



# 2021 ANNUAL REVIEW

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International Colour Association  
Internationale Vereinigung für die Farbe  
Association Internationale de la Couleur

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We are the result of our  
hard work. Our passion  
for what we do makes us  
pioneers in our sector.







# AIC 2021

## PRESIDENT'S REPORT

by Vien Cheung

It is undeniable that we have all been impacted by the pandemic and lockdown situations since 2020.

It has been a severe circumstance but at the same time, an “opportunity” for us to rethink our relationship with the colourful natural environment, to rethink less so ourselves as an individual but more of as a part of the community and global environment. I am thankful that, as a whole, the AIC and wider colour community, have been able to go through these challenging times, and to continue allowing many colour activities. Under the AIC, these included:

- two fully online AIC annual conferences: the last Interim Meeting AIC 2020 and the 14th Congress AIC 2021, organised by the Centre Francais de la Couleur and Gruppo del Colore – Associazione Italiana Colore respectively;
- various AIC Study Group meetings were held with large numbers of international attendance;
- a variety of new ways to celebrate the International Colour Day (ICD);
- continuity of the AIC Annual Review productions and the newly introduced Newsletter since early 2021.

In this report, I would like to share a few key highlights and reflections of the year:

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### AIC Deane B. Judd and Color in Art, Design and Environment Awards

The AIC has been awarding outstanding work in the field of colour science via its Deane B. Judd Award for over 40 years. I am pleased to learn that the Judd Award 2021 goes to John McCann. Established in 2015 and first given in 2017, the CADE Award recognises excellence in the areas of design, art, architecture and humanities. Many congratulations to Jean-Philippe Lenclos, the recipient of the CADE Award 2021.

### History of ICD: UNESCO application preparation

The International Colour Day (ICD) was proposed by the APCor (led by Maria Joao Durao) in 2008 and subsequently adopted by the AIC. Since then the AIC celebrates the ICD on 21st March the equinox of each year primarily via its Regular Members globally. The ICD has its own logo – designed by Hosanna Yau from Hong Kong, via the ICD logo competition organised by AIC 2012 in Taipei, Taiwan. To-date, 27 (out of 28) Regular Members, over five continents, have celebrated ICD at least one time. An ICD Special issue: International Colour Day (ICD) – over a decade in underway in preparation to include all the ICD celebration activities. The special issue is an autonomous document that will also be used to support the application for international days observed at UNESCO.

### AIC Banking; annual audit and new banking location options

The AIC finance report is published annually via AIC Annual Review and reported biannually at AIC General Assembly. The AIC audit takes place annually by every end of June. Thanks to all the

Regular Members and especially those responded very promptly in late June 2021 to our audit request. We collected 22 (out of 28) responses within 4 days over a weekend. It is also a collective efforts from the AIC Executive Committee and Auditors colleagues. During the AIC General Assembly 2017 it was approved that the AIC immediate Past President (Nick Harkness) and the AIC Executive Committee (2018-19) will work with the Colour Society of Australia to establish the AIC Banking Arrangements for the period starting from 1st January 2020. However, following further investigation by Nick Harkness it was advised that such establishment is not feasible given the constraints of the current AIC registration. Therefore, alternative AIC Banking Arrangements will be necessary. The AIC Executive Committee (2020-21) looked for options to re-register AIC outside Australia and subsequently to open new bank accounts. Five options were found: UK, USA, Italy, Germany and Austria. With careful considerations and the constraints under the decision on adopt option Austria has been taken, and all the processes will be underway to carry out in 2022.

### AIC future conferences line up

Continuing the AIC tradition and spirit on internationalisation, after two conferences in Europe, the forthcoming conferences are confirmed to take place in North America, Aisa and South America.

- Sensing Color by Colour Research Society of Canada
- 15th Congress by Colour Society of Thailand
- Color Communication and Marketing by Associação ProCor do Brasil
- 16th Congress by Colour Association of Taiwan

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Starting from 1 January 2022 I will be a Past President and I look forward to seeing the new energy and initiatives the new AIC Executive Committee (2022-23) will bring in. On a personal note, I am very grateful for the opportunity that I was able to follow WD Wright and RWG Hunt's footsteps, represent the Colour Group (Great Britain), to serving the AIC as its President. I would also like to thank all who contributes to the AIC: Executive Committee and Auditor colleagues, Study Group leaders, Regular Member liaisons, conference organising teams, and many more, for all the enthusiasm, commitment, support and cooperation.

Vien Cheung  
President

Association Internationale de la Couleur

*Vien Cheung is President until  
end of 2021 and then Leslie  
Harrington will be President for  
the 2022-23 term.*

// GLOBAL MEMBERSHIP //

AIC REGULAR MEMBERS

ARGENTINA

GRUPO ARGENTINO DEL COLOR  
aike.fadu.uba.ar/sitios/sicyt/color/gac  
María Paula Giglio (President)  
Anahí López (Secretary)

AUSTRALIA

COLOUR SOCIETY OF AUSTRALIA  
www.coloursociety.org.au  
Jean Pretorius (President)  
Glenys Thomson (Secretary)

BELGIUM

INTERDISCIPLINARY COLOUR ASSOCIATION  
https://ica-belgium.org/  
Jeannette Hanenburg (President)  
An Truyens (Secretary)

BRAZIL

ASSOCIAÇÃO PRÓ-COR DO BRASIL  
www.procor.org.br  
Paula Csillag (President)  
Fabio Cuppo (Treasurer)

BULGARIA

COLOR GROUP BULGARIA  
www.bgcolorgroup.org  
Ralitza Gueleva-Tzvetkova (President)  
Sofia Anguelova (Secretary)

CANADA

COLOUR RESEARCH SOCIETY OF CANADA  
www.colourresearch.org  
Doreen Balabanoff and Robin Kingsburgh (Co-Presidents)  
Vivian Lo (Vice President)

CHILE

ASOCIACIÓN CHILENA DEL COLOR  
www.asociaciondelcolor.cl  
Elisa Cordero (President)  
Ingrid Calvo Ivanovic (Outreach)

CHINA

COLOR ASSOCIATION OF CHINA  
www.fashioncolor.org.cn  
Haisong Xu (President)  
Yu Ma (Secretary)

CROATIA

HRVATSKA UDRUGA ZA BOJE  
www.hubo.hr  
Martinia Ira Glogar (President)  
Ivana Ziljak Stanimirovic (Secretary)

FINLAND

SUOMEN VÄRIYHDISTYS SVY RY  
www.svy.fi  
Saara Pyykkö (President)  
Harald Arnkil (Vice-president)

FRANCE

CENTRE FRANÇAIS DE LA COULEUR  
www.centrefrancaisdela couleur.fr  
Patrick Callet (President)  
Barbara Blin-Barrois (Vice-President)

GERMANY

DEUTSCHER VERBAND FARBE  
www.dfwg.de  
Frank Rochow (Chairman)  
Axel Buether (Vice-Chairman)

GREAT BRITAIN

THE COLOUR GROUP (GREAT BRITAIN)  
www.colour.org.uk  
Marina Bloj (Chairman)  
Jenny Bosten (Secretary)

HUNGARY

HUNGARIAN NATIONAL COLOUR C'TEE  
http://mta.aic.mnb.uni-obuda.hu  
Ákos Nemcsics (President)  
Janos Zana (Secretary)

ITALY

ASSOCIAZIONE ITALIANA COLORE  
www.gruppodelcolore.it  
Marcello Picollo (President)  
Veronica Marchiafava (Secretary)

JAPAN

COLOR SCIENCE ASSOCIATION OF JAPAN  
www.color-science.jp  
Hiroyuki Shinoda (President)  
Katsunori Okajima (Liaison)

KOREA

KOREAN SOCIETY OF COLOR STUDIES  
www.color.or.kr  
Jinsook Lee (President)  
Hyeryeoun Kim (Secretary)

MEXICO

ASOCIACION MEXICANA de INVESTIGADORES del COLOR A.C.  
www.amexinc.mx  
Georgina Ortiz Hrdz (President)  
Lourdes Sánchez Carpintero (Secretary)

THE NETHERLANDS

STICHTING KLEURENVISIE  
www.kleurenvisie.nl  
Kim Van Savooyen (Director)  
Jan de Vletter (Secretary)

NORWAY

FORUM FARGE  
www.forumfarge.no  
Mette L'orange (President)  
Aland A. Mendoza (Secretary)

PORTUGAL

ASSOCIAÇÃO PORTUGUESA DA COR  
www.apcor.org  
Verónica Conte (President)  
Joana Perry (Secretary)

SLOVENIA

SLOVENSKO ZDRUŽENJE ZA BARVE  
www.szb.si  
Jasmina Weiss (President)  
Sabina Bračko (Secretary)

SPAIN

COMITÉ ESPAÑOL DEL COLOR  
http://www.sedoptica.es/SEDO/color/index.htm  
Meritxell Vilaseca (President)  
Luis Gómez (Secretary)

SWEDEN

STIFTELSEN SVENSKT FÄRGCENTRUM  
www.fargcentrum.se  
Lena Anderson (Chairman)  
Berit Bergström (Liasion)

SWITZERLAND

PRO COLORE  
www.procolore.ch  
Tanja Jacobsohn (Geschäftsstelle)  
Verena M. Schindler (Liaison)

TAIWAN

COLOR ASSOCIATION OF TAIWAN  
www.color.org.tw  
Tien-Rein Lee (President)  
Cheng-Min Tsai (Deputy Secretary)

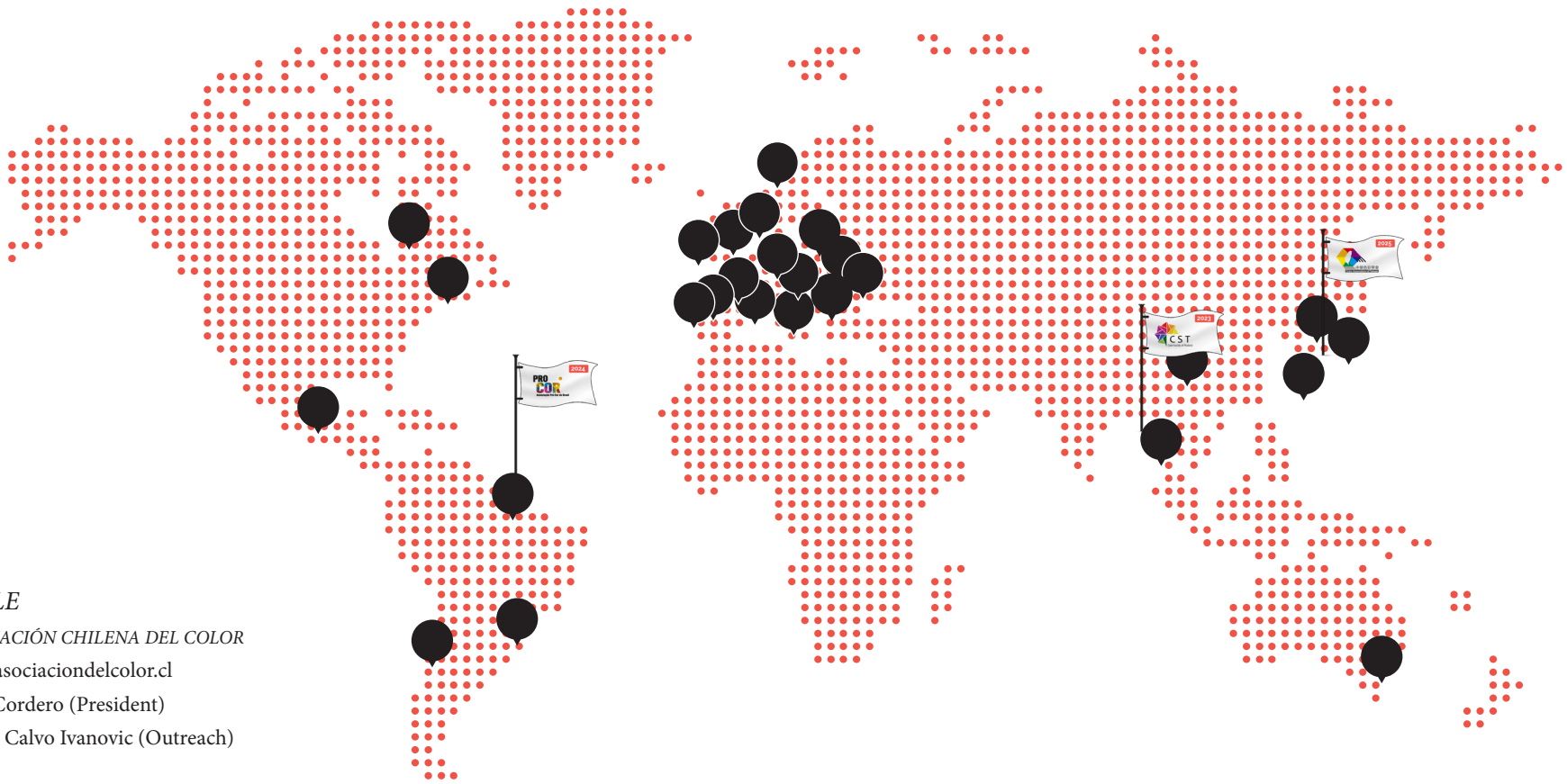
THAILAND

COLOUR SOCIETY OF THAILAND  
www.thaicolourgroup.org  
Pichayada Katemake (Chairman)  
Chanprapha Phuangsuan (Secretary)

USA

INTER-SOCIETY COLOR COUNCIL  
www.iscc.org  
David R Wyble (President)  
Paula Alessi (Liaison)

Our members represent 28 regular members representing 5 continents.



// GLOBAL MEMBERSHIP //

AIC ASSOCIATE & INDIVIDUAL MEMBERS

ASSOCIATE MEMBERS

Color Marketing Group - CMG, USA  
International Accociation of Color  
Consultants/Designers, North America

INDIVIDUAL MEMBERS

Jacqueline Carron, France  
Yulia Griber, Russia  
Kazim Hilmi Or, Turkey  
Lia Margarita, Colombia  
Zena O'Connor, Australia  
Yannis Skarpelos, Greece  
Andrea Urland, Slovakia  
Martina Vikova, Czechoslovakia

AIC HISTORY

AIC was founded June 21, 1967, in Washington DC, USA, during the 16th Session of the CIE (Commission Internationale de l'Éclairage)

AIC Foundation Documents was signed in by these eight national color associations:

- France - Centre d'Information de la Couleur (Yves LeGrand)
- Great Britain - The Colour Group (Great Britain) (Robert W. G. Hunt)
- Japan - Color Science Association of Japan (Tamotsu Fukuda)
- Spain - Comité Español del Color (Lorenzo Plaza)
- Sweden - Swedish Colour Group (Gunnar Tonnquist)
- Switzerland - pro/colore (Ernst Ganz)
- The Netherlands - Nederlandse Vereniging voor Kleuren-studie (J. L. Ouweltjes)
- USA - Inter-Society Color Council (Deane B. Judd)

If you would like to learn more about AIC please read, The Early History of the Association Internationale de la Couleur (AIC) by Gunnar Tonnquist, published in AIC Color 77, Proceedings of the Third Congress, Troy, New York, 10-15 July 1977 (Bristol, England: Adam Hilger, 1978), 13-32.

// BEHIND THE SCENCE //

2021 AIC EXECUTIVE COMMITTEE



President  
Vien Cheung  
UK



Vice President  
Leslie Harrington  
USA



Past President  
Tien-Rein Lee  
TAIWAN



Secretary | Treasurer  
Ralf Weber  
GERMANY



Ordinary Member  
Paula Csillag  
BRAZIL



Ordinary Member  
Takahiko Horiuchi  
JAPAN



Ordinary Member  
Maurizio Rossi  
ITALY



Ordinary Member  
Robert Hirschler  
HUNGARY

2021 Auditors



Berit Bergström  
SWEDEN



Jose Luis Caivano  
ARGENTINA

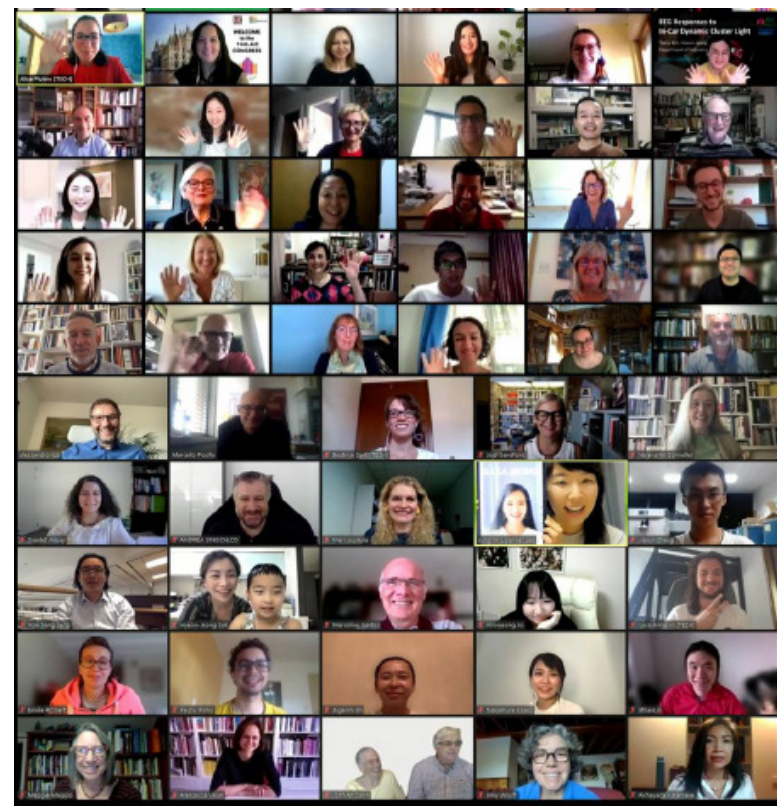
AIC EXECUTIVE COMMITTEE 2022-2023

Executive Committe elections were held during the Milan conference for the 2022-2023 term. Election results:  
Maurizio Rossi (Italy) - Vice President  
Maria João Durão (Portugal) - Secretary | Treasurer  
Valérie Bonnardel (France) - Ordinary Member  
Ingrid Calvo Ivanovic (Chile) - Ordinary Member  
Pichayada Katemake (Thailand) - Ordinary Member

Vien Cheung will become Past President, Leslie Harrington, President, Robert Hirschler will remain as an Ordinary Member.

Tien-Rein Lee and Javier Romero Mora appointed as auditors.





**41 Countries**

**324 Participants**

**252 Presentations** (accepted & confirmed)

**301 Abstracts** (received)

**109 Reviewers**

# AIC 14th CONGRESS

Milan, Italy

Organized by Gruppo del Colore – Associazione Italiana Colore

**August 30th – September 3rd 2021**

Venue: Online Meeting

Chairs: Maurizio Rossi and Alessandro Rizzi

The AIC-International Color Association Congress is a world unique multidisciplinary event that brings together scholars and professionals from a wide range of fields. Since its inception in 1969, It has been held every four years. In 2021, it was hosted in Italy, for the first time, organized by the Gruppo del Colore - Associazione Italiana Colore from August 30th to September 3rd. The Covid19 pandemic imposes multiple constraints all over the world. Moreover, due to travel-related risks and restrictions, in agreement with the AIC, the Italian association decided to organize the AIC 14th Congress online in compliance with the program elements required by the AIC: Opening Ceremony, Awards, AIC General Assembly, AIC Study Groups Workshops and Closing Ceremony

with the passage of the banner to AIC2022. We hope to be back in presence in the historic chosen Venue in Milan downtown, the Ca' Granda-Università degli Studi di Milano, for a future event.

Since 2016 the Congress Chairs and the Italian association have wanted to create an Ethically Sustainable Congress, thinking about young people, retired people, people from disadvantaged countries, and professionals who cannot afford to spend too much to attend a Congress. According to this idea, the early registration was less than a quarter of the previous Congress. This was possible thanks to the volunteer work of the members of the Associazione Italiana Colore in the organizing committee. Therefore the organization of the Congress was not entrusted to an external service but was managed directly by the Italian association, which is a non-profit organization. Special thanks go to the 20 volunteers involved in the AIC2021 organization and to the chairs of the 55 sessions organized in the program.

AIC2021 received more than 300 abstracts. After the peer review process, they were divided into areas to organize the time schedule for the attendees that were free to switch between two parallel sessions on five full-time program days. We have made our best to shrink the more than 250 accepted talks in a timespan that could be attended by everyone regardless of the time zone from which one is connected. For this reason, all the mandatory events required by AIC were organized in the mid-day time of UTC+1 to cover East to West participation. The Congress was followed online by more than 320 participants.

In the AIC 14th Congress, we have also promoted special thematic sessions. The session on "Innovation and research in color for beauty and hairstyle" followed by "All the colors of cinema" and the "All recent books on colour" session. Another special session was co-organized jointly with the ILA. There were special sessions for the AIC Judd award John McCann, the AIC CADE award Jean-Philippe Lenclos, and the "Premio Colore GdC" award Vittorio Storaro. Thanks to the Colour Group (GB) for the Robert W G Hunt Poster Awards organization. All the AIC Study Group were invited to organize workshops in the Congress Program. So we had four workshops organized by the AIC Study Groups on "Arts and Design", "Color education", "Environmental Color Design" and "Language of Color".

