, workshops and exhibitions which might be of interest for the members of the group and to share with other members news from congresses, seminars, workshops, publications and exhibitions.

Projects and activities during 2004:

Newsletters have been sent out during the year with news and information about coming AIC meetings and other colour seminars, colour studies, methods of teaching colour, new literature e t c.

Our literature list has been updated regarding literature used in colour studies and papers about how to teach colour. A work that continuously is going on.

Our list of literature used in colour education is divided into following groups:

- Colour Atlases, Systems and books about them
- Literature about how to teach colour
- Papers about how to teach colour
- Literature and papers that we use to teach colour
- Journals
- Video
- CDROM

During the AIC Interim Meeting in Porto Alegre, Brazil, November 3-5, 2004, we had one Invited Paper on colour education *Light, colour, paints and pigments – A new concept in teaching colour for designers, architects and artists* by Robert Hirschler and two oral paper presentations on colour education titled *Colour, Painting and computing* by Garth Lewis and *Teaching Colour Plans* by Lia Luzzatto and Renata Pompas.

Meeting of members:

During AIC 2004 we had a meeting of the Study group with around 17 attendants. We discussed the

guidelines for the study group and interesting topics to be discussed within the group.

One question was about colour education and small children: When do we start colour education for children? What is the best method to use to make it easy to understand colour? How can we engage the children into the world of colour? This ended up in an interesting project within the study group *Collection and analysis of colour books for children* which will start during 2005.

I think projects of this kind are very important for the Study Group. The goal of the Study Group is to be a natural worldwide network for colour education, and that can only happen when everyone is active.

Email and homepage:

The Study Group has the following e-mail address: swedish.colour.centre@ncscolour.com

The Swedish Colour Centre has its own homepage where you can also find information about the AIC Study Group on Colour Education and up-coming AIC meetings. www.fargcentrum.se

Members of the Study Group on Colour Education:

After AIC 2004 the number of members has happily increased. Now there are 58 members with 23 nations represented in the group. The list of members is not on our web site to avoid too much spam. It will be sent out continuously when new members are introduced.

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

Chairperson:

Berit Bergström
Swedish Colour Centre Foundation,
PoBox 49022, S-100 28 Stockholm, Sweden

ENVIRONMENTAL COLOUR DESIGN (ECD)

Minutes of the ECD meeting held in Porto Alegre, Brazil, November 4, 2004:

The opportunity offered by the Interim Meeting of the AIC in Porto Alegre was taken to hold a small meeting of the ECD Study Group, to discuss current issues. Members present (9): Caivano, da Pos, Hansuebsai*, Melgosa*, Pogacar, Pompas, Pujol*, Romero, Schindler (the asterisks indicate new members incorporated during AIC 2004). The meeting began at 6:00 p.m. Verena M. Schindler was proposed and accepted to act as secretary, to take notes of the matters discussed.

First, the procedure for selecting a new chairperson of the ECD Study Group was discussed. This became necessary because Caivano (AIC vice-president) will be the AIC president during 2006-2009, and could not continue chairing the Study Group. Leo Oberascher will continue as co-chair. It was agreed that the ECD members would vote to select the new chairperson, and that the person elected by this means would be proposed to the AIC Executive Committee for final approval and appointment.

The next point in the agenda was the future collective work. Two possible projects for future work of the Study Group were discussed:

1) Continuation with the glossary of *Light and Color in Environmental Design* initially compiled by Lucia Ronchi in 2002, with contributions of definitions by various ECD members. This glossary is published on the ECD website. The work to be done is mainly a revision and improvement, with the incorporation of new terms.

2) Anthology of texts on color written by architects and designers who have been influential in the discipline: The aim of this project is to produce a corpus of knowledge about color in architecture and the built environment by architects and designers who have been important for their design work or general theories, but who have not necessarily been previously recognized for their color theories. Many of these texts have remained unknown for a variety of reasons, e.g., because they were published in journals that are now out-of-print; they have only appeared in a fragmentary form in texts on the general theory of architecture or design; or they have never been published at all. Assembling these various color texts and theories together will not only serve to

validate individual efforts and achievements, but also to put these in an historical context which promotes a deeper understanding of the relevance of color in the overall design process.