We had ten Invited and Keynote speakers: Clino Trini Castelli on "Umbrella Diagram - 1981-2021, four decades of forecasts and CMF design", Reiner Eschbach on "Color deficient see this way .. or don't they?", Robin Jenkin on "The influence of CFA choice on automotive and other critical imaging systems", Jean-Philippe Lenclos on "Living in colour", Pietro Marani on "Leonardo's colour today: from the dark to the light", Luca Missoni on "Color in fashion design", John McCann on "Edges in illumination control appearance in natural HDR scenes", Austin Nevin on the "Conservation science and changing colours - approaches to measuring and managing change", Giovanni Pinna on "Lighting and color design in the show" and Francesca Valan on "Color in industrial design".

The Book of Abstracts was published online before Congress days. The Book of Proceedings was published online on the AIC website in November 2021. Special issues for best papers were agreed with seven different Journals: JAIC, CCSJ, JOCCH-ACM, SCIRES-IT, CR&A, DII and PpD. The peer-review process for these seven special issues is ongoing in 2022.

The AIC2021 14th Congress Chairs  
Alessandro Rizzi and Maurizio Rossi



Congress promotional material



Clino Castelli



Original venue



Vittorio Storaro





*"As two circles form the eye with equal half or rainbow of color and black representing light and darkness, day and night, everyone feast one's eye on International Colour Day"*

*Logo designed by Hosanna Yau, Hong Kong.*

# ICD 2021

## INTERNATIONAL COLOUR DAY

by Maria João Durão

The concept for an international day of colour was proposed to the AIC in Stockholm (2008) by Prof. Dr. Maria João Durão, Honorary and Founding President to the Portuguese Colour Association (APCOR). It was adopted as International Colour Day (ICD) to be commemorated on the 21st March by the AIC Executive Committee in the AIC Congress held in Sydney (2009). At the AIC2012 meeting in Taipei, designer Hosanna Yau, from Hong Kong, was announced the winner of the international competition for the ICD logo design.

From 2010 to 2021, the number of Regular Members that engaged in ICD celebrations, at least once, is very high: 27 out of 28. 2021 was an exceptional year for the ICD AIC. In fact, 23 Regular Members set up events to mark this important date, more than any other year. Furthermore, despite the existing limitations in some countries derived from Covid-19, the AIC colour community found very creative ways to gather around the reason that connects us all: COLOUR!



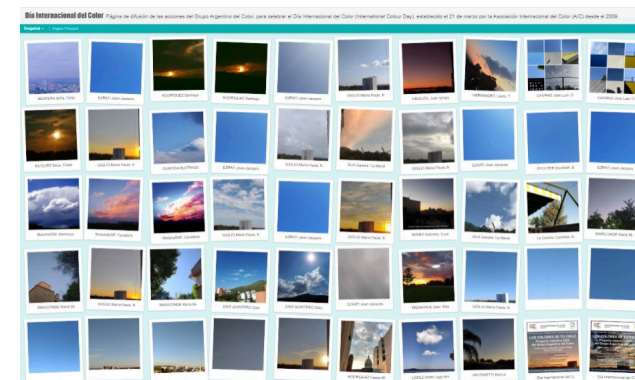
*Maria João Durão  
Honorary President, Associação  
Portuguesa da Cor - International Colour  
Day coordinator*

### ARGENTINA | Grupo Argentino del Color (ACG)

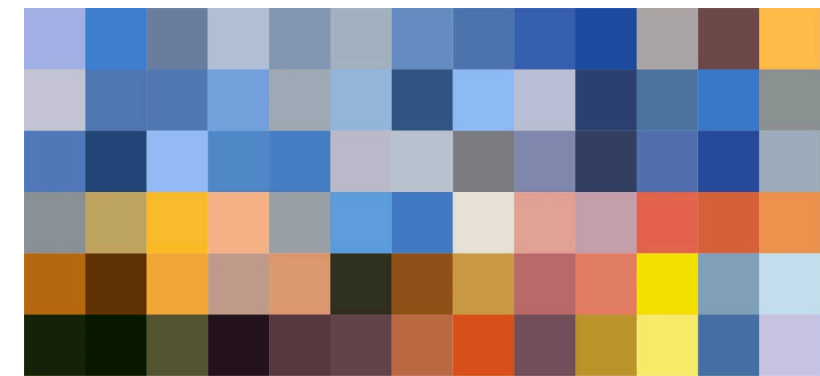
March 21, 2020 found us in a very particular situation in Argentina and throughout the world. We had to stay home due to quarantine in result of the Covid-19 pandemic. In this context of social distancing, there was something that surpassed that distancing and united us: seeing the same sky. That is why GAC launched a Call to the AIC to engage in an open collective project called "The colors of your sky" from 2020 to 2021. This project is based on the intention of recognizing ourselves in our diversity through a series of photos that combine variety of COLORS of the SKY, the multiplicity of situations that surround us and the plurality of views on that sky, through a game between sun, moon, atmosphere, clouds, effects, observers, environment, space, color and cesía, celebrating through color, humanity, art, science and technology.

For this project, all those interested in color were invited to participate for free, in the autumn or spring equinox depending on the hemisphere, taking photos of the sky that they saw from where they were.

The photographs that we received from different cities in Argentina, and from countries such as Colombia and France, were published on the site created for this purpose, on Facebook and Instagram of GAC, and networks in general with the following hashtags #daiinternacionaldelcolor2020 #grupoargentinodelcolor #internationalcoloureday2020



*GAC website for ICD 2020-2021*



*Selected colors from photos*

### AUSTRALIA | Colour Society of Australia (CSA)

The Colour Society of Australia national conference Colour Connections Sydney 2021 (March 19-21 on Zoom) was timed to conclude on International Colour Day and was our celebration of this event for 2021. The conference attracted 142 registrants from 13 countries including every state and territory of Australia. A total of twenty-five speakers responded to our open call for abstracts, or to subsequent invitations from conference committee Chair Dr David Briggs and committee members Dr Jean Pretorius, Annamaria di Cara and Kerry O'Donnell. Huge thanks go to our speakers for generously giving their time and energy, allowing us to present such a diverse and colourful program, and special thanks are due to our session chairs Jean Pretorius, Paul Martin, Aly Indermühle, Sally Ryan, Mike Dixon and Annamaria di Cara.

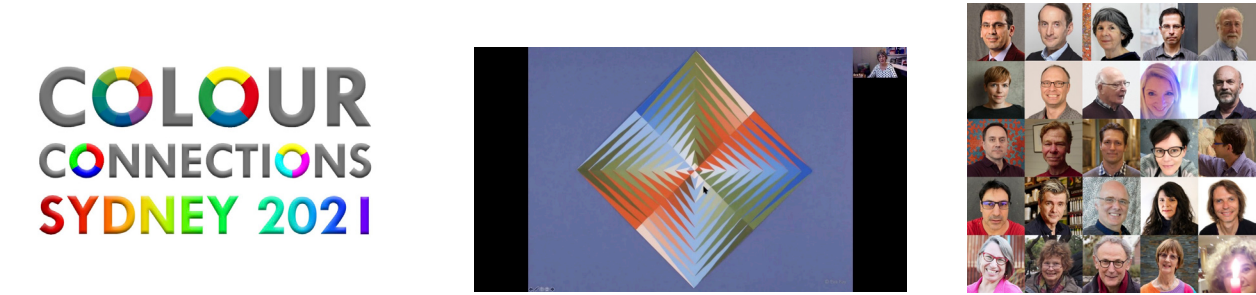
The online format facilitated the participation of nine international speakers, from the USA (3), Italy (1), Portugal (2) and the UK (3), as well as speakers from every corner of Australia. The program included sessions on the history of colour theory and practice, colour science and lighting technology, philosophy of colour, colour in light art, painting, and technological imaging, the phenomenology of colour, and colour education. The volume of abstracts can be downloaded from the CSA website at this link.

International Colour Day itself featured a whole day of presentations on colour education by an appropriately international line up of speakers, comprising Ingrid Calvo Ivanovic (Italy), Craig Kirkwood (UK), Maggie Maggio (USA), Juliet Albany (WA), Paul Green-Armytage (WA) and Eva Fay (NSW). Maria João Durão (Portugal) then honoured us by giving the final presentation, Celebrating the Harmony of Our Identities on the 'International Colour Day', in which she recounted the origins and history of International Colour Day.

Our post-conference survey indicated a very high level of satisfaction from our attendees, with 91% rating the conference either "above average" or "far above average" relative to comparable events they had participated in. Our experiment of scheduling a discussion break among the session speakers and chair after every two presentations, responding to but not restricted to questions raised by attendees in the chat, proved highly successful in promoting interaction among our speakers, and 80% of respondents found it to be either "very valuable" or "extremely valuable".



A link to the full set of video recordings from the conference was sent to all registrants, and these recordings will also be available to anyone joining or re-joining the CSA for the 2021-2022 membership year. In addition, our speakers were invited to distribute the recordings of their own presentations as they see fit, and five of these recordings are now publicly available online:



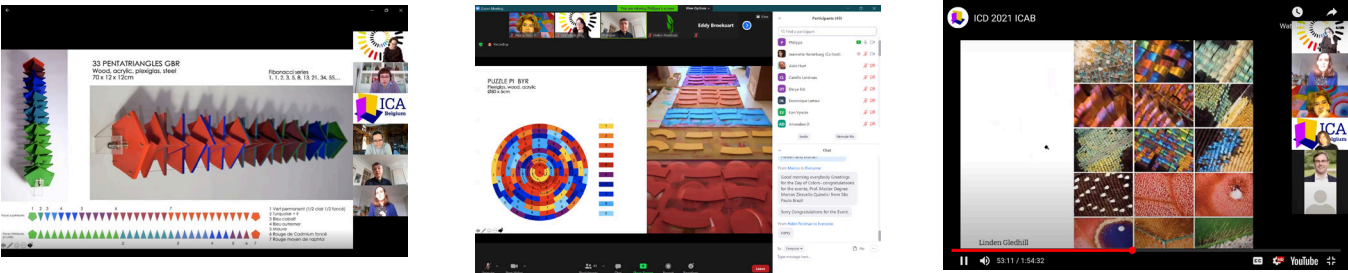
**BELGIUM** | Interdisciplinary Colour Association Belgium

On March 21st, 2021, the Interdisciplinary Colour Association Belgium celebrated the International Colour Day (ICD) with an online Zoom conference. The event was without a doubt an unprecedented success with more than 120 registrants from around the world.

We are proud to have had among our guests the coordinator of the ICD Maria João Durão. She told the story of the ICD, from its launch in 2008 till today. How it all developed from her point of view. She presented the process involved in the establishment of an International Colour Day, and how she sees its future. We got a good picture of the ICD as a global movement, a festival celebrated all over the world.

Our second guests were María Boto & Heleen Sintobin with a talk about their research on the Ecology of Colour, a journey from nature to materiality. They explained how in living beings, colours come from pigments and structures. How this research aims to become a bridge between nature and design by dissecting the bases of colour generation and translating them into an applicable and sustainable material. María is a researcher at KASK/School of Arts of University College Ghent, where she is responsible for Laboratorium: the experimental lab for art/design and biotechnology of KASK together with Heleen Sintobin. Heleen is a designer who holds a deep appreciation for craft practices and the mastering of technique. She is a design researcher at Laboratorium, biolab of KASK and a lecturer at Autonomous Design in KASK.

We closed the festivities with an intimate chat with Philippe Leblanc. A Belgian artist sensitive to rationality and the purity of forms, to the changing qualities of light, Philippe finds inspiration in mathematics, in famous series like Fibonacci's, conical shapes and emblematic numbers such as the golden number, Pi, and root of two. His works include wall sculptures, light boxes, hanging mobiles, motorized carousels or raised puzzles, all sharing the same geometric language. The colours, the minimality of white, the non-materiality of mirrors, cut-outs and translucent pieces, reinforce a play with light as well as a notion of spectrum or series, while evoking the memory of the underlying writing. The artist talked about the process and ideas behind his mysterious, enigmatic work.



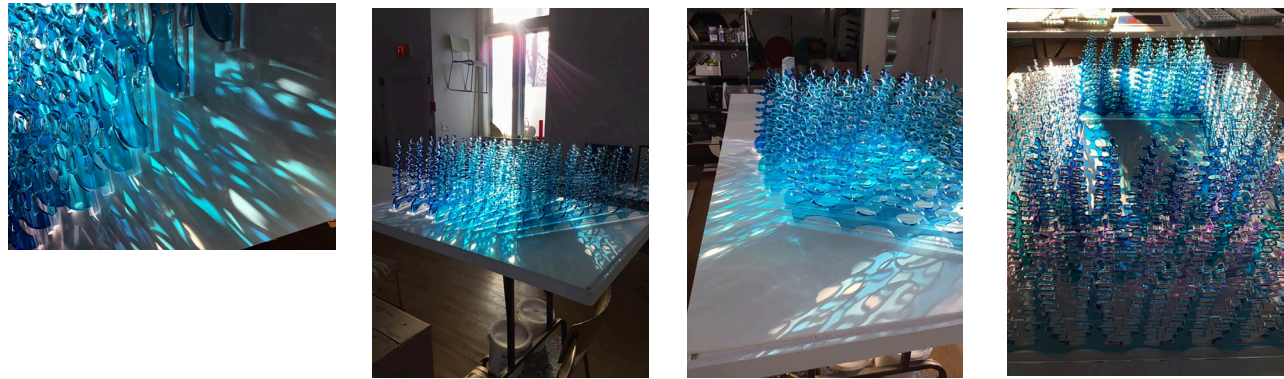
**BRAZIL** | Associação ProCor do Brasil (ProCor)

On March 23rd, ProCor celebrated the International Color Day, offering a free Course exclusively for members, about Colorimetry and Color Management. The course was offered by a highly specialized technician, Mr. Augusto Fatarelli, from DataColor, in partnership with ProCor. In times of covid, the course was offered via zoom, and was attended by 35 attendees. Those present received a certificate for the course, which lasted 2 hours. Receiving much praise from all participants, it was an excellent way to update members with an issue so important and present in the use and application of color in several areas, and which depends on cutting-edge technology!



**CANADA** | Colour Research Society of Canada (CRSC)

CRSC – Colour Research Society of Canada's International Colour Day celebration included the following events:  
CRSC Annual General Meeting  
The announcement of Student Awards winners  
CRSC Member and Saskatchewan artist Lannoo online lecture: Considering Colour Multidimensionally and Studio tour. Marie Lannoo spoke to an international audience, showing/discussing her work, with a strong focus on colour and colour science.



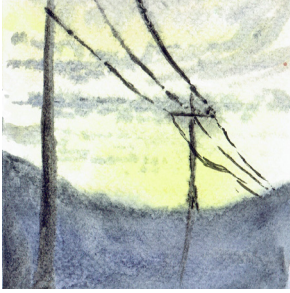


**CHILE** | Asociación Chilena del Color (CCA)

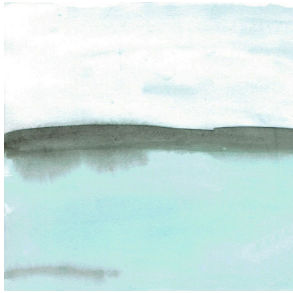
The Chilean Color Association celebrated this year's International Color Day, with the creation of an instagram to share with the world some chromatic impressions of southern Chile, through sketches. These were made in watercolor and colored pencils, by design and architecture students from the Universidad Austral de Chile, in Valdivia. The drawings show parts of the city and nature, where the students have made studies of the chromatic atmospheres of these places. These studies are the basis for the subsequent realization of design or architecture projects, which incorporate color as an important variable. The way of looking and drawing of these young people is surprising for its sensitivity and simplicity, which is reflected in these few colour sketches that we have published. Color is an important part of the training of students in creative areas, as they will always be faced with deciding and solving challenges that involve them. "Observaciones del color del paisaje del sur de Chile" was a watercolor project conducted by Professor Elisa Cordero Jahr, and developed by students of the Color Course at 'Diseño y Arquitectura de la Universidad Austral de Chile' For more watercolor sketches . <https://www.instagram.com/asociacionchilenacolor/>



Gustavo Márquez



Valentina Ehrenfeld



Camila Matamala

**CHINA** | Color Association of China (CAC)

Due to the COVID-19 pandemic, the Color Association of China (CAC) has registered a special account named “Wonderfulness of Color” (“色之彩” in Chinese) on WeChat public platform to celebrate the International Color Day (ICD) 2021. The WeChat is a self-media platform, on which users can subscribe to their favorite official accounts and receive article pushes. Each user may be recommended by the system to read those articles based on their potential interests. According to a survey by the market research company On Device, WeChat's market share in mainland China is as high as 93% and has reached more than 1 billion active users. The main body of our account logo is composed of three English letters, “C”, “I” and “L”, meaning Color, Imaging and Lighting, respectively, and its appearance colors with various hues and chroma grades represent the colorful world. Scanning the QR code through WeChat would jump directly to our account.

The topics of the published essays involve introducing and celebrating ICD, color science, imaging technology, and lighting engineering, of which the titles and links are as follows.  
Seeing is believing? The deceptiveness of color - the color appearance phenomena. (published on March 17), available at <https://mp.weixin.qq.com/s/t00gjim8FSmUo788rUBT6w>  
Warmly celebrating the International Color Day! (published on March 21), available at [https://mp.weixin.qq.com/s/Qs\\_a-nkPWCb5-S4KIEmjQw](https://mp.weixin.qq.com/s/Qs_a-nkPWCb5-S4KIEmjQw)  
What does the world look like for color-deficient observers? (published on March 25), available at [https://mp.weixin.qq.com/s/o9AdayxNag\\_lbDygD-mPdw](https://mp.weixin.qq.com/s/o9AdayxNag_lbDygD-mPdw)  
How to make photos more realistic? - the white balance in photography. (published on March 28), available at [https://mp.weixin.qq.com/s/ATJNFUdTG0s26jv6dp\\_Uw](https://mp.weixin.qq.com/s/ATJNFUdTG0s26jv6dp_Uw)  
LED: leading the present and lighting the future. (published on March 31), available at <https://mp.weixin.qq.com/s/iMo49fkFueGHAzfEUr8Iwg>

In the main interface of the account, the essays are separated into the groups of knowledge popularization and technical series according to their contents. In the meantime, the essays are also labelled with the keywords like LED, ICD, white balance, etc. so that the subscribers can quickly find the desired essays by clicking on the relevant label.

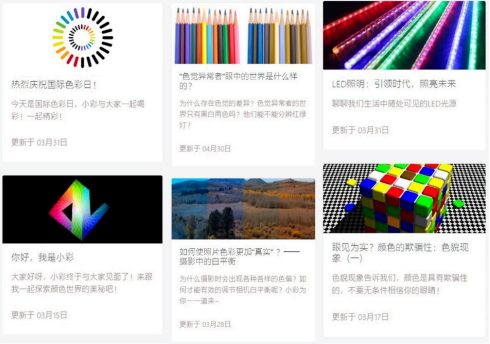
With the continuous release of fresh essays, the number of followers increased steadily, and our account had grown nearly 80 subscribers in only two weeks. The age distribution of subscribers roughly covers all age groups of adults, among which the young people aged 18 to 25 is the largest, followed by those aged 26 to 35. The essays can be shared and widely disseminated by WeChat users, and the total reading amount of all essays has reached 3,000 times so far. At present, we are going on publishing a variety of essays about color science and technology for continuous high-quality updates in the future.



The starting image of all the essays during the ICD2021 celebrations.



The main interactive interface of our account.



A glimpse of the titles and covers of all essays published during our ICD celebrations.

**CROATIA** | Croatian Colour Society (CroCoS)

The Croatian Colour Society, (CroCoS), in co-organization with the University of Zagreb, Faculty of Textile Technology, Faculty of Graphic Arts, Faculty of Architecture and the Academy of Fine Arts, this year marked for the 8th time the International Colour Day with the Audio-visual Multimedia Exhibition. The exhibition was held at the Nikola Tesla Technical Museum and was open from March 19th till March 21st, 2021.

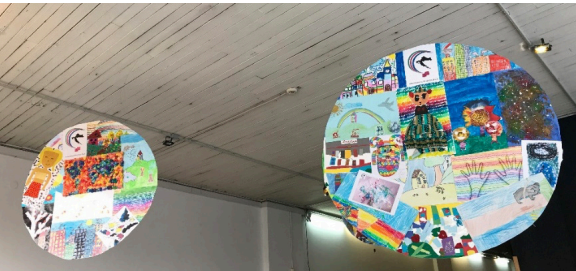
This year, light and virtual environment were chosen as the media of presentation, and for the third year in a row, the International Exhibition of Digital Prints on Tarpaulin, ZAGREB FULL COLOR 21, was held on the wire fence of the Technical Museum Nikola Tesla.

With the light installation "Whims of Rainbow", the light artists Gordana and Zorislav Sojat, bathed the exhibition hall with light effects of spilling and play of colours, while other exhibitors presented their works in the form of a video exhibition. The video exhibition features artists, designers and scientists from the University of Zagreb, Faculty of Textile Technology, Faculty of Graphic Arts, Faculty of Architecture and the Academy of Fine Arts, as well as painters and graphic artists, colour lovers and friends of the Croatian Colour Association.

Students from the University of Zagreb, Faculty of Textile Technology and Graphic Arts, also participated in video exhibitions of their works, high schools also participated - School of Applied Arts and Design from Zadar, Trade and



"Whims of Rainbow" Gordana and Zorislav Sojat



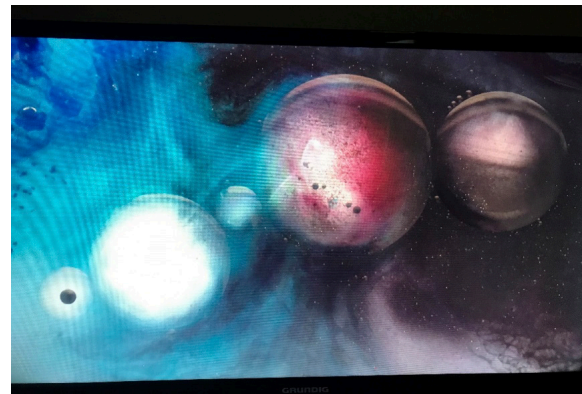
The exhibition of children's works "Let's Colour the World"



Textile School from Rijeka and Vocational School from Varazdin, majoring in Clothing Designer.

The exhibition of children's works "Let's Colour the World", is attended by elementary school students Julij Klovic and Izidor Krsnjavi from Zagreb, in cooperation with the Public Institution Museums and Galleries Niksic from Montenegro.

Also, a video exhibition of textile sculptures created by students of the University of Zagreb, Faculty of Textile Technology, graduate study of Textile Design, under the mentorship of Assoc. prof. art. Koraljka Kovac Dugandzic, was shown. The exhibition entitled "Judith Scott as a stimulus - textile forms" is set up live in the Faculty of Textile Technology Gallery and was dedicated to World Dawn Syndrome Day which, like the International Colour Day, is celebrated every year on March 21!



Video exhibition: Maja Strgar Kurecic "Other Worlds"

## FINLAND | The Finnish Colour Association

The Finnish Colour Association celebrated International Colour Day 2021 by awarding the Association's Iris Prize to conservator Malla Tallgren for her work as an authority and teacher of fine art painting materials. Over 30 years Ms Tallgren has developed and taught the materials of painting programme at the Academy of Fine Arts, Helsinki, Finland. The year-long programme covers painting techniques, supports and grounds, and consistencies and properties of binders, pigments and colourants. All of these have their specific effect on the appearance of colours in a painting.

Under Ms Tallgren's tuition many students have become acquainted with methods whereby they can find colourants from nature, and environmental and ecological questions have in fact been an integral part of the courses. Toxic and hazardous materials continue to be a part of the daily working routine of artists, which is why Ms Tallgren teaches also work safety on her courses. The consistency and quality of artists materials available today is extremely varied, which can cause technical challenges for painters. Over the years Ms Tallgren has provided information about the life cycle of available materials and has stressed the importance of acquiring reliable information about them.



Malla Tallgren in front of the old building the Academy of Fine Arts in Helsinki, where she began her teaching career 30 years ago.



outstanding colour experience or has noticeably improved the aesthetic appreciation, functionality or safety of people's daily lives or environment or whose research has markedly increased knowledge about colour. Due to the Corona virus restrictions the Association did not arrange any live public events to celebrate ICD.

## GREAT BRITAIN | Colour Group (Great Britain) (CG(GB))

For eleven years now 21st March has been acknowledged across the world as International Colour Day. Because of the strict lockdown operating within Britain, this year the Colour Group (GB) celebrated it by offering an online talk. The talk was entitled Drama and Light and was presented by the art historian, lecturer and artist Gayna Pelham.

Pelham is also one of the National Gallery guides for private tours, so it was not surprising that her talk was in the style of an in-person tour, which gave the event a relaxed and intimate atmosphere. At the opening, Elza Tantcheva-Burdge, the organiser of the event, marked the special occasion by reading from Emily Dickinson's poem "A Light Exists in Spring." After that Pelham presented a virtual gallery within which she looked in detail at a number of works by some of the most extraordinary artists of Western Europe. The focus was on differences in the representation of light, on the resultant overall aesthetic effect and on the creation of meaning.

For example, in Guido Reni's depiction of the nativity of Christ, known as the Adoration of the Shepherds (Fig. 1) the newborn is the brightest source of light illuminating the crowd of worshippers, that include a few heavenly beings. Pelham pointed to a similar effect in the Louvre version of Leonardo's Virgin of the Rocks (Fig. 2) where a group is worshipping the Christ child, who seems to be the source of light within an otherwise dark cave.

In other cases, it was explained how a virtuoso depiction of reflected light contributed to the vivid representation of a material object, as in Caravaggio's portraits or still lives (Fig. 3) while Rembrandt combined the representation of both the divine and the reflected light. In his Belshazzar's Feast (Fig. 4) he carefully depicted the play of reflections on the lavish materials and the telling expressions of the protagonists in the composition.

These are but a few examples of the greatly informative and multifaceted journey which the talk offered. Though the online format did not allow for the direct and full appreciation of the quality of each work, it did allow a wider exploration of the subject, involving examples from many different collections.

Moreover, the format allowed a truly international celebration, shared by members as well as friends of the Colour Group (GB) from around the world, bringing a foretaste and the hope of the meetings in person to be enjoyed soon.

Fig. 1 Guido Reni, Adoration of the Shepherds, c. 1642. National Gallery, London. [goodfree-photos.com](https://www.goodfree-photos.com)



Fig. 3 Michelangelo Caravaggio, Basket of Fruit c.1599, Bibliotheca Ambrosiana, Milan. [drawpaintacademy.com](https://drawpaintacademy.com)



Fig.2 Leonardo da Vinci, Virgin of the Rocks c.1483-1493, Louvre, Paris. [gallerix.ru](https://gallerix.ru)



Fig.4 Rembrandt van Rijn, Belshazzar's Feast c. 1632, National Gallery, London. [nationalgallery.org.uk](https://nationalgallery.org.uk)



**HUNGARY** | The Hungarian National Colour Committee (ICCPH)

As part of the 2021 International Colour Day celebrations the Hungarian National Colour Committee, together with the Nemcsics Memorial-house organised an exhibition from the works of András Mengyán and Zsigmond H. Serényi, in the Colour-country Gallery in Budapest. The exhibition paid tribute to the life work of Prof. Dr. Antal Nemcsics (1927-2019).

Antal Nemcsics PhD, was a Hungarian painter, pioneer of colour dynamics, university professor, founder and for 50 years president of the Hungarian National Colour Committee (member of the AIC). Prof. Nemcsics was the first awardee of the prestigious CADE award of the AIC. The exhibition PROGRESSIVE GEOMETRY was opened by László Fábíán, writer, poet and esthete (Figure 1.and 2.) on the 17th of March 2021. Fábíán, in his opening speech, praised Antal Nemcsics's theoretical work and its relevance for the new, geometry-based world of the two exhibiting artists.

András Mengyán, graphic artist and designer (Figure 3.) explained that in addition to the extraordinary usefulness of formal experiments and research (which will continue), the experiential communication of these to the public, for them to understand these, is an extremely important task. "This means, and I believe more and more, that it is not enough to achieve and publish research results, you have to add something extra that reaches people's minds and emotions. It is another new task, a new transformation to communicate the essence, and maybe that too is, or that is art."

Zsigmond H. Serényi is a painter and graphic artist whose idols are the works and spirit of László Moholy-Nagy and Josef Albers. "On the white grounded canvas and wooden boards, I made my panels by gluing only horizontally placed cotton yarns of different thicknesses based on preliminary pencil sketches. The works made in this way created an exciting, perspective visual world under the effect of certain lighting conditions, "grazing lights". The exclusively horizontal placement of the threads in the compositions creates a natural calm, while the geometric "concrete" forms create an inner tension and spatial dynamism. In recent years, I have wanted to give the compositions a more prominent emphasis, which is why I have used light grey tones in my work."



Figure 1. László Fábíán opening the PROGRESSIVE GEOMETRY exhibition in the Colour-country Gallery.



Figure 2. András Mengyán, László Fábíán and Zsigmond H. Serényi at the opening ceremony.



Figure 3. András Mengyán explaining the importance of communicating the essence of art.

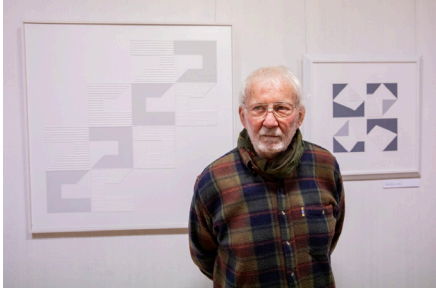


Figure 4. Zsigmond H. Serényi and two of his exhibited works.

**ITALY** | Gruppo del Colore - Associazione Italiana Colore (GdC)

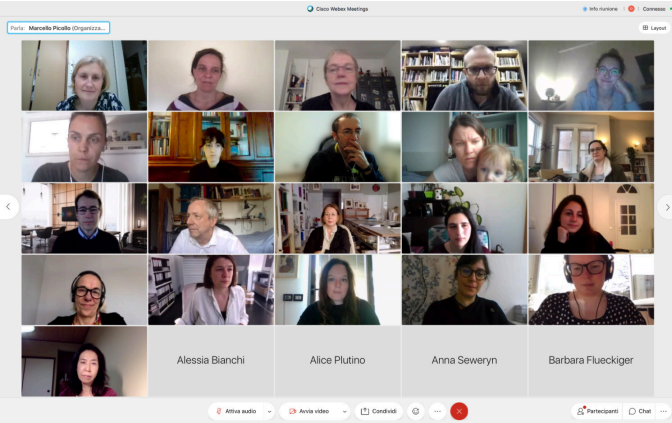
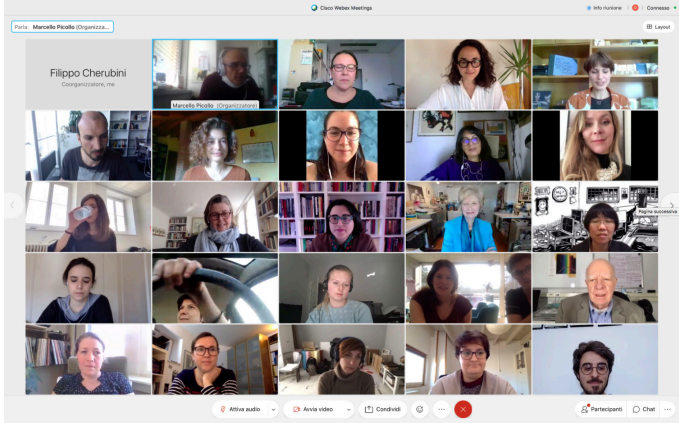
It was a pleasant surprise and great pleasure to discover that close to 140 participants, from all over the world, had registered for the conference. They all had taken up the challenge to participate in the first edition of the "Colour Photography and Film: Sharing Knowledge of Analysis, Preservation, Conservation, Migration of Analogue and Digital Materials" conference, which was held completely online on March 29 and 30, 2021. It was jointly organized by the Gruppo del Colore – Associazione Italiana Colore, the Istituto di Fisica Applicata "Nello Carrara" of the National Research Council (IFAC-CNR) and the Opificio delle Pietre Dure (OPD) in Florence. Almost 50 papers were delivered in a two-full-day marathon where all participants had an opportunity to become immersed in a bimodal world in which photographic and cinematographic material interconnected.

Unfortunately, due to Covid-19, we lived through a nearly complete lockdown. As it stands, this event proved to be the very first digital memory of a major, global event on these particular themes. The transition from analogue to digital began in the 1990s, but so far, analogue and digital technologies have mainly been united to ensure a qualitative compromise. Although the idea, stemming from the Italian research project called Memoria Fotografica (2018-19), was to launch a conference on the state of art of contemporary photography at that time, we were facing a new situation, therefore also a new involvement gravitating around the growing international interest in visual memory, its results and issues related to preservation, conservation, investigation, and transmission. It became evident that a closer look at the history, practices, archiving and use of analogue and digital photography can help us define new strategies for the conservation and restoration of photographic and film materials.



The Conference had four main Topics: 1. Historical and current technologies, materials, processes; 2. Preservation issues and sustainability, which includes a Special Session on Contemporary Photography Preservation Issues; 3. Conservation treatments, experiences, case studies, which includes a Special Session on Emergency preparedness and recovery; 4. Digitization and digital recovery of photographic objects and film materials, which includes a Special Session on Research, Technologies and New Tools in Film Restoration.

The "Colour Photography and Film" conference was the first international convening in which these topics were treated together. As such, it was an opportunity for discussions at an international level on various topics related to furthering the knowledge of color photographic and cinematographic objects from a historical, material and conservation point of view. Subsequently, all oral and short poster presentations were collected in the Conference Proceedings volume, which is freely available online as part of our diamond open access book series the "Research Culture And Science Book" series (RCASB website at <https://www.rcasb.eu>).





**JAPAN** | Color Science Association of Japan (CSAJ)

The third celebration of the ‘International Colour Day’ in Japan was held online on March 20th, 2021. More than hundred people participated in the event. First Dr. Hiroyuki Shinoda, the president of the The Color Science Association of Japan (CSAJ), gave an inaugural address, and Dr. Takahiko Horiuchi, EC member of the AIC, made a short presentation introducing a history of the ICD and various events having been held in other member countries of the AIC. Then two external lecturers delivered special talks on the SDGs, Sustainable Development Goals, a chief subject of the event. The first talk was ‘Latest trends of the SDGs domestically and internationally, and various efforts by companies’ by Mr. Shinji Onoda, a policy researcher of the Institute for Global Environmental Strategies (IGES). The second talk was ‘What colors can contribute to the SDGs’ by Mr. Masaaki Nakagawa, DIC Corporation, a chemical products maker dealing in printing ink and organic pigments. Since most audience were not quite familiar with the SDGs, Mr. Onoda’s lecture was very useful for us to understand the present situation of the earth and importance of ‘taking action immediately.’ And Mr. Nakagawa tried to treat an apparently difficult problem, SDGs and color, and presented a promising possibility by spreading the color universal design. These talks were followed by some online discussion including audience, and the four-hour event was closed in great success.

Though it is unclear whether COVID-19 would be overcome in the near future, we hope to plan more experiential, ideally face-to-face, event in the ICD next year.

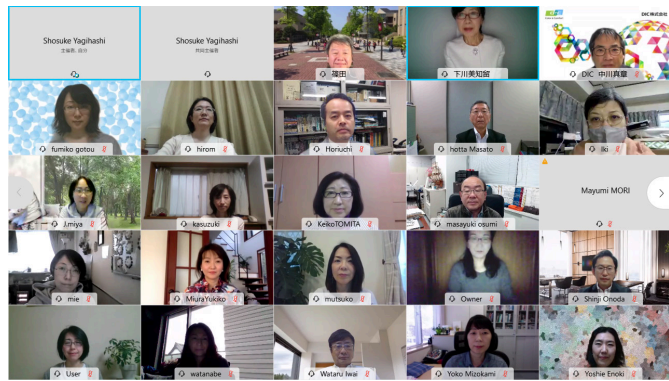


Photo 1 : A group photo of the participants.

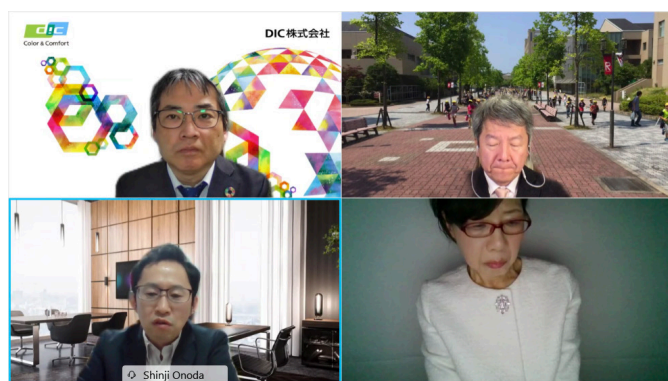


Photo 2 : From the top right, clockwise, Dr. Hiroyuki Shinoda, Ms. Michiru Shimokawa (a coordinator of the event), Mr. Shinji Onoda, and Mr. Masaaki Nakagawa.

**MEXICO** | Asociacion Mexicana de Investigadores del Color A.C.

To celebrate the International Colour Day, AMEXINC held those activities that had been postponed in 2020 due to the pandemic. Therefore, in 2021 the Second International Congress and the Fifth Mexican Color Meeting: "Sex, color, and eroticism" took place in Mexico City. These events were organized together with the UNAM Society of ex-Alumni of the Faculty of Psychology (SEFPSI). We also opened Facebook and Instagram accounts to spread our activities as an organization and make us known on social networks.

**NORWAY** | Forum Farge Norway

In order to celebrate the International Colour Day, Forum Farge organised the Webinar ‘Colour and Beyond’ in collaboration with the Department of Computer Science and the Norwegian Colour and Visual Computing Laboratory at the Norwegian University of Science and Technology (NTNU).

A broadly conceived, content-rich afternoon workshop dedicated to colour and beyond, started with an introduction to human colour vision and perception, followed by an excursion into the potential of multispectral imaging and visualisation. We continued to explore computational colour constancy and white balance, before the importance of colour in the context of visual communication of information and interaction design were discussed. An application related to colour wallpaper design was presented and short colour related contributions from Forum Farge members were presented. Finally, the webinar ended with Forum Farge annual meeting.

## PRESENTERS AND TALK SUMMARIES

Professor Rigmor C. Baraas, Faculty of Health and Social Sciences, Department of Optometry, Radiography and Lighting Design, University of South-Eastern Norway Campus Kongsberg. She is the director of research at the National Centre for Optics, Vision and Eye Care and head of the Colour Vision and Retinal Imaging laboratory. She is an expert in human colour vision, the development of the eye and refractive errors.

## Talk summary:

In her talk she will give an up-to-date overview of human colour vision including the variability in colour vision observed among persons with normal and congenital colour vision deficiency.

Dr Sony George is currently an Associate Professor at The Norwegian Colour and Visual Computing Laboratory, Norwegian University of Science and Technology since 2017. Before joining NTNU, he worked as a researcher at Gjøvik University College Norway. Sony obtained a Ph.D. in Photonics from the Cochin University of Science and Technology, India, in 2012. He has been involved in several national and EU projects multiple roles, including EU MSCA-ITN projects HiPerNav and CHANGE. His primary research focus is in application of spectral imaging for cultural heritage, food, and forensics.

## Talk summary:

Spectral imaging is a technique that combines the power of spectroscopy and imaging. This technology has received wide acceptance in recent years due to the improved performance on solving many computer vision tasks in a better way compared to the conventional 3 channel imaging. In his presentation, Sony will start with an introduction to spectral imaging, different techniques in acquisition such as multispectral, hyperspectral imaging and analysis. Some of the application areas of spectral imaging such as cultural heritage digitisation, food quality inspection, forensics etc. will be discussed in his presentation too.

Pauline Hardeberg Zimmermann is a PhD student at the Department of Computer Science, NTNU. She is working with the Colourlab at NTNU Gjøvik and the Department of Electronic Systems at NTNU Trondheim. The goal of her cross-campus research project is to develop an imaging based approach to documenting skin bruises. She is also involved in developing and teaching a new course in introductory electronics. Before starting the PhD, she was enrolled in a signal processing dual degree program with NTNU Trondheim and Technische Universität Berlin.

## Talk summary

Human color constancy is our astounding ability to perceive the color of objects or surfaces to be constant even though the illumination changes. There have been many attempts to replicate this effect in machines. These attempts are collectively referred to as computational color constancy (CCC). Automatic white balance is the implementation of CCC in digital cameras.

The vast majority of CCC research is based on illumination estimation: estimating the illumination and correcting the colors accordingly. Two of the most well-known CCC methods are called grey world and white patch. Both methods are based on illumination estimation and inspired by human vision research.

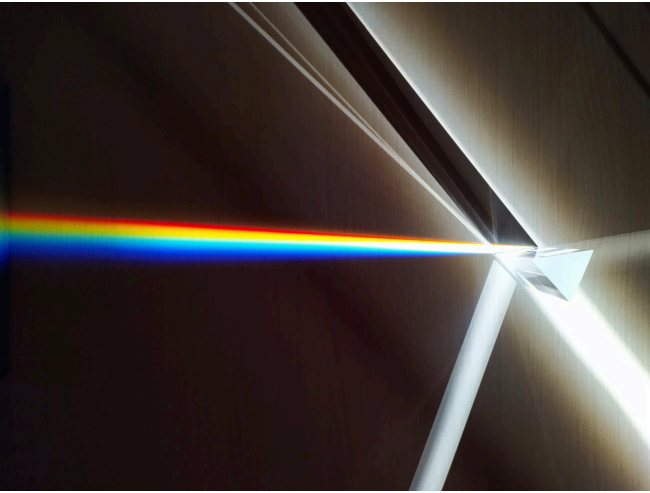




Ole E. Wattne is a PhD student and assistant professor, Department of Design, Faculty of Architecture and Design, NTNU. His research is related to the design of wayfinding systems and specifically how knowledge from multiple research fields influences design decisions and design interventions in such systems. He has been teaching information graphics, information architecture, interaction design, wayfinding systems and graphic design for bachelor and masters students.

Talk summary:

Good information design makes complex information clear with the needs of users in mind. In this context colours are often functional and used with clear intentions. Colour can be an effective and aesthetic tool in the hands of the information designer and for the reader of the information at hand. In this lecture we will look at some principles, limitations and historical and contemporary examples of colour applied in the specialised field of information design.