Various ECD members gave oral or poster presentations in AIC 2004: O. da Pos (invited lecture); B. Bergström, M. Billger, J. Caivano, K. Fridell Anter, A. Hansuebsai, M. Hårleman, L. Luzzatto, V. Pogacar, R. Pompas, V. Schindler (oral papers); M. Avila, S. Estévez, B. Gonçalves, A. Hansuebsai, M. Melgosa, J. Pujol, S. Rizzo, J. Romero, L. Ronchi (posters). The full papers can be read in the electronic version of the Proceedings, edited by J. Caivano, at www.fadu.uba.ar/sicyt/color/aic2004.htm.

The total number of ECD members present in AIC 2004 were 14: Bergström, Billger, Caivano, da Pos, Fridell Anter, Gonçalves, Hansuebsai, Hårleman, Melgosa, Pogacar, Pompas, Pujol, Romero, Schindler.

Activities of the ECD Study Group in AIC 2005, May 8-13, Granada, Spain

Three ECD symposia were held in the congress:

- ECD I, with an invited lecture by P. Green-Armytage on *Colour science for colour design*, and oral papers by H. Linton, N. Camgöz & H. Dalke, A. Lechner & L. Harrington, N. Kwallek & K. Soon.
- ECD II, with oral papers by K. Fagerström, M. Musso, L. Oberascher et al.
- ECD III, with an invited lecture by K. Fridell Anter on *Colours in Pompeiiian cityscape*, and oral papers by T. Ishida & F. Kawaguchi, G. Minah, M. Cler et al., F. Tosca.

In addition, there were some other oral session where ECD members presented papers related to environmental design issues: J. Tarajko, S. Rizzo, R. Pompas & L. Luzzatto, Y. Kim, V. Schindler, M. Brengman, D. Smith, M. Billger, A. Hansuebsai.

The following ECD members presented posters on aspects of environmental design: F. & M. Cler & V. Schindler, K. Fridell Anter, Y. Kim, H. Lee-Niinioja, M. López, M. Melgosa, A. Nemcsics, V. Pogacar, J. Romero, L. Ronchi, A. Wright.

It was also a pleasure that John Hutchings, who has been an active member of the ECD Study

Group for many years, was awarded the AIC Deane B. Judd Award. His lecture dealt with *Colour and power and ethics*, and the citation was presented by another ECD member, Paul-Green Armytage.

Finally, J. Caivano delivered one of the two invited lectures at the closing session of the congress, entitled *The research on environmental color design: brief history, current developments, and possible future*.

New chair of the ECD Study Group

After the congress in Granada, during June 2005, the procedure for electing a new chairperson for the Study Group was conducted. Verena M. Schindler was the ECD member that received the highest number of votes from the other members. She was then proposed to and accepted by the AIC Executive Committee. Thus, starting in 2006, she will chair the AIC-ECD Study Group, working together with Leo Oberascher.

Verena M. Schindler is an Art and Architectural Historian. Her PhD thesis is about color theories in modern architecture (University of Zurich). She taught at the School of Architecture of the Swiss Federal Institute of Technology Zurich, and worked as a free-lance architectural critic. Since 2001 she has been participating in the Atelier Cler Etudes Chromatiques in Paris. She is a founding member and the general secretary of the color association *ad chroma* established in 2003. Since 2004 she is editor in Europe of the Chinese architectural magazine *World Architecture* (Beijing). As well, since 1989 she has been publishing essays in renowned international journals (including *Color Research and Application*), contributions to exhibition catalogues, chapters of books, and is now involved in a publication project about color. She is a member of Pro/Colore, and speaks fluently German, Spanish, English, French, Swiss German, and some Italian.

New ECD members, incorporated after the AIC congress in Granada

Some scholars who presented papers or posters in the two last AIC meetings were incorporated as new ECD members in July 2005: Ulrich Bachmann, Paulina Becerra, Malaika Brengman, Michel Cler, Brian V. Funt, Leslie Harrington, Anat Lechner, Mabel A. López, María Luisa Musso, Dianne J. Smith, Justyna Tarajko, Angela Wright. As a result, the ECD Study Group has now 54 members. Their names and basic data can

be seen on the website. In turn, the e-mail list for discussion has 199 subscribers at present.

Chair: José L. Caivano.