Anton Strand is a sales & Business Manager LFG at Norway Canon Norge As. He is an experienced Application Development Manager with a demonstrated history of working in the business supplies and equipment industry. Skilled in Print Management, Sales, Managed Print Services, Business Development, and Marketing Strategy. Strong sales professional graduated from BI.

Talk summary

New technologies and new use of old technologies sometime reveals new business opportunities. That’s also valid for printing. Trends in the interior and décor market changes very fast. How can interior architects take use of printing technology to enrich and live their ideas? What new business opportunities are being unleashed? Anton will in his presentation share his ideas how wall covering can be printed. How to cooperate with the creatives to secure quality according to the industry standards. The ability to reproduce consistent colours becomes crucial. He will also talk about reconstruction of old wall papers and décor with new technology.

Forum Farge members 15’ Contributions\*

- Professor Jon Yngve Hardeberg, NTNU Gjøvik, “ApPEARS and CHANGE”
- Associate Professor Elise Dees Krekling, University of South-Eastern Norway Campus Kongsberg, “Red-green colour vision deficiencies – vocational requirements and colour vision testing”

PORTUGAL | Portuguese Colour Association (APCOR)

Magic is perhaps the word that best describes what we felt when we finished Directing the Eye. We used the distance as an advantage, which allowed us to meet friends and researchers from all over the world and together (about 54 participants) we were carried by the experiences of our guests to very different places.

First, and under the theme Colour in the Performance we embarked on a journey with António Tiza, to the winter rituals of Trás-os-Montes, going through examples impregnated with colour and ancestral meaning; then we visited the scenography for Vermelho (Red, a play by John Logan), in the design, painting, colour, light and space decisions of António Casimiro; and finally we were transported to the world of the changing characters in colour and light of Cinderella by Alexandra Cabral, a version inspired by her life experience in Shanghai. After a short break we continued with this spirit of diversity, discovering the work of the associated researchers and elements of CIAUD / FA-UL through the presentation of the book Colour: Urban Space, Architecture, and Design, in the presence of Maria João Durão and Fernando Moreira da Silva (editors) and other authors.

Already wrapped up in the dance of this diverse, risky and free-thinking “Parangolé”, even in the distance, we cheered together in a toast to Colour.

For those who have not had the opportunity to see, or wish to review or disclose the event, it is available in: [Dirigir o olhar: A cor na performance](#) - YouTube

Program

Directing the eye: colour in the performance proposes a reflection about the complexity of issues associated with Colour when it comes into action. Colour also orchestrates the experience of performance in a complex work between perception, emotion, memory, culture and society. Three guests will talk about Colour and its universes of work with performance. Each presentation will have 30 minutes. There will be room for questions, and debate with the attendees. Colour: Urban Space, Architecture and Design begins with a papers’ presentation by the editors and authors, opening the book to a conversation among all the presents. At the end of the meeting we will make a toast to the International Colour Day.

16:00 Colour in the Performance (webinar)

António Tiza, PhD in Social sciences and President of the Iberian Mask Academy;

António Casimiro, Scenographer and Visual Artist;

Alexandra Cabral, PhD in Design and Professor FA-UL.

18:00 Colour: Urban Space, Architecture and Design

Open book conversation in the presence of authors and editors:

Maria João Durão; Fernando Moreira da Silva; João Pernão; Verónica Conte; Zélia Simões; Rui Barreiros Duarte; Sarah Frances Dias; Margarida Gamito; Joana Sousa (all from CIAUD FA-UL / APCOR) Cristina Pinheiro (IADE-UE / UNIDCOM / APCOR); Helena Soares (AG.ESCOLAS D. DINIS - SANTO TIRSO / CIAUD / APCOR); Filipa Santos (AFVS / CIAUD / APCOR)



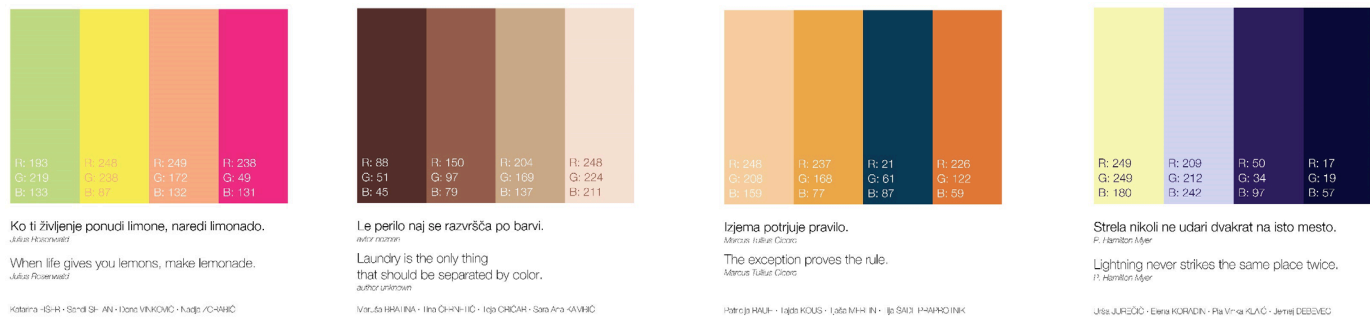
Cheer with us. Bring a glass to toast to Colour!

**SLOVENIA** | Slovenian Society for Colours (SSC)

The Slovenian Society for Colours organised an on-line exhibition based on PROVERBS IN COLOURS.

Colour is a sensual and subjective experience. A specific colour carries a certain symbolic meaning and can convey a strong message. This is even more obvious when observing selected colour combinations. To celebrate the International Colour Day 2021, students of Graphic and Interactive Communications at the University of Ljubljana, Faculty of Natural Sciences and Engineering were challenged to use a colour palette of four colour swatches to illustrate a proverb. The colour palettes present their interpretation of proverbs and reflect the emotions that arose from the proverb message.

Proverbs in colours - IGT (uni-lj.si)



**SPAIN** | Color Committee Spanish Optical Society (CEC)

To celebrate the International Colour Day, the Faculty of Sciences of the University of Alicante organized the talk "Colors do not exist!" by Conchi Lillo within the cycle of conferences "Without Science there is no future". The talk will be held next Monday, March 22 at 7 pm on the Faculty's Youtube channel: <https://www.youtube.com/c/CienciasUA>.

This talk will try to solve some questions about our vision and the way in which our brain (with the help of our eyes) interprets everything we see: why do we see in color? Do we see the same colors? And the animals? Conchi Lillo has a degree in Biology from the University of Salamanca (1996) and a PhD in Neurosciences from the same University in 2001 (Extraordinary Doctorate Award) with numerous research stays in centers of recognized international prestige. She develops her research work in the area of vision neurobiology at the Institute of Neurosciences of Castilla y León (INCYL), where she leads her own line of research in the Institute of Biosanitary Research of Salamanca (IBSAL). She is also the director of the NUCLEUS Microscopy Service. In addition, her scientific work combines it with an intense dissemination activity. She is a collaborator of Naukas and has a radio blog about science in La Ser Salamanca. More information here: <https://ciencias.ua.es/es/noticias/ciclo-de-conferencias-2020-21.html>.



**SWEDEN** | Swedish Colour Centre Foundation (SSF)

THE SWEDISH COLOUR CENTRE FOUNDATION CELEBRATED THE INTERNATIONAL COLOUR DAY FOR THE 10TH TIME!

A Digital Meeting with presentation of the winners in Awarded Colour 2021 established by Swedish Colour Centre Foundation 2014 and an inspirational colour talk by Sara Garanty.

Happy enough, the meeting gathered almost 80 participants!

FIRST PART OF THE SEMINAR: We celebrated by announcing the winner of Awarded Colour 2021

## WHO IS THE WINNER OF AWARDED COLOUR 2021?

During autumn 2020 we have announced Awarded Colour 2021 with the theme “Colour & Status”. Colour and status have always been used as a marker for social or professional status, rank and culture. Today, the concept of status is more complex, fast-moving and can differ markedly in different subcultures. Status can also be a state, position, or location.

We have focused a lot of the work made by Linnéa Andersson, a previous winner 2018 to attract new students to the competition, because her story is so fantastic. The theme was “The Blue Colour” and the competition task was to create a colour design inspired by the blue colour. Linnea presented a blue pattern and she painted the whole stand in her pattern. Today this has become a commercial product for [www.arket.se](http://www.arket.se) in blankets and cushions. That is why you see her on the invitation above.

THE WINNER IS FRIDA NAVRATIL, Interior & Furniture Design, Konstfack, University of Arts, Crafts & Design, Stockholm

The jury's motivation:

DEDICATED TO COLOR

A concrete and elaborate competition entry, which with the help of colour correction shows how it is possible to change the status of a building with colour.

She has been inspired by a criticized building that has been condemned to be demolished due to its colour scheme.

The new colour combinations emphasize the building's unique character and maintain its durability. This project shows how important a colour scheme is for architecture at a time when we need to recycle and take care of the existing . Not demolish and build new.

SECOND PRIZE: CHENG PENG, master student HDK-Valands, Gothenburg

The jury's motivation:

LIGHTING A MEMORY IN COLOR

This personal contribution shows the status of the color in the residence.

Through childhood experiences and impressions, color memories are created.

Examples given are that the warm colors bring to mind joy and the home.

The black color frames the shape with strength and elegance.

The project shows the importance of color for origin and identity.

THIRD PRIZE: EBBA LINDGREN, School of Industrial Design, Lunds University

The jury's motivation:

KERRIA LACCA – DEEP BLUE

A competition entry that displays classic status symbols with today's idiom. The mirror signals vanity. The object's classic varnish work expresses solid craftsmanship. The indigo color stands for historical exclusivity in contrast to the simple green shimmering tumeric. The competition entry





shows in a valuable way how historical objects gain new status in the contemporary context.

#### SECOND PART OF THE SEMINAR

#### COLOUR TALK: WHO IS AFRAID OF ORANGE, YELLOW AND VIOLET?

A colour story from an artistic and spiritual perspective.

#### INVITED SPEAKER: SARA GARANTY

Sara Garanty works as an interior designer and has for the past seven years specialized as a colorist. She lectures about trends and how colours affect us. In the lecture, she talks about her own experiences of living surrounded by colours but is constantly met by the fear of colour in her surroundings. It becomes a story of the future from an artistic perspective.



Catrin Vagnemark, Chair of the Jury, Bengt Ahlin, Student Contacts, Frida Navratil, the winner of Awarded Colour 2021.

Sara offered a splash of colour joy! Colour is extremely important, and you need to remind people of this fact all the time! Wherever you turn, you see colour!

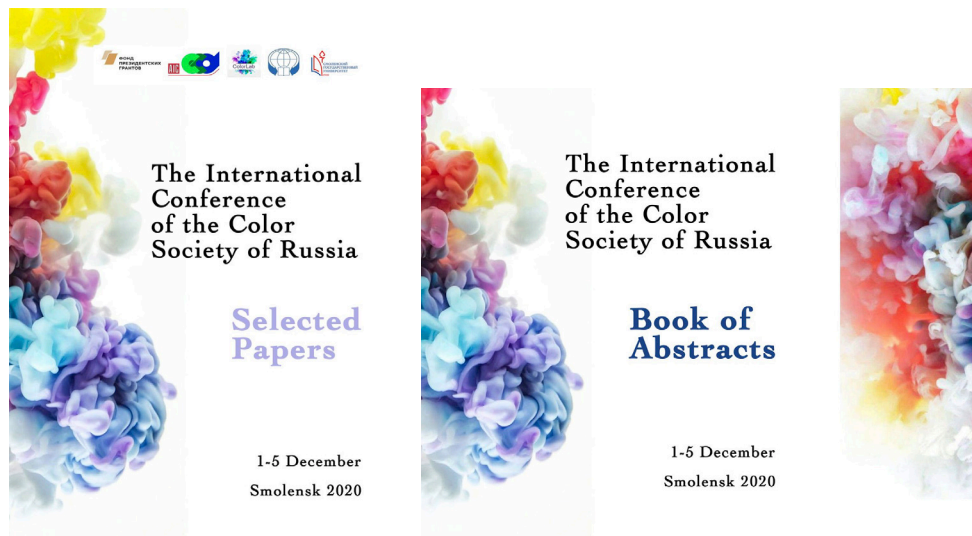
A theme for a COLOURDAY!

## SWITZERLAND | pro colore & RUSSIA | Color Society of Russia

On the occasion of International Colour Day March 21st, we announced the publications stemming from the International Scientific Conference of the Color Society of Russia, RUcolor2020, Smolensk, December 1-5, 2020.

RUcolor2020 was organized by the AIC Study Group on Environmental Colour Design in collaboration with Smolensk State University; the Research and Education Center "Color Lab"; the Institute of Scientific Information for Social Sciences of the Russian Academy of Sciences; and the Soglasie publishing company in Moscow. The conference publications are fourfold and freely available.

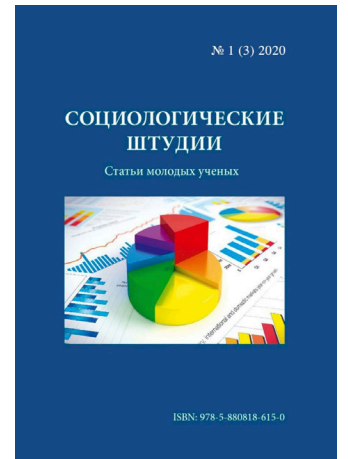
The International Scientific Conference of the Color Society of Russia: Selected Papers. 2021. Edited by Yulia A. Griber and Verena M. Schindler. Smolensk: Smolensk State University Press, 332 pages, which also includes an appendix "Books on Color," ISBN 978-5-88018-660-0 (Russian, English)



The International Scientific Conference of the Color Society of Russia: Book of Abstracts. 2020. Edited by Yulia A. Griber and Verena M. Schindler. Smolensk: Smolensk State University Press, 186 pages, ISBN 978-5-88018-656-3 (Russian, English)

Scientific Notes of the Color Society of Russia. 2020. Volume II: The International Scientific Conference of the Color Society of Russia: Selected papers. Edited by Yulia A. Griber and Verena M. Schindler. Smolensk: Smolensk State University Press, 102 pages, ISBN 978-5-88018-642-6 ISSN ISSN 2712-987X (Russian)

Sociological Studies 1(3), 2020. Articles by Young Scientists: The International Scientific Conference of the Russian Color Society. Edited by Yulia A. Griber and Verena M. Schindler. Smolensk: Smolensk State University Press, 60 pages, ISBN 978-5-88018-615-0 (Russian)



## TAIWAN | Color Association of Taiwan (CAT)

The year 2021 marks a change to Taiwan. Due to the pandemic, the Color Association of Taiwan (CAT) did not have an assembly to celebrate the International Colour Day. Instead, CAT members incorporated this special day for color with teaching color in each classroom, at universities they served around the island. There were seven universities where the International Colour Day was introduced by specially designed classroom activities.



In the Department of Photography and VR Design, Huaan University, professor Vincent Sun talked about the origin of International Colour Day during the course "Introduction to Color," and introduced the color logo. In the Department of Industrial Design, Tatung University, the meaning of the Day was taught in the class. Students learned how to use an App to design a color-picking tool in the Graduate Institute





of Color & Illumination Technology, National Taiwan University of Science and Technology. In Chinese Culture University, within the Departments of Landscape Architecture and Information Communications, at the class about color planning, students learned the colors about the campus culture and ecology. A painting training of the Itten color circle was practiced in the Department of Commercial Design, Ming Chuan University, for the course “Basic Color.” Students and professors in Department of Information Management, Shih Hsin University calibrated color samples during the class “Colorimetry” to celebrate the International Colour day. Finally, students and professor Ansel Tsai of Department of Visual Arts and Design had a colorful day by applying color management skills in the class “Color Theory and Application,” and witnessed the International Colour Day.



**THAILAND** | Color Society of Thailand (CST)

Colour communications culture to the world

We are delighted to inform everyone that we finally publicized International Color Day to Thai people in 2021 widely using social media, mainly “Facebook”. COVID-19 forced us, Color Society of Thailand, to gather people across the country posting colorful photos on their own account page or group using #internationalcolourday2021 as a metadata tag. In 2015 we, back then was Color Group of Thailand, organized one-day activity. It was fun and very academic day. We had about 70 people joining us. However, this year, we believe that we could obtain a great number of views and that a number of people know that the International Color day is on 21st of March. Many comments show that they just know it. This is the first step to widely spread and remark the day.

Initially, we invited people to join the activity by posting photos of colorful Thai food and flowers with the information of ingredients or natural dyes that are contained in food and flower. As the activity post was shared to groups and individuals, it deviated from the theme we first set. That is fine for us, we are glad that they enjoy and aware of the International Color Day. The activity started on 18th March and ended on 31st March.

We selected some posted photos here. The cover photo and Figure 1 shows the hangings used in the north of Thailand related to religion and belief. It is called “Tung”, made of paper. Figure 2 is yellow Marian Plum, the ripe one is sweet. It can be eaten fresh or make is as a sweet dish. Figure 3 shows colourful Thai sweet dish; yellow from pumpkin, red from red dragon fruit, blue from butterfly pea, light purple from taro, orange from carrot and green from Pandan leaf. Figure 4 shows floating lantern made with colored paper and framed with bamboo. In the north of Thailand, people like to release lanterns to wish for a better future. It is a very hot



Figure 1 Northern style of colorful hanging called “Tung”.



Figure 4 Festive colourful Lantern, FB: Tida Moo.



Figure 3 Thai sweet colored by pumpkin, butterfly pea, red dragon fruit, taro, carrot and Pandan leaf, FB: Phu Surang.

**UNITED STATES** | Inter-Society Color Council (ISCC)

Traditionally, the Inter-Society Color Council celebrates International Color Day by hosting a free webinar for color-interested individuals around the world. This year on March 23, 2021 ISCC hosted a webinar entitled “Now You See It, Now You Don’t: Industrial Chromism” given by Dr. Andy Towns. Chromism refers to reversible color changes in substances triggered by stimuli such as light or heat. These effects are often striking. Commercializing them has not proved easy, but chromic materials can be found in a diverse array of products. This webinar looked at some examples of commercial systems from the perspective of how they are put together and what makes them work. It paid particular attention to the type of reversible color change most successfully exploited by industry: photochromism. There was discussion on speculation about future developments in chromic materials and whether they may even be superseded.



His presentation was enjoyed by 95 attendees from 15 countries, including US, Canada, Italy, UK, Iran, Germany, Mexico, Switzerland, Brazil, Finland, Spain. Dr. Andy Towns is an industrial organic chemist, working for the past 20+ years largely on the synthesis and application of substances whose utility relies upon interaction with light. He holds the role of Senior Development Chemist at Arkema UK Ltd’s headquarters in northern England, helping to grow the company’s photoinitiator business. Since gaining a PhD in applied color chemistry, Andy has enjoyed time employed in the UK, India and South Korea by enterprises relating to coloration, specialty chemicals, personal care, and pharmaceutical intermediates. As well as conventional dyes for textiles, thermopolymers and hair, he has worked on functional colorants, including fluorescents, infra-red absorbers, organic semiconductors, and particularly photochromic dyes. For the last ten years, Andy has been Editor-in-Chief of Coloration Technology. Hungary, Belgium, Slovenia, and Denmark. The chromism examples were very striking! The presentation dazzled the audience as it described multiple examples of color-changing materials and products in various industries. Attendee comments included, “It was FASCINATING!!!! Thank you!” and “Fantastic. I worked in fashion product development for years with major department stores ... it is all in the ‘eyes’ for color, then the mind tells you ‘this or that’ ... And all over the world, ‘people’ view color differently.”hotwork expresses solid craftsmanship. The indigo color stands for historical exclusivity in contrast to the simple green shimmering turmeric. The competition entry shows in a valuable way how historical objects gain new status in the contemporary context.

**SOCIAL MEDIA**

Leslie Harrington’s dedication managed to create a major buzz on Instagram with around 700 posts in the days that led to the International Colour Day. This was very impressive and shows what we are able to do in difficult times. Here are some colour quotes that she posted on Instagram.



Examples from Instagram posts

## BEYOND 2021

### 2022 AIC Midterm Meeting - Sensing Colour



June 13-16, 2022 - Toronto, CANADA

Venue: Online

Chair: Doreen Balabanoff and Robin Kingsburgh

Organized by Colour research Society of Canada



### 2023 AIC 15th Congress



November 28 - December 2, 2023 - Chiang-rai, THAILAND

Venue: The Riverie by Katathani

Chair: Pichayada Katemake

Organized by Color Society of Thailand



### 2024 AIC Midterm Meeting - Color Communication and Marketing



September 16-19, 2024 - São Paulo, BRAZIL

Venue: ESPM

Chairs: Paula Csillag and Vien Cheung

Organized by Associação ProCor do Brasil



### 2025 AIC 16th Congress



October 19 - 25, 2025\* - Taipei, TAIWAN

Venue: National Tsing Hua University

Chair: Tien-Rein Lee

Organized by Color Association of Taiwan

\*dates are subject to change



## AIC 2021 AWARDS

### JUDD Award John McCann (USA)



2021 at the AIC Congress, Milan, Italy. John McCann has always been interested in color: high school chromatography; and blue/pinkCuCl isomer synthesis while freshman at Harvard. In summers, he worked for Edwin Land on two-color photography and Retinex Theory. After graduation (Biology, 1964), he worked for Land for 20 years; managing, Polaroid's Vision Research Lab (1961-1996). Land and McCann invented algorithms to calculate appearance images from HDR luminance (1971). John set up Polaroid's first digital imaging laboratory (1975). He captured natural scenes, calculated appearances, and wrote sensations on media, mimicking what artists do in painting scenes. He continues research on human and electronic imaging. John is a Fellow of the Society for Imaging Science and Technology (IS&T) and the Optical Society of America (OSA);

Past President of the IS&T and Artists Foundation, Boston; Past Secretary of the Inter-Society Color Council; IS&T/OSA Land Medalist, and an IS&T Honorary Member. For his scientific achievements in colour vision, colour discrimination, colour deficiency, luminous efficiency, the HK effect investigation, colour appearance modelling, colour constancy, colour name rendering and skin colour. He is Professor Emeritus at Chiba University. He was the Steering Committee Chair of the midterm meeting of AIC2015 Tokyo. Also, he served as an Executive Committee Member of AIC from 2002 to 2005.

*In 1973 Betty Judd proposed to establish an AIC award in memory of her husband, Deane Brewster Judd, to recognize outstanding work in the field of color science.*

### CADE Award Jean-Philippe Lenclos (France)

2021 T the AIC Congress, Milan, Italy. Jean-Philippe Lenclos, colour designer, visual artist, colour researcher, Professor Emeritus of the École Nationale Supérieure des Arts Décoratifs (EnsAD), and founder and former director of Atelier 3D Couleur in Paris was awarded the Ordre des Arts et Lettres as a Chevalier by the French Ministry of Culture for his significant contributions to the arts. He developed a ground-breaking methodology, The Geography of Colour, and has given invited lectures worldwide. His books have received numerous prizes and have been translated into several languages. His works have been exhibited in various countries and 170 of his works are included in the Collection du Centre Pompidou in Paris. Jean-Philippe Lenclos has inspired several generations through his example, excellency, and seminal contributions to the world of colour in urban planning and design, environmental colour design, architecture, industry, product design, art, research, and education.

The 2021 CADE Award was sponsored in part by RAL and AIC.



*The AIC Award for Color in Art, Design and Environment (CADE) is established to recognize those who excel in the areas of design, art, architecture and humanities.*





// ARGENTINA //

Grupo Argentino del Color

ACG - Argentine Color Group

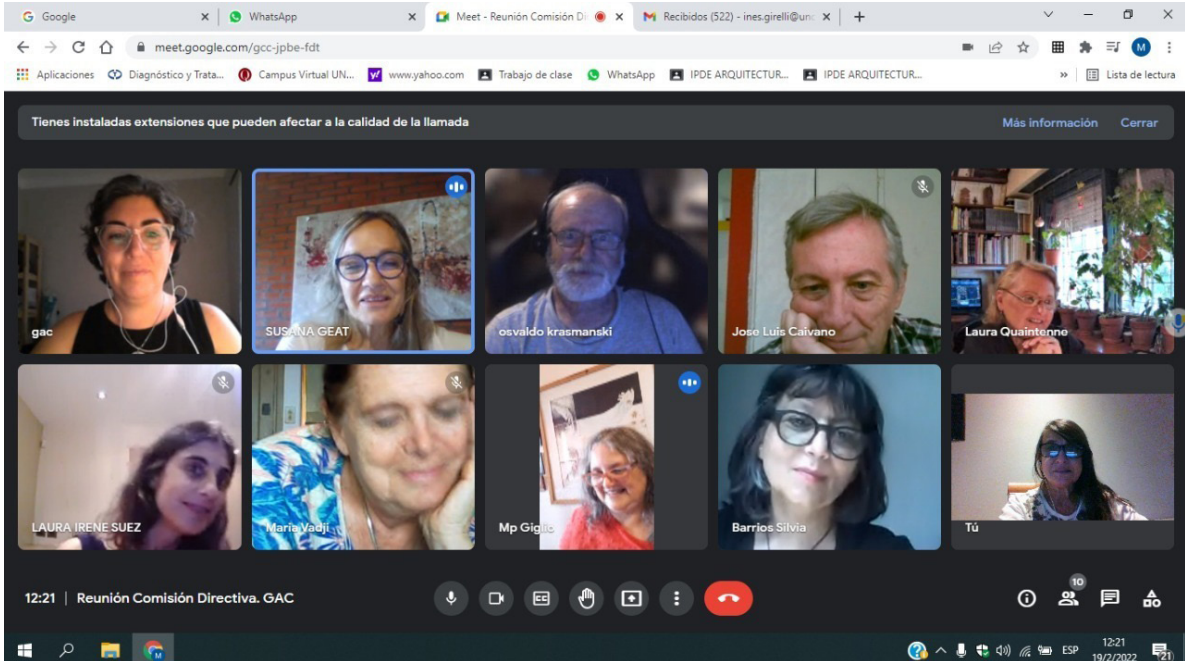
Events 2021

- 1. Last year, within the activities, the International Color Day was commemorated with a participatory activity. It was based on an invitation from the Grupo Argentino del Color (GAC) to the community through the networks to share images of “The color of your sky”. These images were then communicated in grids, both on Instagram and Facebook.
- 2. The executive committee appointed two new honorary members: Gustavo Adrián Defeo and María del Pilar Buera for their invaluable contributions to the GAC and their important developments in research on the subject of color, among other reasons.
- 3. Publication of the book Perspectivas del color, with 45 articles by various authors, edited by José L. Caivano and Mabel A. López. [image 1]



- 4. A new executive committee was elected for the term 2022-2026:  
President: Susana Gladys Geat  
Vice President: María Inés Girelli  
Secretary: Sara Kenny  
Secretary: Osvaldo Krasnanski  
Treasurer: Laura Adela Quaintenne  
Vice Treasurer: María Cristina Vadji  
1st Member: Silvia Barrios  
2nd Member: María Marta Mariconde  
3rd Member: Omar Burgos  
1st Substitute: Laura Suez  
2nd Substitute: Claudio Salvador  
3rd Substitute: Carlos Augusto Zoppi  
Auditors:  
1st auditor: Silvio Roldán  
2nd auditor: María Paula Giglio  
Substitute: José Luis Caivano

Committee meeting: First row: Sara Kenny, Susana Geat, Osvaldo Krasnanski, José Luis Caivano, Laura Quaintenne. Second row: Laura I. Suez, María C. Vadji, María Paula Giglio, Silvia Barrios, María Inés Girelli]



Committee meeting



// AUSTRALIA //

## Colour Society of Australia CSA

On March 19-21 the Colour Society of Australia held its first online national conference Colour Connections Sydney 2021. The conference, which was organized by the committee of the NSW Division of the CSA chaired by Dr David Briggs, attracted 142 registrants from every state and territory of Australia and 13 other countries. The sessions comprised History of Colour Theory and Practice, Colour Science and Lighting Technology, Philosophy of Colour, Colour in Light Art, Fundamentals of Colour, Colour in Painting, Colour in Digital Imaging, Painting Materials, Phenomenology of Colour, and a full day on Colour Education coinciding with International Colour Day 2021. A total of twenty-five speakers responded to our open call for abstracts or to subsequent invitations from the conference committee. The online format facilitated the participation of nine international speakers, from the USA (3), Italy (1), Portugal (2) and the UK (3), as well as speakers from every corner of Australia. Our post-conference survey indicated a very high level of satisfaction among our attendees, with 91% rating the conference either "above average" or "far above average" relative to comparable events they had participated in, and 77% or more selecting the maximum rating option for their satisfaction with the conference as a whole, with the work done by the organizers, and with the information provided before the conference.

Through the rest of the year we continued the series of free webinars that we have been hosting since the beginning of the covid pandemic. Further details of these webinars can be found in the CSA Annual Report for 2021 which can be downloaded here.

- On April 22 Berit Bergstrom (Berit Colour Talks, Sweden) discussed influences on

Scandinavian design, including an overview of her research into colours of historical interiors, in her presentation Scandinavian Colour Design of Today.

- On July 3 Kristen Tivey (Helen Frankenthaler Foundation and the Isamu Noguchi Foundation and Garden Museum, New York) gave a presentation on the pioneering abstract painter Hilma af Klint and her use of colour.
- On August 15 artist Adrien Lucca (Belgium) gave us a close look into the research methods that go into his paintings, installations and publications in his webinar Light on Painting.
- On September 25 Marcia R. Cohen (Professor Emerita SCAD Atlanta, USA) gave a presentation on her innovative approach to teaching and its impact on her practice in her presentation Concerning the Shape of Colour hosted by Annamaria di Cara.
- In our webinar on October 31, A Conversation about Colour hosted by Aly Indermühle, eminent Australian sculptor, painter and educator Ron Robertson-Swann shared a wealth of fascinating anecdotes and insights related to his career.
- In Colours of Light: An Emotive Exploration on Sunday December 5, also hosted by Aly Indermühle, Melbourne-based designer Ilan El described and illustrated his journey to his current creative practice and artistic expression.

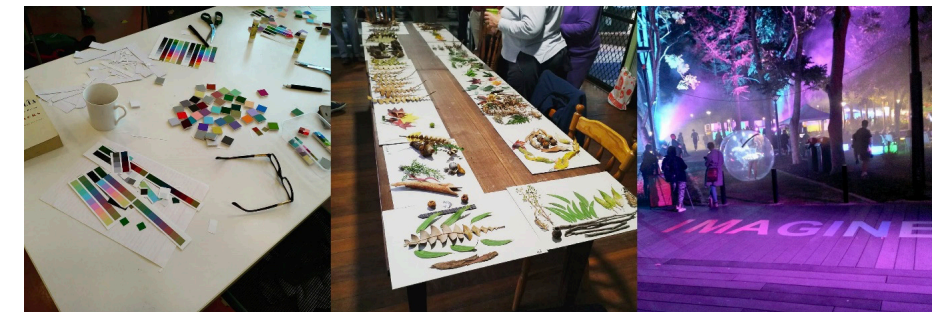
Meanwhile, our Western Australian Division under Chair Helen Ponton conducted a successful program of face-to-face meetings and social events throughout the year. Their theme for 2021, Colour and Music, was explored in two sessions, one in March with Paul Green-Armytage conducting



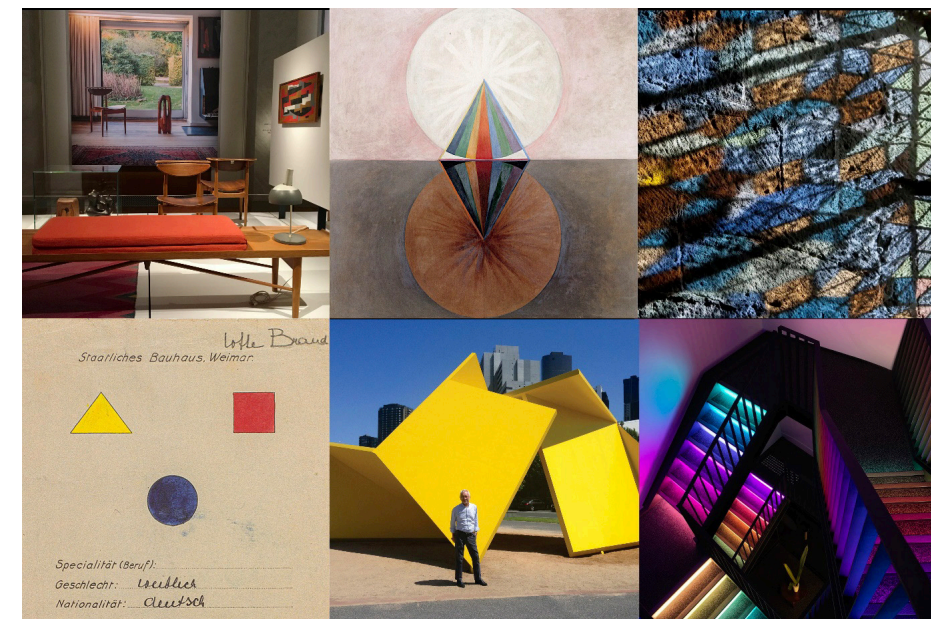
Session chairs from Colour Connections Sydney 2021 Jean Pretorius, Paul Martin, Aly Indermühle, Sally Ryan, Mike Dixon and Annamaria di Cara.

an activity relating music and colour, and one in September with neuroscientist and musician Professor Alan Harvey speaking about the importance of music throughout human evolution, Georgina Noble speaking on artist Paul Klee, and Dr Ashley Smith (UWA) speaking on The Art of Orchestration - Painting with Sound. Other activities included a weekend away at Dwellingup in May and visits to arts events at Joondalup and Rockingham.

The Annual General Meeting of the Colour Society of Australia was held on November 29 on Zoom, and President David Briggs (NSW), Vice President Mike Dixon (WA), Secretary Glenys Thomson (Southern Division), Treasurer Emily Guo (NSW), and Membership Secretary Julie Blackmore (Queensland) were all re-elected unopposed.



Photos from the Colours and Music workshop, the weekend away at Dwellingup, and the LUMINIGHT event at Joondalup, all conducted by the Western Australian Division of the CSA



Images from our six free webinars for 2021, presented by Berit Bergstrom, Kristen Tivey, Adrien Lucca, Marcia R. Cohen, Ron Robertson-Swann and Ilan El (see below)





// BELGIUM //

## Interdisciplinary Colour Association Belgium

### ICA-Belgium

Looking in reflection to 2021, one can say that the world changed in a way none of us had foreseen and which caused great discomfort in so many lives. We had to further adjust to a new lifestyle and find new ways in everyday living. The resilience of many was taken to the test.

2022 is still asking a lot of patience and tolerance with the circumstances and each other. Hopefully, the time will come soon that we can leave current times for what they were and move on, back to our freedom.

We embraced the power and possibility of the online events and decided to launch a series of online Colour Talks, starting with the International Colour Day on 21st of March 2021, which was continued throughout the year.

All content of the Colour talks of 2021 can be found on the website and on the You Tube channel of ICA-Belgium.

- March 21st
  - Maria João Durão – as Chair of the of the ICD she gave her talk about the founding of this day and the future to come.
  - María Boto & Heleen Sintobin talked about Ecology of Colour, a research journey from nature to materiality.
  - Philippe Leblanc. A Belgian artist, sensitive to rationality and the purity of forms, to the changing qualities of light, Philippe finds inspiration in mathematics.
- April 25th Robert Hirschler shared his innovative views about colour theory and neo-impressionist painting.
- May 23rd Liz West, British based artist, shared her view on her broad body of work, that encompasses site-specific installations,

sculpture, and wall-based artwork, all vivid environments that mix luminous colour and radiant light.

- June 27th Axel Buether, scientist, perceptual psychologist and architect with a research focus on colour, light and space. He spoke about the secret power of colours and how they influence our behaviour and feelings.
- October 17th Nick Harkness the Australian colour technologist gave us an exclusive insight into the impressive online training seminar Colour Made Simple – For Visual and Instrumental Colour Measurement.
- November 28th Inez Michiels our ICA-B colleague and Belgian design semantics took us on a tour through her innovative Design Semantics Database (DSD), an online application developed for the creative

### LIVE EVENT IN BRUSSELS

Sunday October 10th we were invited by one of the speakers of the first Colour talk, Philippe Leblanc at his studio in Brussels. Philippe is a Belgian artist/architect sensitive to rationality and the purity of forms, to the changing qualities of light, he finds inspiration in mathematics, in famous series like Fibonacci's, conical shapes and emblematic numbers such as the golden number, Pi, and root of two. His works include wall sculptures, light boxes, hanging mobiles, motorized carousels or raised puzzles, all sharing the same geometric language. The colours, the minimality of white, the non-materiality of mirrors, cut-outs and translucent pieces, reinforce a play with light as well as a notion of spectrum or series, while evoking the memory of the underlying writing. The artist showed his workspace, his

methods, and techniques, while talking about the process and ideas behind his mysterious, enigmatic work.

### REPORTS BY ICA-Belgium MEMBERS

Report 2021 - Felix A. D'Haeseleer <https://leseminairedecouleurs.wordpress.com>

Given the circumstances, I feel lucky the Spring and Fall work sessions of Le Séminaire de Couleur and the few hours of the color course I still teach at La Cambre could take place live (fig.1). I even could give a live talk to a limited audience of art teachers on my color teaching concepts. Urban Brussels issued number 34 of Bruxelles Patrimoines /Erfgoed Brussel, a special on color and texture in architecture; it has my two page article on the NCS. All articles can be downloaded either in French or in Flemish; there is no English translation. <http://patrimoine.brussels/decouvrir/publications/notre-revue-par-article/ndeg34-couleurs-et-textures> [http://erfgoed.brussels/nl/ontdekken/publicaties/ons-tijdschrift-per-artikel/nr34-kleuren-en-texturen?set\\_language=nl](http://erfgoed.brussels/nl/ontdekken/publicaties/ons-tijdschrift-per-artikel/nr34-kleuren-en-texturen?set_language=nl)

The library of Le Séminaire made only one acquisition last year but what a trove !: the 24 step color wheel devised by Julie Beaudeneau for the second edition of Rosenstiehl's *Traité de La Couleur* in 1934 (fig.2) ; it was missing in my copy until I found this one sticking out of a Code Universel des Couleurs by Seguy, 1936, in a second hand bookstore. For 2022, the schedule and the description of the work sessions at Le Séminaire de Couleur can be found on <https://leseminairedecouleurs.wordpress.com>

### Report 2021 Inez Michiels, director at CITY OF 8

365 days of design research and creativity.

The Design Semantics Database (khnum.club) is an ever-growing source of design information and was supplemented with more than 800 keywords. It puts the total number of searchable keywords at 1877. These structural classification works have strengthened the coherence of the DSD and turned it into a more robust tool. 2021 is also the year we founded an online platform for design semantics courses and workshops (cityof8-school.thinkific.com). Kick-offs are the courses Colour Semantics for Interior Architects, put to the test by interior design students at the University of Antwerp Belgium, and Signifix: design from keyword to

colour and shape, tried out by graphic design students at the famous MICA in Baltimore USA. Sliding effortlessly into the new year, we want to expand the range of courses by initially targeting industrial designers. The DSD will be enhanced with about 70 materials linked to meaning and emotional effect.

Colour, in all it's beautiful and interesting applications, will be a constant topic for ICA-Belgium in the year to come. By organizing the Sunday Colour talks, we want to continue sharing the knowledge of experts with you, to learn, and most of all to enjoy.



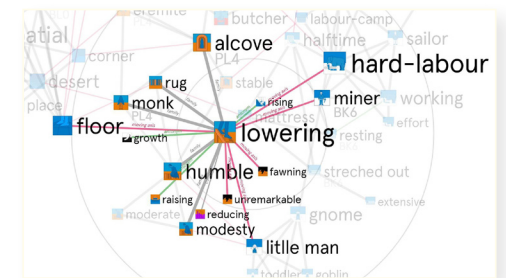
Studio visit - Philippe LeBlanc



Colour Talks 2021



Matching a true blue and a true yellow of the same lightness at le Séminaire de Couleur (Felix A. D'Haeseleer)



Inez Michiels



// BRAZIL //

## Associação ProCor do Brasil

PROCOR - Colour Association of Brazil

On September 21st, 2021, the Brazilian Color Day was celebrated, a date established by ProCor in contact with congressperson Mr. Bruno Covas, through Law No. 14,913. ProCor celebrated the day, with an online event and with great success, having 172 subscribers! Speakers spoke via zoom and a YouTube link was created to accommodate all subscribers. We had the participation of paint manufacturers, color solution providers, architects, decorators, interior designers and experts from academia.

The event had the precious sponsorship of member companies: COLORMIX, DATACOLOR, LECHLER DO BRASIL S.A, LUKSCOLOR TINTAS, NCS, RENNER SAYERLACK, SHERWIN WILLIAMS TINTAS and SINTEGLAS ACRYLICS AND SPECIAL COLAS and 2AGOVONI, companies that we greatly honor! The event was supported by the partners of ProCor, ABA, ABRAFATI, AGNELO EDITORA, JORNAL DO PINTOR, MORRELL EDITORA, PAINT & PINTURA, SHOW DO PINTOR, SITIVESP and TINTAS E VERNIZES.

The opening of the event had the honorable presence and words of the President of the Union of the Paints and Varnishes Industries Owners of the State of São Paulo (SITIVESP), Mr. Douver Martinho. Following the opening, the event had the honorable presence and words of the Executive President of ABRAFATI (Brazilian Coatings Manufacturers Association), Mr. Luiz Cornacchioni. The President of ProCor, Prof. Dr. Paula Csillag, presented the entity and the celebration of the Brazilian Color Day. According to her, this type of event enhances synergies and partnerships, promoting the interaction between academia and industry. The Vice President of

ProCor, Patrícia Fecci, introduced the speaker of the day. After the opening, there was the main lecture, by Danni Couto, with the theme, "Color as a Tool in Transforming Houses into Homes". After the lecture, there was a presentation on ProCor's participation in AIC2020, with associate Josivan Benegate. Then there was the Academic Communications Panel on Color, with the presentation of members Ana Laura Alves, Luiz Cesar Barcanti, Pablo Manye and Pedro Pinho. Then there was the Associate Projects panel with the presentation of the associate Claudia Bavaresco.