Co-chair: Leonhard Oberascher

New elected chair: Verena M. Schindler

Website: www.fadu.uba.ar/sicyt/color/ecd.htm

VISUAL ILLUSIONS AND EFFECTS

As in the past I stress the particular kind of topics on which the Study Group is working. Due to different meanings attributed to the concept of illusions, many researchers either do not believe or do not bother whether they are studying illusions or not. On the other hand there are others who often insist on the illusory aspect presented by their discoveries.

Because of these theoretical difficulties it is very seldom that papers are presented at AIC Meetings explicitly identified as dealing with illusions, although in many cases they really are so. For this reason, in the past, I analysed the papers I recognised as treating some known visual illusions and prepared a report to show why, and in what way, they could be considered as scientific contributions to the field of colour illusions.

The reports were published in the AIC NewsLetters, but probably, despite the intention of making people more aware of the interest and importance of studying colour illusions (applications are rather wide and relevant), these reports did not reach a very large number of researchers.

Papers on visual illusions and effects presented at AIC 2005 in Granada

This year, as in the past, I have made the same analysis of the scientific papers presented at the Granada Conference. But I would also suggest that, in the future, I be given the opportunity to look at the titles and, if possible, the abstracts of submitted papers. This would enable me to select the most significant papers and, after contacting the authors, to organize a session specifically devoted to illusions.

The session would begin with a short theoretical introduction and end with some concluding remarks to encourage all participants to discuss the theoretical and practical implications of the illusions that had been presented.

The essence of a visual illusion:

There are two main views about the essence of a visual illusion: it can occur when a discrepancy is encountered between what we see and what we know we should see on the basis of the current scientific knowledge (psychophysical illusion), or when a discrepancy is perceived between the current appearance of an object and how it

appears in a different viewing condition (phenomenological illusion). The first case is obviously dependent on the development of our knowledge: when the phenomenon is explained, the illusion does not exist anymore. The second alternative, on the contrary, compares the ways under which an object can appear in different situations: an illusion is detected when two appearances of the same object are discrepant. We can know the reasons for this difference, but it still remains before our eyes.

The paper by R.W. Pridmore and M. Melgosa (*Effects of psychophysical variables on colour attributes: a classification system – AIC 2005 Proceedings*, p. 903) is important for understanding the first case of illusions, as not only does it highlight the potential scientific causes of a specific effect, but it proposes a simple and exhaustive classification of the many possible relationships between the psychophysical variables and the colour attributes which would depend on them. The results are interesting because they reveal why (i.e. where we should go to discover the reason why) many visual effects are considered illusory. The clear representation of the complex relationships between different sources of causes (conditioning factors like Luminance, Wavelength, Purity and colour Temperature of the illuminant) and different effects (like lightness, hue, and saturation) helps us to understand that the illusion is only due to the neglected reason that the effects can depend on more than a single physical causing variable.

One might question the idea, included in the concept of *causing variables*, that luminance and purity would be physical dimensions in the same way as wavelength is, and also the concept itself of a cause-effect link applied to the relationship between psychophysical variables and perceived attributes would be debatable. Nevertheless, the structure of the proposed classification is indeed of great help for describing and analysing the most known colour effects and others as well not yet known.

Simulation and 'real situations':

A very modern and interesting point, which appears in many papers presented at the Conference, is the concept of simulation as opposed to 'real situation'. The underlying idea is that simulation creates illusions, i.e. the perception of something which looks the same as

the reality but is nevertheless different. Somehow the concept is reversed in the case of visual illusions: in simulation the discrepancy is in the causes which produce the same visual effect. In the *real* case the source of the eye stimulation is located in natural objects, while in the simulated conditions it is to be found in artificial devices.

Examples of this kind of research are the contributions by F. Viénot, E. Mahler, L. Serreault, M. Harrar, J-J. Ezrati, P. Pérignon, A. Bricoune (*Discriminating colours under LED illumination* – AIC 2005 Proceedings, p. 33), B. Stahre, C. Gatta, M. Billger, A. Rizzi (*Towards perceptual colour for virtual environments* – AIC 2005 Proceedings p. 219), and N. Tsumura (*Appearance reproduction and multi-spectral imaging* – AIC 2005 Proceedings, p. 119).