After these, there was the Panel of ProCor Sponsoring Companies. In this panel, each of the companies had 10 minutes to make a presentation telling news and trends offered by their company. In alphabetical order, the representatives of the companies COLORMIX, DATACOLOR, LECHLER DO BRASIL S.A, LUKSCOLOR TINTAS, NCS, SHERWIN WILLIAMS TINTAS and SINTEGLAS ACRYLICS E GLUES SPECIALS made presentations. At the end, participants were able to ask questions and praise the event!

For those who missed it, this is the youtube link with the event in full: <https://www.youtube.com/watch?v=bXmqJHon7Ow>

Access the color changing invitation here!

[https://procor.org.br/\\_e-mkt/2021\\_DiaBrasileiroDaCor/](https://procor.org.br/_e-mkt/2021_DiaBrasileiroDaCor/)

All people disclosed have given permission for image disclosure.

On March 23rd, ProCor celebrated International Color Day, offering an exclusive free course on Colorimetry and Color Management to associates. The course was offered by a highly specialized technician, Mr. Augusto Fatarelli, from DataColor,

in partnership with ProCor. In times of covid, the course was offered via zoom, and was attended by 35 people. Those present received a certificate for the course, which lasted 2 hours. Receiving a lot of praise from all the participants, it was an excellent way to update the members with such an important and present subject in the use and application of color in several areas, and that depends on cutting edge technology!



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caption





// CANADA //

## Colour Research Society of Canada CRSC

2021-2022 marks our 10th anniversary year! As part of our year-long celebration, we are highlighting 10 Members on social media and on our website at <https://www.colourresearch.org/profiled-members>.

International Colour Day was celebrated with our Annual General Meeting and a talk by artist Marie Lannoo (Saskatoon, Saskatchewan).

10th Anniversary: In December 2021 we held a special Member's only event with a presentation on The Power of Colour by Board Member Marie-Chantal Milette. We will continue celebrating on International Colour Day 2022 with a talk by Dr. Jennifer Veitch (National Research Council, CNC-CIE), who spoke ten years ago at our inaugural event.

The CRSC had another active year, ramping up for the upcoming AIC Interim Meeting in Toronto, June 13-16, 2022 with the theme Sensing Colour <http://www.aic2022.org/>. We look forward to welcoming you to Toronto - virtually and/or in person! Members of the planning committee include: Co-Chairs Robin Kingsburgh and Doreen Balabanoff, Program Co-Chairs Robin Kingsburgh and Brian Funt, and Paul Haft, Ilene Sova, Judith Tinkl, Sharyn Gitalis, Vivian Lo and Janine May. The AIC 2022 Sensing Colour logo and website were developed by Haft2, who are also providing ongoing support for managing AIC2022.

The successful online Kaleidoscope Lecture series has been very well attended. Benefiting from

the online format, we have hosted speakers and attendees from across the country and abroad. Our attendance continues to increase substantially. 2021 lectures included:

- Colour Imaging by Michael Brown of York University on Jan 21st.
- Lexichrome by Chris Kim and Christopher Collins on Feb 24th.
- Considering Colour Multidimensionally by Saskatoon Artist, Marie Lannoo on March 21st.
- Covid 19 Collage Project by Ilene Sova, CRSC Board Member and OCADU Faculty Member on June 9th.
- James Clerk Maxwell and his contributions to colour science by Vengu Lakshminarayanan of the University of Waterloo on July 22nd.
- Colour in the Mineral World by Katherine Dunnel of the Royal Ontario Museum on Sept 22nd.
- Bauhaus Influence on Colour Education: a critical homage by Robert Hirschler, Oct 23rd.
- The Power of Colour by Marie-Chantal Milette Nov 4th. (a members only event)
- The role of human colour vision and its development in young children by Kathy Mullen of McGill University on Nov 24th.



The annual CRSC Student Award is now in its third year, generously funded by a 3-year commitment from Haft2, as well as donations from Board members.

The 2020 Student Award winners were:

Graduate Award: Vanessa Mardrossian, Université Concordia, Culture de la couleur: Une écolittérature du design textile; Undergraduate Award: Vladimir Kanic, OCAD University, Music of the Photograph - Memory Fragments from Pag; Honorable Mention: Justine Fisher, OCAD University, Emotional Architecture. See: <https://www.colourresearch.org/award-recipients>.

Our ongoing social media campaign highlighting our mission and interdisciplinary nature continues. Our online presence has been greatly enhanced by our VP Paul Haft and his marketing and communications team at Haft2. We are grateful for their ongoing support. This year, Haft2 designed our new logo, mentored a design student from OCAD University to help support our mission, and helped create our monthly newsletter. Our membership has increased substantially this year as we build awareness of the organization through social media outreach. We hope to continue this trend into the future.

Our Land Acknowledgement and Diversity and Equity statements are now posted on our CRSC and AIC-2022 websites: (<https://www.colourresearch.org/land-acknowledgement>). (<https://www.colourresearch.org/diversity-and-equity-statement>). They are fundamental to our organization in its work and programming. Board member Ilene Sova contributed greatly to this effort.

Members' activities:

Jayanne English won the 2021 Qilak Award from the Royal Astronomical Society of Canada, in recognition of her outstanding contributions to Astronomy Outreach and Communication. Jayanne's outreach includes educating both scientists and the general public on the role of colour in scientific visualization.

Sharyn Adler Gitalis and Deborah Gottesman (Gottesman Associates) completed a bespoke dining room chandelier designed with colour as a primary design consideration. The project won the Illuminating Engineering Society (IES) Illumination Award of Merit and Honorable Mention in the LIT Lighting Design Awards (Residential Lighting).

Udo Schliemann of Entro Communications completed a branding, wayfinding and placemaking design for Weston Common in Toronto.

Brian Funt and his student Hoda Aghaei were awarded the Charles E. Ives Journal Award for outstanding publication of the year in the field of basic or applied science or engineering) for their paper, "A Flying Gray Gall Multi-illuminant Image Dataset for Color Research", from the Society for Imaging Science and Technology.

At AIC 2021, Doreen Balabanoff, Robin Kingsburgh and Brian Funt served on the Scientific Peer Review Committee. Doreen participated with a paper/presentation, Colour and Design of Birth Spaces: a transdisciplinary review of the literature; she served on the Scientific Peer Review Committee and as Co-Chair of two sessions, and delivered presentations at the Environmental Colour Study Group and the Art and Design Study Group. Robin gave a presentation on Teaching the Science of Colour Asynchronously at the Study Group on Colour Education.

Board Members this year included Co-Presidents Doreen Balabanoff and Robin Kingsburgh; Vice President Paul Haft, Secretary Judith Tinkl; Treasurer Sharyn Gitalis and Members at Large: Brian Funt, Vivian Lo, Ilene Sova, Deirdre Tomlinson, Janine May and Marie-Chantal Milette.



Weston Commons, Toronto. Photo courtesy Udo Schliemann



Ilene Sova image from her Kaleidoscope lecture presentation "Covid19 Collage Project"



Chandelier design by Gottesman Associates. Photo courtesy Sharyn Adler Gitalis



Member Rhodie Lamour, featured on our website in our Members' Profiles



Logo by Haft2, part of our graphic communications initiatives in 2021.





// CHILE //

## Asociación Chilena del Color

CCA - Chilean Color Association

### Francisco Méndez-Labbe exhibition

In December 2021 opened he exhibition Francisco Méndez-Labbe (1922-2021), "Modernity, calculation and divergence" at the Museo Nacional de Bellas Artes, in Santiago de Chile. Francisco died in February 2021 at the age of 99. Through almost 60 works, the exhibition covers the 70-year career of this architect, who, without leaving aside his disciplinary field, devoted himself almost entirely to large-format painting, graphic work on paper (drawings, engravings and collages), and aesthetic writing, leaving behind a dozen books and showing how art and architecture nourish and complement each other (image 1). Méndez-Labbe was founder and professor at the School of Architecture and Design of the Pontificia Universidad Católica of Valparaíso, where he created the Open Sky Museum (murals in the city of Valparaíso). In 2008 he exhibited at the Seminar on Colour in Valdivia and was part of the foundation of the Chilean Colour Association. (<https://www.mnba.gob.cl/noticias/francisco-mendez-labbe-modernidad-calculo-y-divergencia>)



Imagen 1. Oil on canvas, Francisco Méndez-Labbe.

### Colour Harmonies in Design School, Valdivia

The course "Colour, Harmonies and Contrasts", taught by Professor Elisa Cordero-Jahr at the School of Design of the Universidad Austral de Chile, studied in 2021 the dominant-tonic-mediator colour harmonies and Johannes Itten's harmonies of contrasts. These harmonies were applied to the brand of a local adventure products company. The starting colours of the study were about the nature of southern Chile.

### Landscape & Women Award

In the context of Women's Month, the Landscape Committee of the Chilean Association of Architects created the Landscape & Women Award. The award is a distinction for outstanding women in the field of landscape architecture. The winners have contributed to the design of works, as well as to the research, promotion, protection, and defense of landscapes in diverse territories of environmental and cultural value.

Elisa Cordero, professor at the School of Design, received the distinction together with 12 other women from the country. After being awarded, the designer thanked the Landscape Committee of the College of Architects for the recognition and explained that: "I work with colour, the environment, landscape, architecture and design. I believe that we are immersed in an atmosphere of colour, we breathe colour, we are colour, and when we learn to know the relationships between these colours, we also learn to understand how they converse, what relationships they have, and finally we learn to communicate, whether in heritage, in architecture, in landscape: to communicate culture".

### Composición by Color, School of Visual Arts, Valdivia

In the Colour course at the School of Visual Arts of the Universidad Austral de Chile, Professor Isabel Santibáñez studied composition by colour. The content was focused on identifying colour weight and its importance in composition. The weight can be found by saturation, tone, illumination, and temperature. The aim was to find the chromatic weight and propose a balanced composition, varying the size, shape and place of the figures in the plane. The analysis of the chromatic weight depends on the relationship between the colour of the figures, and the colour of the background, which is why each proposal has a different development and different solutions (image 2).

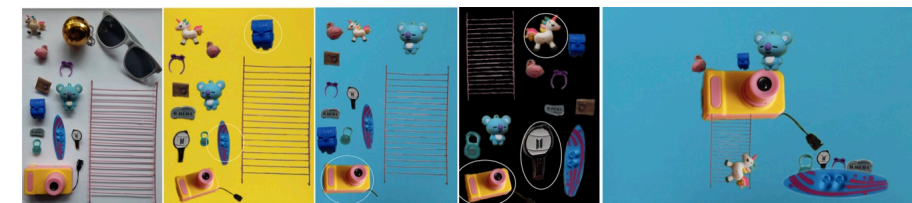


Image 2. Work of student Fabiola Millapán (2021).

### Filomena Baeza at the ArtSantiago 2021

Artist Filomena Baeza showed her work at the ArtSantiago exhibition in 2021. She is architect, dancer and painter. Her search points to the purely gestural, where the protagonist is the movement and the marks left by this gesture printed on the plate with all its variants. She sees a language there, which does not run out. She sets aside all representative models. Color is a way to highlight this gesture. <https://www.filomen-art.com/>

### Work in Progress about colour coatings in modern architecture

Designer Elisa Cordero-Jahr and architect Gonzalo Cerda-Brintrup began a study in 2021 on colour coatings in modern architecture in southern Chile. Mosaics, stained glass, and tiles are some of the products with which Chilean cities began to acquire colour from the second modernity, after the great earthquake of 1960. This study will be presented at the AIC congress in Canada (image 3).



Image 3. Work of Filomena Baeza, Serie II. Oil on canvas, 2021.





// CHINA //

## 中国颜色学会

**CAC** - Color Association of China

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

### Activities in 2021

On 18-20 September 2021 the biennial symposium on the topic of "Color Science and Imaging Technology" was held in Shenzhen World Exhibition & Convention Center, along with the annual conference of Chinese Optical Society (COS). Coming from the academic institutions, including Zhejiang University, Fudan University, Beijing Institute of Technology, Donghua

University, Yunnan Normal University, Xi'an University of Technology, China University of Geosciences, Shenzhen University, Kunming University of Science and Technology, Northeast Normal University, Zhejiang A&F University, Shenyang Jianzhu University, Civil Aviation University of China, Huawei Technologies, and so on, the participating experts, graduate students, and industry insiders presented 26 technical reports at this symposium through four oral sessions and one poster session. The oral sessions involved the sub-topics of Color Vision and Detection, Color Image and Display, Color Conversion and Reproduction, and Spectral Imaging and Technology. By academic communications, the attendees discussed and exchanged their related technical trends, research thoughts, and recent achievements in the fields of color science and imaging technology, providing a professional platform for Chinese color scientists, especially for the young scholars.

Led by the Color Association of China, several members attended the 6th International Conference of Asia Color Association (ACA2021), held on 2-3 November 2021 online in Universitas Gadjah Mada, Indonesia, with the theme of "Color and Culture". The Chinese participants gave the oral presentations with the titles of "Evaluation of color space for high dynamic range and wide color gamut image signals", "Adaptive histogram adjustment tone mapping based on block segmentation and fusion", "Display white point perceptually matched with light booth illumination", "Optimization of spectral sensitivity for multispectral imaging system", and etc.



Some speakers gathered at 2021 symposium of "Color Science and Imaging Technology" by Color Association of China, along with the annual conference of Chinese Optical Society, on 18-20 September 2021 in Shenzhen World Exhibition & Convention Center.



The rendered appearance, displayed in sRGB, of the spectral image for a folding fan under CIE D65 illumination.

Responding to the call of AIC to celebrate the International Color Day (ICD), the Color Association of China registered a special account of "Wonderfulness of Color" (" " in Chinese) on WeChat public platform, on which five essays were published over a two-week period around 21 March 2021. The topics of the published essays involve ICD introduction and celebration, color science, imaging technology, and lighting engineering.

The study on key technologies of color correction for digitalizing and displaying paper-based culture heritages is a project aiming for the capture and reproduction of spectral images for traditional Chinese paintings. As the examples, the traditional Chinese paintings provided by Hangzhou Museum are mainly folding fans and scroll art works, giving a glance of the daily life and sceneries of Qing Dynasty. In the project, a line-scanning hyperspectral camera was employed to capture

the high-resolution hyperspectral raw images of the traditional Chinese paintings under the illumination of a high color rendering index (CRI) light source. For a raw image, a spectrophotometric calibration was specially designed to generate the corresponding spectral image, with every single pixel containing the spectral reflectance of the real position in a painting in the visible range. In the color reproduction of these paintings, the RGB colors of the spectral images under any standard illuminant or customer-specified light source could be figured out and then their softcopies would be further output on the professional displays through chromaticity characterization. Compared to the RGB colored images from the previous painting digitalization technology, the spectral images by this method present higher fidelity and greater flexibility on the recovery and simulation of image color appearance. The traditional three-channel camera could only capture the RGB copies of the paintings, resulting in the mismatch of displaying colors with the change of ambient lighting conditions, whereas in the framework of this project the accurate color appearance of the spectral images could always be reproduced whenever the lighting condition might vary.



The logo of our self-media platform account, together with the QR code directing to our account.





Hrvatska udruga za boje  
Croatian Colour Society

// CROATIA //

## Croatian Colour Society CroCoS

In 2021, the Croatian Colour Society (CroCoS), continued with the usual activities of connecting professions that include colour and exchanging information on scientific, professional and artistic achievements and innovations within STEM and STEAM areas. In co-organization with the University of Zagreb, Faculty of Textile Technology, Faculty of Graphic Arts, Faculty of Architecture and

the Academy of Fine Arts, Croatian Colour Society celebrated the International Colour Day 2021 by organizing the audio-visual multimedia exhibition. The exhibition entitled Colour in a Virtual Environment, set up at the Nikola Tesla Technical Museum, remained open for three days, from March 19 to 21, 2021. The youngest also participated with the exhibition of children's works "Let's Paint the World", which was attended by primary school students from Zagreb, in cooperation with the Public Institution Museums and Galleries Niksic from Montenegro.



"Let's Paint the World" -  
the Colour in the Eye of Children

The International Exhibition of Digital Prints on Tarpaulin, ZAGREB FULL COLOR 21, was held, placed on the wire fence of the Nikola Tesla Technical Museum. The originator, organizer and curator of the exhibition is a respected member of the Croatian Colour Society, artist and artistic director of the LADICA Fine Arts & Design Center, Mr. Hanibal Salvaro. Hannibal Salvaro in 2021 also held the exhibition Oggetti Cerenissimi, from 18 September to 1 October in the Galleria delle cornici, in Venezia.

In addition to dedicated work in the activities of the Society, members of CroCoS through numerous

activities and scientific research, artistic, educational and popularization work within their professions, tirelessly spread the beauty of colour and fill their environments with the richness of their artistic, creative, educational and scientific work.

Prof. art. Koraljka Kovac Dugandzic, in cooperation and on the initiative of the Honorary President of the Society, prof. emerita Ana Marija Grancaric, mentored a student art project called Contemporary Reinterpretation of Missoni, which was presented in an exhibition realized in collaboration with the Italian Community of the city of Zadar, Croatia.

Ana Marija Grancaric also received the Dean's Award for scientific paper "Grancarić, A. M.; Tarbuk, A.; Sutlović, A.; Castellano, A.; Colleoni, C.; Rosace, G.; Plutino, M. R.: Enhancement of Acid Dye stuff Salt-Free Fixation by a Cationizing Sol-Gel Based Coating for Cotton Fabric, Colloids and surfaces. A, Physicochemical and engineering aspects, 612 (2021), 125984, 11 doi:10.1016/j.colsurfa.2020.125984, Q2, IF= 4,539.

Maja Strgar Kurecic, in 2021, with her photographs participates in several important international exhibitions: "6th Biennial of Fine Art & Documentary Photography", Barcelona, Spain; "Significant Color", Budapest, Hungary; "Flora", Greenville, South Carolina, USA. She has received several international awards for her photographs in 2021: TIFA 2021 - Tokyo International Photo Awards, Gold in Nature/Flowers; Chromatic Photography Awards - 1st place winner in Abstract category; BIFA 2021 - Budapest International Photo Awards, Bronze in Fine Art/Still Life; ND Photography Awards - 2nd place and Silver Star Award in Fine Art - Abstract; 17th Julia Margaret

Cameron Award - 1st place Winner, Nature category; IPA 2021 - 19th Annual International Photography Awards - 1st place, Nature Category, Flowers; 14th Annual International Color Awards - 3rd Place - Honor of Distinction in Abstract.

Image No 7: Maja Strgar Kurecic "Urban Diptych"

Ivana Bakal, also a member of the CroCoS and the Presidency of the Society, implemented a successful project "IVANA BAKAL - VISUAL THEATER", within the program Digital Adaptation and Creation of New Cultural and Educational Content of the Ministry of Culture and Media, subjecting the transfer of existing artistic content to a new digital environment. She also authorizes two exhibitions, both dedicated to the historically significant Croatian costume designer Ika Skomrlj: "Costume and/or Sculpture-Ika Skomrlj" and "Uncompromisingly its Own - Costume Designer Ika Skomrlj Ajki". She won the prestigious award for the best publishing project in 2021, for the editorial board of the book "Zlatko Kauzlaric Atac - Painter in the Theater", published by the Croatian Academy of Sciences and Arts.

A member of the Society, Ana Sutlovic, had an exceptional activity in 2021 in the promotion and popularization of science within the STEAM field, promoting the importance of the connection of art with scientific and technical, engineering fields. She is implementing the project "Only natural - hygienic mask dyed with natural dyes", with students of the University of Zagreb, Faculty of Textile Technology, within which a prototype series of handmade unique ONLY TTF hygienic masks was realized. Image No 10: Students Team with mentor prof. Ana Sutlovic PhD, wearing ONLY TTF masks



Image No 3: Hanibal Salvaro: "Oggetti Cerenissimi"



Image No 6: Contemporary Reinterpretation of Missoni



Image No 9: Ivana Bakal "Visual Theatre"



// FINLAND //

## Suomen väriyhdistys

FCA - The Finnish Colour Association

Despite another year of lockdowns and restrictions in the shadow of the coronavirus, the Finnish Colour Association was relatively active in 2021.

### International Colour Day

On International Colour Day 21st March the Finnish Colour Association's Iris Prize 2021 was awarded to conservator Malla Tallgren for her over 30-year-long work in developing and teaching the programme of painting materials at the The University of the Arts Helsinki Academy of Fine Arts. Malla teaches courses on traditional and contemporary painting methods and runs workshops on creating ecologically sustainable pigments from natural sources. Malla is known especially for focusing on the ecological and safety issues of artist's materials, and has provided invaluable advice and guidance to both students of the academy and professionals outside of it.

### Excursion to Alvar Aalto's Paimio Tuberculosis Sanatorium

In August the Association arranged an excursion to Paimio Sanatorium, the architectural complex in south-western Finland which made its designers, Aino and Alvar Aalto, world-famous in 1933. The site is particularly interesting for the colourful interiors of the main building. During the excursion Harald Arnkil gave a brief talk on colours in Alvar and Aino Aalto's architecture, focusing on the colours of Paimio, after which the group toured the spaces under the auspices of a local architecture guide.

### Symposium Who designs the colours of architecture?

As part of preparing for the Association's 20th anniversary celebrations in 2022 the FCA

invited experts from various fields to discuss the role of colour design in architecture. Chief Intendant Sanna Teittinen PhD opened the day with her talk about artist Anitra Lucander's collaboration as colour designer with Aarno Ruusuvuori and other architects. In part I of the symposium, Painted Colour – The colour story of Helsinki, the focus was on historical architecture. Architects Kati Winterhalter, Käpy Paavilainen and Rosemarie Schnitzler each presented their colour design projects on historical buildings. In part II, Who designs the colours of today's architecture? Landscape architect MA Saara Pyykkö and architects Suvi Tyynilä and Tuukka Vuori talked about architectural colour design at the scales of urban planning and individual buildings. They rounded off the day with a discussion moderated by architect Pentti Kareoja. The symposium was arranged in collaboration with the City of Helsinki and Helsinki Design Week and could be followed both live and on the City's free stream channel.

The last event of the year, on 10th December, was an excursion to Espoo Museum of Modern Art EMMA where there was a guided tour of the exhibitions of the Estonian painter Konrad Mägi (1878–1925) and the Japanese contemporary artist Chiharu Shiotä's (b. 1972) installation, a labyrinthine space made of hundreds of metres of red string.

### Research by FCA members

As part of Color Impact Conference II, Color for the Built Environment, the Association's president Saara Pyykkö presented "The Color Design Methods of New Neighbourhoods – The Koivusaari Case in Finland".

The Association's Secretary, designer Noora Yau and materials scientist Konrad Klockars continued with their doctoral research into wood-based structural colour. Noora and Konrad explore the potential of structural colour in real-life design applications, such as architecture, furniture and fashion. The cross-disciplinary research is carried out in the Structural Colour Studio of Aalto University. As part of this research, Noora has worked on the "Shimmering Wood Dress" by Aalto University's fashion student Anna Semi for her fashion collection.

Vice President Harald Arnkil published a revised and updated edition of his textbook on colour for artists, designers and architects, Värin havaintojen maailmassa (2021) which was issued also as an Epub electronic book. The English language edition, Colours in the Visual World (2013) was also issued as an Epub with some revisions and updates. Harald worked also on his doctoral thesis on colours in the artistic process of contemporary artists and continued as member of the Colour Literacy Project.

Tarja Peromaa and colleagues at the Perception Action Cognition research group, Helsinki University, continued with their research into facial colour.

Kati Winterhalter continued her longstanding professional work on the research and restoration of the façade colours of historical buildings in central Helsinki.

FCA members participated in AIC Milan 2021. Saara Pyykkö presented the paper "How to convert an experience-based university course about colour, light and space for the web?".

Harald Arnkil  
Vice President  
Suomen väriyhdistys SVY ry



1 SVY, Members of the Finnish Colour Association on the roof balcony of the Paimio Sanatorium on 23rd August 2021.



2 SVY, Panelists Tuukka Vuori, Saara Pyykkö, Pentti Kareoja and Suvi Tyynilä at the symposium Who designs the colours of architecture?



3 SVY, Saara Pyykkö presenting at the symposium Who designs the colours of architecture?, held on 17th September 2021 at the City Hall, Helsinki, Finland.





// FRANCE //

Center Francais de la Couleur  
CFC - French Colour Center

As to a lot of French societies, our activity was very disturbed by the restrictions due to the COVID-19 pandemic government's decisions.  
The president, was sollicitated by the “Techniques de l'ingénieur” encyclopedia to produce two quizzes on “Colour and scattering media or materials” and about “Metals, alloys and appearance”.

Four young members defended their PhD:

- Maelys Jusseaux: "À la recherche de l'expérience Numineuse patrimoniale : Exploration d'une essence du patrimoine grâce aux technologies d'interactivité et d'immersion"
- Thomas Müller: “Synthèse d’Image Iso-Photographique pour la Conception de l’Apparence Assistée par Ordinateur”
- Kevin Bideaux: La Vie en rose – Petite histoire d'une couleur aux prises avec le genre
- Joël Randrianadrasana: “Transfer Matrix Based Layered Materials Rendering” (article at Siggraph 2021: “Transfer Matrix Based Layered Materials Rendering”, J. Randianandrasana, P. Callet, L. Lucas)

Participation of several CFC members to the AIC 14th Congress in virtual Milano.  
Participation of scientific members to MNO: “Metallic nano objects” meeting organized by the GDR CNRS Appamat (Research Group within the Centre National de la Recherche Scientifique, dedicated to Materials Appearance). CFC is co-founder and co-responsible of that research group with Université de Saint-Etienne and Institut d’Optique Paris-Saclay.

To know more:  
The PhD manuscript:  
<http://theses.fr/2020REIMS028>

The last paper:  
<https://hal.univ-reims.fr/hal-03262831>

The open-source software:  
<https://github.com/laurent-lu/TMbLM-Rendering>



Efficient rendering of layered materials made of rough layers and exhibiting volume scattering effects. The model shows a significant evolution in terms of visual fidelity, compared to previous efficient methods, and a good agreement with respect to the state-of-the-art stochastic approaches of surface and volume scattering.

In 2021 we rediscovered some records from Radio Canada where several CFC members participated in.

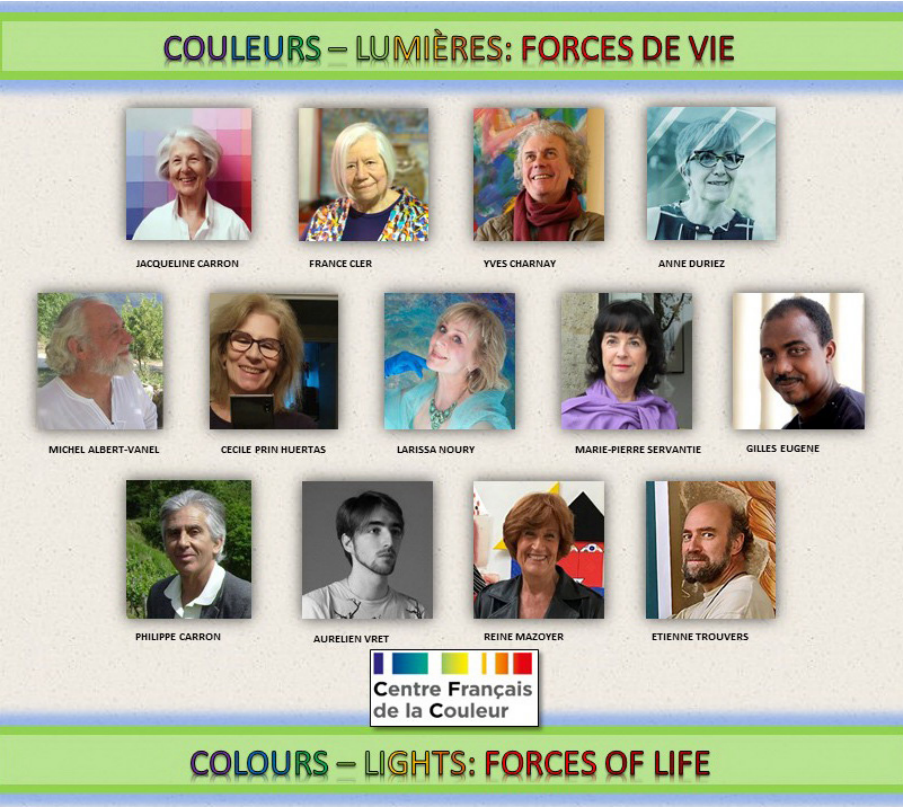
These archives are only available in french. « La couleur en chansons » was a set of ten 60 mn records containing more or less known songs in French language, including interviews and/or comments.

A virtual exhibition of paintings was built in June and is permanently online, see hereafter.

The participants are:

- Our doyenne, Jacqueline Carron, painter born in 1920 who created the PSI COLOR  
France Cler, chromoarchitect presented her watercolors drawings  
Yves Charnay, painter and light player for architecture  
Anne Duriez, painter  
Michel Albert-Vanel, painter and translucency « student »  
Cécile Prin-Huertas, painter  
Larissa Noury, paintings, living pictures on fabrics and fashion show  
Marie-Pierre Servantie, chromoarchitect  
Gilles Eugène, painter  
Philippe Carron, painter  
Aurélien Vret, typography and color  
Reine Mazoyer, painter  
Etienne Trouvers, painter and visual artist

<https://centrefrancaisdelacouleur.fr/actualite/exposition-numerique-doeuvres-dartistes-du-cfc/>



La couleur en chansons participants



// GREMANY //

## Deutscher Verband Farbe

**DfwG** - German Society of Color Science and Application

Deutsche farbwissenschaftliche Gesellschaft (DfwG) - German Society of Color Science and Application

In 2021 the Covid-19 pandemic still required special precautions when organizing in-person meetings. Nevertheless, with its 2021 annual conference the DfwG was able to have such a meeting with 40 persons on site and some more as remote attendees. The conference venue was at the company Image Engineering GmbH at Kerpen-Horrem, near Cologne. This DfwG-member is a worldwide leading supplier for camera test equipment and allowed an insight on what is possible and necessary to analyze, describe and possibly correct the characteristics of digital cameras.

The program of 15 lectures offered a diverse spectrum from the field of color science. With a special focus on high-end digital cameras, their properties, applications and qualities the papers covered a wide field of colour. The presentations were in detail:

Manuel Spitschan; University of Oxford, UK:

Physiological basis of color perception

Christoph Schierz, TU Ilmenau:

From spectrum to colour: where do we stand?

Bernhard Hill, Aachen, Aachen:

Colorimetry and absorption in the eye using the example of the visual comparison of screens with reflected light colors

Berthold Oberhollenzer, Fogra:

Color communication between two worlds: When D50/2° and D65/10° color measurement values meet in digital textile printing

Simeon Geiger, ILU, Ulm:

Color characterization of 3D printed objects: top down versus bottom up

Marco Mattuschka, Vizoo, München:

Description of the glossiness of dielectric materials in physically based rendering

Carl Florian Weber, TU Darmstadt:

Psychophysical studies on the gloss of printed metallized surfaces

Werner Rudolph Cramer, Münster:

Reaction of colored pigments to achromatic pigments

Udo Krüger, TechnoTeam, Ilmenau:

Degree of equivalence of tristimulus values of LEDs considering measurement uncertainty and correlation

Johannes Fließbach, TU Darmstadt, (Recipient of the DfwG-promotional award 2021):

Modification and calibration of a commercially available camera for recording luminance images

Dietmar Wüller, Image Engineering GmbH, Kerpen-Horrem:

Color calibration and correction of cameras

Paul Myland, TU Darmstadt:

Color correction of color sensors of the same type via sensor binning

Kazim Hilmi OR, Hamburg:

Discord or “multi”cord of an interdisciplinary active color scientist

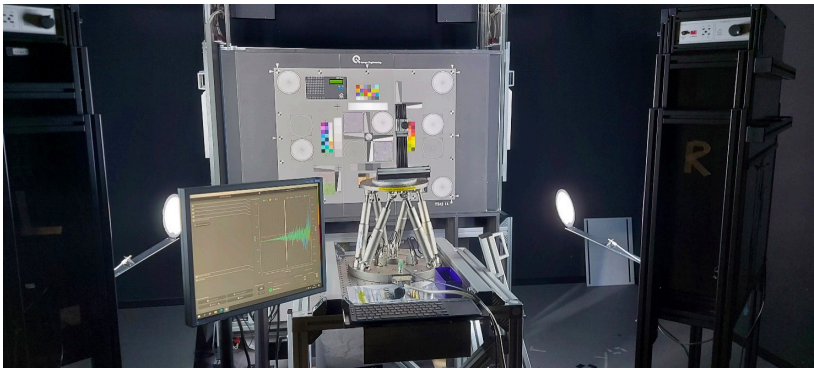
Julian Klages, TU Darmstadt:

Why metrics without a brightness component are not enough to describe color preference

Stephan Pusch, bfw-Leipzig:

COLOR!O – With color through the layout

In addition to the conference program, the general meeting took place in the afternoon. The reports from the President, Treasurer, Auditors and Secretary are summarized in the minutes. The result of the regular election was that the actual board was re-elected again, unanimously.



Laboratory for camera testing



Participants of the DfwG annual conference 2021 at Image Engineering GmbH



// GREMANY //

## Deutsches Farbenzentrum

DFZ - German Colour Association

On October 1-2, 2021 the Deutsche Farbenzentrum (DFZ) organized a video conference titled “Farbwerkstattgespräch” (Colour workshop talk)

Details see:

<https://deutsches-farbenzentrum.de/ankuendigung-farbwerkstattgesprach-dfz-am-1-und-2-oktober-2021-online/>



We are facing real challenges and in many fields such as health, climate change, environmental pollution, scarcity of resources and world peace, we do not yet have answers to the questions that each and every individual, but also the societies as a whole. What role does colour play in the discussions about a sustainable future? The aim of the two-day event was the exchange of ideas, the promotion of personal contacts and the preparation of our next conference, which will take place in summer 2022 at Humboldt University Berlin.

Short contributions of the following persons have been presented:

Prof. Dr. Axel Buether (Chairman DFZ); Bergische Universität Wuppertal

Welcome

Marcus Pericin und Florian Bachmann; Farb-Licht-Zentrum Zürcher Hochschule der Künste  
Prof. Esther Hagenlocher; School of Architecture and Environment, College of Design, University of Oregon USA

Dr. Konrad Scheurmann; Historische Farbstoffsammlung TU Dresden

Prof. Dr. Johannes Grebe-Ellis (Co-Chair DFZ);

Bergische Universität Wuppertal

Nathalie Pagels (Dipl. Farbberater ICA);

Düsseldorf

Prof. Dr. Ulrika Eller-Rüter; Alanus Hochschule

Prof. Dr. Susanne Marschall; Universität Tübingen

Dr. Jürgen Golz; Christian-Albrechts-Universität zu Kiel

Jessica Rinne; Hamburg

Tanja Drewitz

Julia Hausmann Köln

Prof. em. Dr. Karl Schawelka; Bauhaus Universität Weimar



Prof. Timo Rieke (Board member DFZ)

Ariane Clermont

Benjamin Schaible

Prof. em. Axel Venn; Berlin

B.A. Louisa Richter

Magda Tomoff und Maja Hauke:

B.A. Lina Schmidt/Melissa Lindemeyer

Beate Breitenstein

The general meeting of DFZ-members took place in the afternoon.

Another successful event of the Deutsches

Farbenzentrum was the online lecture series

Best Practice Healthcare Architecture 3th Nov -

15th Dec 2021

POSITIONS – Healing Architectur (see:

<https://colour.education/positionen-healing-architecture-2/> )

The organizer is the DFZ German Colour Association – Central Institute for Colour in Science and Art at University of Wuppertal in cooperation with Bauhaus University Weimar. Moderation of the event: Dr. Alexandra Abel (architectural psychologist at Bauhaus University Weimar, Prof. Dr. Axel Buether (Chairman German Colour Association) and students.

The free livestream and video documentation of all presentations can be found at this link to the YOUTUBE channel of our non-profit educational platform color.education :

<https://www.youtube.com/playlist?list=PL0VcyKtWi-T-25so8yW1V4IXI741Q2eFE>



Prinses Máxima Centrum, Utrecht (LLAG Architecten NL)

### DIN – FNF

In 2021 the following new standards have been published:

DIN 5033-10: 2022-03, “Colorimetry - Part 10: Reflectance black standard for calibration in colorimetry and photometry”

DIN EN ISO 18314-4: 2021-09, “Analytical colorimetry - Part 4: Metamerism index for pairs of samples for change of illuminant” (ISO 18314-4:2020); German version EN ISO 18314-4:2021

ISO 18314-4: 2020-08, “Analytical colorimetry - Part 4: Metamerism index for pairs of samples for change of illuminant”

For details about the work of DIN-FNF please see:  
<https://www.din.de/en/getting-involved/standards-committees/fnf>





// GREAT BRITAIN //

## The Colour Group (Great Britain) CG(GB)

Despite the continuing problems created by the pandemic nationally and worldwide, the Colour Group (GB) was able to follow its initial events plan. Some of the meetings included in it were transferred from the 2020 plan. This is because at that stage, with severe restrictions in place and the uncertainties presented by the situation, it was either difficult or impossible to carry out those meetings. However, in 2021 the life of the Colour Group (GB) was brought to some sense of normality as the Committee developed an online presence which not only allowed it to maintain its customary pattern of meetings, but also made it possible to welcome 'visitors' from around the globe too.

The traditional one-day January Colour Vision Meeting was very well attended and an array of international and British speakers presented on the day. The 2021 Palmer lecture Compensation for Colour Deficiencies was presented by Michael A. Webster, University of Nevada, Reno. A link to the

lecture and much more can be found on the Colour Group (GB) website. The event concluded with an online social event, where participants interacted and shared thoughts over a glass of wine.

Our meeting in February brought together different perspectives on iridescence, a spectacular effect found in natural and artificial materials and in atmospheric effects on light. The talks were from the areas of physics, art, biology and engineering.

There are usually two annual events in March: The International Conference on Colour in Film, usually at the beginning of the month and the celebration of International Colour Day on 21st March. Unfortunately, because of the lockdown restrictions, Colour in Film had to be postponed until September 2022. The event could not be staged online as there would be no opportunity to screen the archive material, which is one of the focal points of the event. Details will be published on our website nearer the time.



credit Karin Kjærsmo – speaker at the Iridescence Day Iridescence as Camouflage

The members and friends of the Colour Group (GB) celebrated International Colour Day online. The focus of the meeting was a talk by the art historian, lecturer and artist Gayna Pelham on Drama and Light in the art of the most extraordinary artists of 17th century Western Europe, from El Greco to Caravaggio and Rembrandt to Rubens and their influence on the art of the 20th and 21st centuries.

In April vision scientists, ophthalmologists, neurologists, artists and those who appreciate the arts of painting and drawing gathered online to take part in an event entitled Neuroscience, Colour and the Visual Arts: Art and the Illuminant. Amongst the speakers were Anya Hurlbert and Gordon Plant.

Every two years the Colour Group (GB) selects and invites a distinguished artist or art historian, for whom colour is at the centre of their work, to give The Turner Lecture, honouring Britain's greatest colourist. A sterling silver medal is awarded to mark the occasion, and the recipient presents a keynote lecture related to their work. Hoping that the pandemic restrictions would be lifted in 2021, perhaps with the arrival of some warm weather and an easing of the infection rate, the Turner Lecture, which is usually held in February, was postponed until the beginning of June. As there were still significant restrictions in place once again it was an online event. The textile artist and designer Margo Selby spoke on the theme of Weaving in Colour, sharing her passion for colour, and she elaborated on the effects of colour in a pattern – the relationship between colour and woven thread.

The Group is now looking forward to 2022 and hopes to continue the propagation of interest in and knowledge of all aspects of colour. With the lifting of the restrictions around the world it will be possible to begin holding meetings that will be presented in person as well as online. This will strengthen existing relationships and forge new relations and co-operations.



credit Kabe Wilson – Skin Tone – Prize for Outstanding Communication on Colour



credit Ginny Smith – Prize for Outstanding Communication on Colour



credit Margo Selby, Turner Medal Awardee for 2021 – Assembly



// HUNGARY //

## The Hungarian National Colour Committee ICCPH

Members of the Hungarian National Colour Committee and their colleagues in the colour community were very active in 2021.

As part of the 2021 International Colour Day celebrations the Hungarian National Colour Committee (HNCC), together with the Nemcsics Memorial-house organised an exhibition from the works of András Mengyán and Zsigmond H. Serényi, in the Colour-country Gallery in Budapest. The exhibition paid tribute to the life work of Prof. Dr. Antal Nemcsics (1927-2019).

Antal Nemcsics PhD, was a Hungarian painter, pioneer of colour dynamics, university professor, founder and for 50 years president of the Hungarian National Colour Committee (member of the AIC). Prof. Nemcsics was the first awardee of the prestigious CADE award of the AIC.

The exhibition PROGRESSIVE GEOMETRY was opened by László Fábián, writer, poet and aesthete (Figure 1. and 2.) on the 17th of March 2021. Fábián, in his opening speech, praised Antal Nemcsics's theoretical work and its relevance for the new, geometry-based world of the two exhibiting artists.

Two months later, on the 12th May 2021 in the same gallery Árpád Szende, a member of the HNCC had a successful exhibition called Archi-Color Colour Dynamics in Practice; followed by the László Miskei – Antal Nemcsics – Béla Tillness memorial exhibition Inspiring Interdisciplinarity. Miskei and Tillness were friends and colleagues of Antal Nemcsics, all three of them were members of the HNCC.

In the Zichy Major Gallery an interesting exhibition opened on the 20th October with the title Without

Borders, with participation of a dozen Hungarian artist, many of them living abroad. The President of the HNCC, Ákos Nemcsics was among them (Figure 4.)

<http://online.anyflip.com/ymkwt/nvyu/mobile/index.html>

Members of the HNCC participated also in two other important exhibitions of contemporary Hungarian art: that of the 8AK group in the Bartók Gallery

<http://online.anyflip.com/ymkwt/bnmy/mobile/index.html>

and the Triadic Chord, the exhibition of three contemporary Hungarian architects/painters in the Gallery Éva Erdei:

<https://1drv.ms/u/s!Aqtyv9Lka7t49kb8bH3tXWLCBF6?e=iMNNZE>



Figure 1. László Fábián opening the PROGRESSIVE GEOMETRY exhibition in the Colour-country Gallery.



Figure 3. Work of Árpád Szende at the Archi-Color Colour Dynamics in Practice exhibition.



Figure 2. András Mengyán, László Fábián and Zsigmond H. Serényi at the opening ceremony.