Explicit considerations of the equivalence between simulation and virtual reality are made in the papers by P. Callet (*Visual appearance of bronze - simulation and validation* – AIC 2005 Proceedings, p. 45), and by A. Maripov, N. Kulmurzaev, K. Omurzakov (*The rainbow hologram by the unique properties* – AIC 2005 Proceedings, p. 49). Emblematic is the statement by M. Tsuchida, H. Arai, M. Nishiko, Y. Sakaguchi, T. Uchiyama, M. Yamaguchi, H. Haneishi, N. Ohyama (*Development of BRDF and BTF measurement and computer-aided design systems based on multispectral imaging* – AIC 2005 Proceedings p. 129): ‘... as if the real object were in front of the designer.’

The concept of simulation would be worth further theoretical development, as it is recognised that good simulations imply good knowledge of the mechanisms which generate certain perceptions.

Traditional topics:

Studies on traditional topics of illusions could be expected in such a wide collection of scientific contributions. The common factor underlying the best known series of illusions is colour induction, that is the influence that a surrounding area exerts on the colour appearance of an object. This influence becomes manifest when different surrounds makes the same object appear different in colour, i.e. produces what is considered a visual illusion according to the second viewpoint previously described.

The paper by J.J.M. Granzier, T.C.W. Nijboer, J.B.J. Smeets, E. Brenner (*Does realistic rendering of a gradient in illumination increase chromatic induction?* – AIC 2005 Proceedings, p.

227) deals with this effect from a general point of view; on the other hand it is studied in the form of a contrast effect in the contribution by G. M. Johnson (*The quality of appearance* – AIC 2005 Proceedings p. 303) and E. Koizumi, K. Sakata (*Graphical analysis of White effect* – AIC 2005 Proceedings p. 943), and of assimilation in the papers by I. Tortajada, V. Blanca, M. Martínez, M. Aguilar (*Variation with the contrast and modulation ratio of an achromatic grating on the view of a chromatic periodic test* – AIC 2005 Proceedings p. 931), T. Nonaka, M. Matsuda, T. Hase (*Modulation Transfer Function model of assimilation phenomenon based on visual characteristics* – AIC 2005 Proceedings, p. 983); in both forms by M.R. Luo, C. Li, G. Cui (*Combining colour appearance model with colour difference formula* – AIC 2005 Proceedings, p. 235).

Among the more traditional topics covered by the submitted papers is the phenomenon of advancing/retreating colours, in which areas lying on the same front-parallel surface appear at different depth as a function of hue, lightness, and their contrast with the background (I. Chen, J. Lin *Quantitative assessment of the advancing/receding and the expansion / constriction effects of colours* – AIC 2005 Proceedings, p. 1481); the translucency aspect of food and drinks is discussed in relation to the possibility of measuring it in a practical way, and the concepts of transparency vs opacity (and of others like haze, turbidity, cloudiness, ...) are examined in the paper by J. Hutchings, M. R. Luo (*Translucency, its perception and measurement* – AIC 2005 Proceedings, p. 835).

It might seem that the perception of transparency depends on some physical property of the material, but on the contrary it is the contrast with the background which essentially affects it, with the consequence that different backgrounds make the same object to appear differently translucent. Because of the essential link of translucency with contrast, this effect shares the same illusory characteristics, especially when it is produced through simulations as in classic psychological works.

The Boswell-Helmholtz-Kohlrausch effect is very well known because it is one of the most frequent reasons why the lightness of a colour does not correspond to what one should expect on the basis of its luminance, and the paper by H. Sakai, Y. Nayatani (*The tolerance level of practical light sources for a visual comparison of surface*

colours (in relation to the Helmholtz-Kohlrausch effect) – AIC 2005 Proceedings, p. 1099) represents a relevant in-depth analysis of the topic.

Last in this series of spatial induction effects, I mention the neon colour which includes many others, like contrast assimilation and colour spreading, and is the subject of the paper by S. Nakamura (*Desaturation of inducing figures in Neon-colour phenomenon* – AIC 2005 Proceedings, p. 963).

Temporal effects are those in which the colour appearance of an area depends on changes that occur in that same area in different moments. These effects can be classified as a function of the latency needed to appear: after-images require a relatively short time, from a fraction of a second to seconds, while colour adaptation, at least at a psychophysical level, has a much slower course.

A very interesting method for studying after-images has been devised by K. Sakata (*Retinal afterimage colour affected by background* – AIC 2005 Proceedings, p. 991) who exploits the apparent movement of a disc to show that low level photo pigment bleaching is not the only responsible cause of the chromatic effect, but also that higher neural mechanisms are involved.

Effects resulting from changes in size and form:

Some effects are reported in which the unexpected colour appearance of an object depends on changes that affect its area, not from the point of view of the chromatic stimulation but of a spatial kind (changes in size or in form). Although these effects are relevant in specific fields like architecture, design and art, they are seldom studied from a rigorous scientific point of view.

The paper by G. Kutas, K. Gócza, P. Bodrogi, J. Schanda (*Colour size effect* – AIC 2005 Proceedings, p. 887) reports a systematic study in which a 2° coloured area appears different from an immersive stimulation. The chromatic aspect in the two conditions does not show a regular variation, while the lightness does (it increases with the size). Nevertheless, in this second case, an unwanted variable was introduced in the small size stimulus, i.e. its luminance contrast with the background, a problem that the authors are resolving with new experiments.

In a similar work by T. Hsieh, I. Chen (*Area-dependent colour appearance shift* – AIC 2005

Proceedings, p. 1115) the large stimulus could subtend up to 33° x 55° and it had to be matched by a comparison stimulus of 2° x 2°. In this case, while observed lightness variations agree with the previous study, some regular changes were detected in the saturation as a function of the hue. The difficulty experienced by the observers to make matches with small samples, shown by the large variability in their responses, seems to depend on the hue, and is of practical interest.

Changes resulting from perceived changes in illumination:

One interesting chromatic effect, extremely relevant from a theoretical point of view, is the change observed in an area as a function of perceived (or 'recognised', according to the authors' terminology) differences in the illumination of different parts of the scene (P. Pungrassamee, M. Ikeda, P. Katemake, A. Hansuebsai *Color appearance is determined by the recognition of a 3D space* – AIC 2005 Proceedings, p. 95). The same object undergoes an abrupt color change when its perceived illumination changes.

What is particularly worthy of attention is that the colour change does not seem to depend on known physiological processes, but on a sort of Gestalt re-organization similar to those observed in figure-ground reversals (the Rubin's faces are a well known example of this kind).

Newly reported effect resulting from prolonged observation:

One last comment on a new effect presented by L. Swirnoff (*Sequential contrast: a phenomenon of colored light*, paper presented in an informal meeting, not scheduled in the program). Very seldom do observers look for a very long time at the same display, in this case a cubic room whose walls are independently lit.

The author, with her students, found that after prolonged observation (10-15 min) not only at the borders of the walls are colours observed which are complementary (or opposing) to the adjacent wall colours, but with time they spread over the whole wall so that it appears uniformly filled by that colour. These colour changes seem to resist free looking, and the observed colours are so unexpected that the phenomenon is probably not of the same kind as the most known contrast effects. Coloured shadows seem to show the same colour uniformity over large areas as happens in this case, although with a different span of time.

The effect is worth further study because there are other cases in which prolonged observations show unexpected changes in the appearance of geometrical illusions (B. Fischer, O. Da Pos, F. Stürzel, *Illusory illusions. The significance of eye movement in the perception of geometrical illusions*. Perception 2003, 32, (8), 1001 – 1008), but there might be, in modern life, more occasions than in the past where people are forced to observe the same environment for a long time. Knowledge in this field is therefore necessary.

Oswaldo da Pos

COLOUR PERCEPTION OF THE ELDERLY

Activities:

Study Group Symposium: *Color Vision and Ageing* was organized and held in the AIC 2005 Granada in Spain. In the symposium, one invited paper and two general papers were presented, and active discussions were held with many participants.

Homepage:

The homepage of the Study Group (<http://www.cpesg.org>) is being maintained and has been updated from time to time. From this year, only registered members who have ID and a password can access the homepage and get information on aging vision research at anytime.

Mailing list:

A mailing-list system for members of the Study Group has also been maintained since 2004. News about the Study Group for all the members has been issued through the Internet since 2003.

Membership:

Currently, the number of the Study Group members is 60.

Future:

In the future,

1. We will enrich the homepage contents steadily.
2. We will make an effort to issue the mailing news periodically.
3. We are planning to hold the next meeting during AIC 2007 in China.

Katsunori Okajima