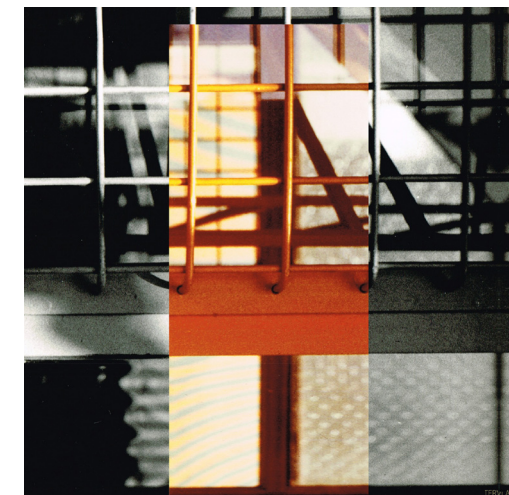


Figure 4. Yellow Square by Ákos Nemcsics in the Without Borders exhibition.





// ITALY //

## Gruppo del Colore - Associazione Italiana Colore

### GdC - Color Group - Italian Color Association

In 2021 the Gruppo del Colore - Associazione Italiana Colore was involved in the organisation of two important events: the first edition of the “Colour Photography and Film: sharing knowledge of analysis, preservation, conservation, migration of analogue and digital materials” Conference and the 14th AIC-International Color Association Congress. Due to the epidemic of Covid-19, both the events were managed completely online.

The “Colour Photography and Film” Conference was the first international convening in which these topics were treated together. As such, it was an opportunity for discussion at an international level on various topics related to furthering the knowledge of color photographic and cinematographic objects from a historical, material and conservation point of view. The oral and short poster presentations were collected in the Conference Proceedings, which are freely available online as part of our diamond open access book series the “Research Culture And Science Book” series (RCASB website at <https://www.rcasb.eu>).

The 14th AIC-International Color Association Congress was organised in Italy, for the first time in its history. The event took place from August 30th to September 3rd and involved more than 320 participants from all over the world. The theme of colour was widely explored both in its technical, scientific and cultural aspects.

During the plenary session, on the first day of the Congress, the ceremony of the seventh edition of the Colour Award took place, which awarded Vittorio Storaro, who is considered to be one of the most influential cinematographers of all time. His research, training, and work experience have led

him over time to recognize the fundamental meaning that color has in life. Storaro believes that it is not possible to express oneself in the visual arts, including cinematographic photography, without knowing the physiological, dramaturgical and philosophical meaning of colors, or what Leonardo da Vinci called the “children of light and shadow”. The study of color has been one of the greatest thrills of his life and his life philosophy focuses on the effects colors have on human actions and reactions, and how they influence human perception.

During 2021 the Association gave patronage to the conference activities of the Associazione Italiana Ricerche Pittura Antica (Italian Association for Ancient Painting Research), to the Color and Imaging Conference 2021 (CIC29) organised by the Society for Imaging Science and Technology and to the series of meetings “COLTIVIAMO INSIEME \_ I colori della natura” (GROWING TOGETHER \_ The colors of nature”) which took place at Fondazione Catella in Milan with the collaboration of our member Arch. Francesca Valan.

We also recall the activity of our “Colour and Culture Science Journal” a diamond open access journal, free for readers and authors (<https://jcolore.gruppodelcolore.it/>) with the publication of two issues of the Volume 13.

As publisher, our Association published three volumes of the RCASB series:

- the over mentioned Colour Photography and Film: Sharing knowledge of analysis, preservation, conservation, migration of analogue and digital materials – 2021: Conference Proceedings edited by the members Marcello Picollo, Barbara Cattaneo,

Filippo Cherubini, Veronica Marchiafava

- Color Design & Technology A Multidisciplinary Approach to Colour Part 2 edited by the members Alice Plutino, Alessandro Rizzi and Gabriele Simone
- Culture and Methods of Lighting Design by the member Maurizio Rossi

For the 2022 we are organising the XVII Color Conference and the second edition of the “Colour Photography and Film” Conference, which will both take place in Florence on 12-13 September and 15-16 September 2022, respectively. More info at <https://www.gruppodelcolore.org/la-conferenza/?lang=en>

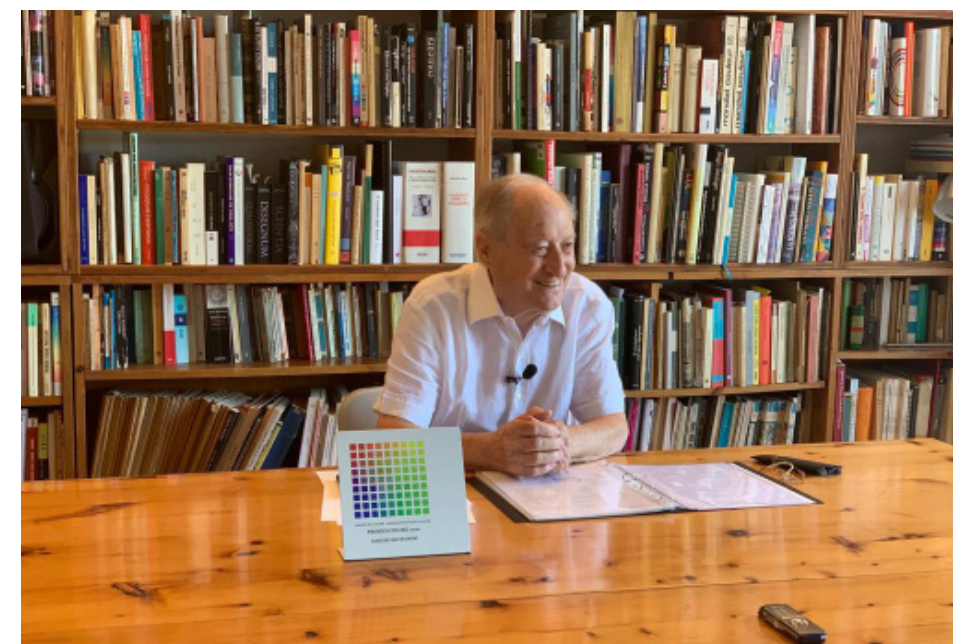


Figure 1 – Vittorio Storaro, winner of the Premio Colore 2021





// JAPAN //

## 日本色彩学会

CSAJ - Color Science Association of Japan

### THE 52st ANNUAL MEETING 2021

The 52nd Annual Meeting of the Color Science Association of Japan (CSAJ) was held online on 26-27 June by Dr. ICHIHARA Yasuyo (Kogakuin University). More than 215 participants attended, and 53 contributed papers were presented. Two invited lectures were "Color vision diversity in humans from an evolutionary perspective" by Dr. KAWAMURA Shoji (University of Tokyo) and "What color researchers can do in the age of color vision diversity: Review of the 20th century and future prospects" by Mr. KAWABATA Hiroto, a novelist & nonfiction writer. The CSAJ Presentation Encouraging Awards were given to three students: Mr. FUKAGAWA Shinpei (Osaka City University), Mr. MANABE Yusuke (Chiba University) and Mr. KOIZUMI Kazuto (Tokyo Institute of Technology).



Advertisement Poster for Annual Meeting 2021

### AWARDS

The 13rd CSAJ Best Paper Award was given to KIKUCHI Kumiko (Shiseido Co. Ltd.), MIZOKAMI Yoko, EGAWA Mariko and YAGUCHI Hirohisa (Chiba University) for "Development of an image evaluation method for skin color distribution in facial images and its application: Aging effects and seasonal changes of facial color distribution", Color Research and Application, Vol.45, No.2, 290-302, 2020. The 23rd CSAJ Research Encouraging Award was given to KAKEHASHI Erina (Chiba University) for "Computational color combination analysis of Papilionidae butterflies as aesthetic objects", Color Research and Application, Vol.45, No.1, 65-84, 2020. The 25th CSAJ Award was given to YAGUCHI Hirohisa, for his longtime contribution to the association as the secretariat and editorial work with his creative and challenging activities.

### PUBLICATIONS

The CSAJ published six issues of the Journal of the Color Science Association of Japan in 2021. Three original papers were published.

### UPCOMING MEETINGS

The 53rd Annual meeting of the CSAJ will be held online on 25-26 June 2022.

### LOCAL CHAPTERS

Three local chapters in the Kanto, Tokai and Kansai areas worked actively and organized several meetings throughout the year. Currently, CSAJ has 1,102 members.



Some participants in Annual Meeting 2021





// MEXICO //

## ASOCIACIÓN MEXICANA DE INVESTIGADORES DEL COLOR AMEXINC - Mexico Color Association

In preparation for the 2nd AMEXINC International Congress and 5th Mexican Color Conference monthly meetings were held. As well, from October 2020 through August 2021 AMEXINC successfully organized several talks. One by Concepción Moran and Georgina Ortiz was about color, perception, and emotion. Another concerned color as a generator of productive labor and was presented by Mónica Cuvelier. Other color topics including, e.g., stained glass, emotions, film and photography, were presented by nationally and internationally renowned speakers via Zoom and the resulting recordings were uploaded to the AMEXINC online viewing platform on YouTube.



Meanwhile, to celebrate the annual International Color Day, which is always on 21 March, Citlali Ortiz presented her research on the relationship between colors and emotions. She carried out an interesting survey on the association

of nine negative and positive emotions with ten colors. Her full article with the research results is available at the AMEXINC website: <http://amexinc.mx/emocion-y-color/>.

Organized by AMEXINC, the 2nd AMEXINC International Congress and 5th Mexican Color Conference exploring the theme “Sexo, Color y Erotismo” (Sex/Gender, Color and Eroticism) was held online and broadcast on 24-26 November

from the Universidad Autónoma de Ciudad Juárez (UACJ) in Ciudad Juárez, Chihuahua, Mexico. The opening ceremony included welcome speeches by event organizer Mónica Cuvelier; AMEXINC President Georgina Ortiz; Director of the Institute of Architecture, Design and Art Guadalupe Gaytan; and, Head of the Design Department Fausto Enrique Aguirre Escárcega. Nineteen papers and four keynote lectures were presented by researchers coming not only from Mexico but also from Argentina, Bolivia, Italy, Spain and Switzerland. The opening lecture “Love Hotels” was delivered by Mexican interior designer Aurelio Vázquez Durán. Keynote speakers included José Luis Caivano with his lecture “The Masculine, the Feminine and their Relation to Color”; Manuel Elías López Monroy’s presentation “Film, Sexuality and Color”; and, Mabel Amanda López’s “Beyond the Rainbow: Color and Gender Identities.” The color RED was central to talks by Ma del Val Gago Saldaña, María del Mar Sánchez Llorens, and Ruth Barranco Raimundo. Talks concerning the color red not being the only color of eroticism were delivered by Renata Pompas and Lia Luzzato as well as by Liliana Angelica Monroy Mendoza. Julio Antonio Lillo Jover presented interesting research results about color preferences. Other key topics encompassed: skin color, Ana Aurora Maldonado Reyes and also Georgina Ortiz; hair color, Citlali Ortiz; and, the color of clothing, Oscar F. Bustamante Ramírez.

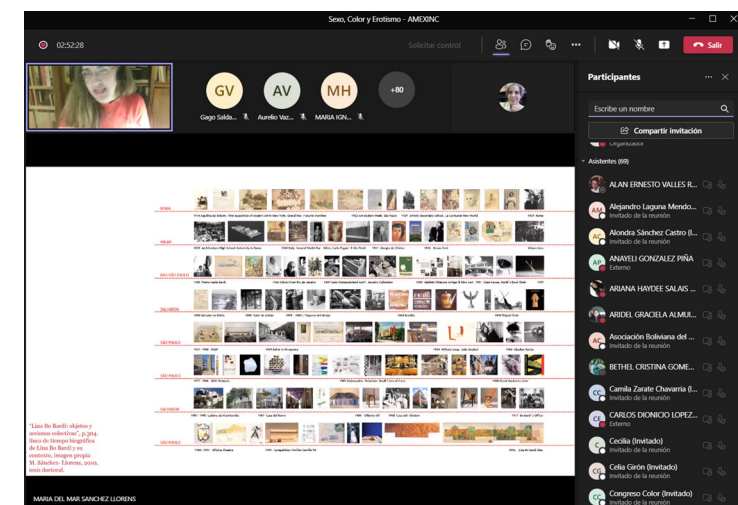
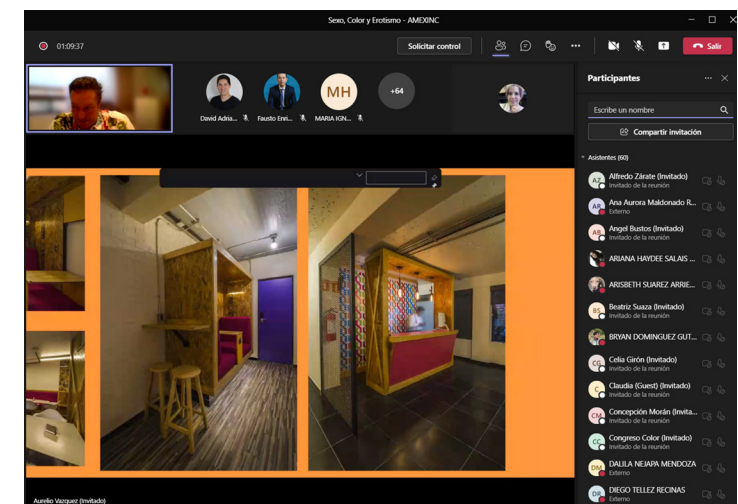


Further talks were by Alfonso Claros Uzqueda, Alfredo Zárate Flores, Mónica Cuvelier and Carmen Zetina Rodríguez, Víctor Hugo Jiménez Arredondo and Dhamar Geraldine Olague Martínez, Verena M. Schindler, Víctor Manuel Reyes Espino and Rogelio Armando Zavala Ortega, María Concepción Moran Martínez, and Arturo Puente Lomelín and Liliana Carreón Miranda.

The recordings of the talks can be enjoyed at the association’s website: <http://amexinc.mx/congreso-completo/>. During the congress, the “Premio Mexicano del Color AMEXINC A.C.” (Mexican Color Award of AMEXINC A.C.) was given to Dr. José Luis Caivano in recognition of his outstanding career and his contributions to color research on an international level.

The General Assembly was also held during the congress and agenda items included the election of the new AMEXINC Executive Committee: President, MDH Mónica Cuvelier García, full-time Research Professor of the Department of Design at the Universidad Autónoma de Ciudad Juárez (UACJ); Vice President, Dr. Manuel Elías López Monroy, Research Professor at Universidad Nacional Autónoma de México (UNAM); and, Treasurer, Citlali Ortiz Hernández.

The congress papers will be compiled and edited in order to publish a new volume featuring the most recent speakers of the many who have been presented by AMEXINC.







// NORWAY //

## Forum Farge Norway

Forum Farge, the Norwegian Colour Association, was founded on 10th April 2013. The purpose of Forum Farge is to stimulate research on all aspects around colour, to disseminate research-based knowledge about colour, and to facilitate applications of this knowledge to solve colour related problems within art, design, architecture, science and technology on a national level. The group became a member of AIC in 2014. More information about Forum Farge can be found on [www.forumfarge.no](http://www.forumfarge.no)

The Board 2021 has been: President: Mette Lorange, Vicepresident: Kine Angelo, Treasurer: Lisbeth Larsen. Regular members: Bent Erik Myrvoll, Ingvild Festervold Melien, Elise Dee Krekling, Heidi Pettersvold og Peter Nussbaum.

Secretary has been Aland Mendoza fra NTNU Gjøvik.

### RESEARCH

Members of the board are represented in several international theme groups in AIC, such as "Study Group on Colour Education (CE)" and Study Group on environmental design (ECD). Some present regularly at AIC's and several participate in various colour arenas.

An important focus arena is Colour between Art and Architecture as well as Colourplans, methods and strategies and Visual Techtonics.

One of the board members has recently completed a research fellowship linked to the Norwegian Crafts Institute in Lillehammer. Focus is on lime based techniques and research on local soil and pigments resources. He also researches several national lime-

and marble deposits for use in frescoes and stucco lustro.

The Board and other members of FF are also connected to Norwegian Colour and Visual Computing Laboratory at the Norwegian University of Science and Technology (NTNU) and the OSA Color Technical Group. Colourlab's research area and international research network range from basic research such as color matching experiments to applied research in color management, cultural heritage, 'AppPEARS which focuses on four main objectives: measurement and visual evaluation of material properties, reproduction of complex surface appearance, and predicting and minimizing reproduction errors.

### CONFERENCES

The annual conference/ International Colour Day: The seminar in connection with the annual meeting / International Colour Day, "Colour and Beyond" was canceled due to Covid 19 in 2020, but it was instead conducted in 2021 as a webinar. The webinar was free of charge as an encouragement in the shutdown period.

The webinar was organised in collaboration with the Department of Computer Science and the Norwegian Colour and Visual Computing Laboratory at the Norwegian University of Science and Technology (NTNU). The webinar was interdisciplinary. It became a content-rich afternoon workshop dedicated to colour and beyond. It started with an introduction to human colour vision and perception, followed by an excursion into the potential of multispectral imaging and visualisation. We continued to explore computational colour constancy and white balance,

before the importance of colour in the context of visual communication of information and interaction design were discussed. An application related to colour wallpaper design was presented as well as short colour related contributions from Forum Farge members. The webinar ended with Forum Farge annual meeting.

Presenters were Professor Rigmor C. Baraas (USN), Dr. Sony George (NTNU), Pauline Hardeberg (NTNU), Ole E. Wattne (NTNU), Anton Strand (Canon NORGE).

Professor Jon Yngve Hardeberg (NTNU) and Elise Dee Krekling (USN) represented the. Members with short presentations.

Responsible for the webinar was Peter Nussbaum NTNU.

### COLOUR GUIDE FOR OSLO

Forum Farge has also been involved in the Municipality's work to create a colour guide for urban areas in Oslo. The following work and contributions have been carried out in this connection:

Introductory chapter (Chapter 1) to the Colour Guide and participation in expertise- and reference groups. Editors for the texts have been Ingvild Festervold Melien and Mette L'orange.

Participation in the full day Colour Seminar, «Colour Day», arranged on Vega Scene, 1 December 21. (Hybrid).

Presenters from Forum Farge were: Ingvild Festervold Melien, Kine Angelo, Mette L'orange and Bent Erik Myrvoll. Heidi Pettersvold was leading the seminar.

### NEWSLETTER

Forum Farge has developed a new tradition: Newsletter for members.

Two newsletters have been sent out in 2021. Editor is Ingvild Festervold Melien.

Designer Anette L'orange.

## FORUM COLOR ACTIVITY PLAN 2022

Recruit new members and further develop membership offers

Colour talks / webinars: Two in the spring semester and two in the autumn

International Color Day: 21. of March: Webinar: Art Creativity Color

(Focus on Colour Materiality, Pigments and Binders/Sustainability)

Discussions/ Member forum.

Newsletters







// PORTUGAL //

## Associação Portuguesa da Cor APCOR - Portuguese Colour Association

“I am somewhat embarrassed at being referred to as a «color expert». One of the difficulties of a so-called color expert is that nearly everyone knows a good deal about some phrase or other of color and expects the expert to know more” Deane B. Judd, 1941, “Introduction to color”. In Symposium on color - Its specification and use in evaluating the appearance of materials, Washington. I guess we can all identify ourselves with this experience, as long as we know how vast colour is as a research subject, and how small our knowledge is. Attempting not to embrace an impossible task - to satisfy our own questions or those of simple curious people - we continue to present the work accomplished by our members to the academia, but also spreading colour expertise to the society in large, expecting fruitful future connections and dynamics to come. Hence, our main activities were centered in those:

### WEBSITE

We are happy to say that a new website for APCor will be launched, by the time you will be reading this report! Please visit [www.apcor.org](http://www.apcor.org). Here you can find all our activities throughout the years, publications, a galery of our associates and more.

### PUBLICATIONS

The highly anticipated books "Colour: Urban Space, Architecture and Design" were finally published! Durão, M. J. (ed.). 2021. Cor: Espaço Urbano, Arquitectura e Design. APCor, LabCor e GICL – CIAUD (org.). Vila Nova de Famalicão: Edições Húmus. ISBN 978-989-755-651-7 (ebook: ISBN 978-989-755-650-0.) Durão, M. J. (ed.). 2021. Colour: Urban Space, Architecture and Design. APCor, LabCor e GICL – CIAUD (org.). Vila Nova de Famalicão: Edições Húmus. ISBN 978-989-755-653-1. (ebook ISBN 978-989-755-652-4)

We followed the Chromatic Instants series, where APCor and the ArchiNews magazine invites the readers to temporarily shift the attention away from the reading to immerse their eyes in colour, through a series of records made by collaborators and associates:

Brehm, J. 2021. “Chromatic Instant #5: Spectral Studies, 14 (2008), in Série Instantes Cromáticos/ Chromatic Instants (APCor ed.)”, in Humberto Conde. Archinews #53, 4º trimestre 2020. Caivano, JL 2021. “Chromatic Instant #7: Casa en barrio Coghlan, Ciudad de Buenos Aires AR/House in Coghlan neighbourhood, Buenos Aires city, AR (2018), in Série Instantes Cromáticos/ Chromatic Instants (APCor ed.)”, in CVDB Arquitectos. Archinews #54, 1º trimestre 2021. Lenclos, JP. 2021. “Chromatic Instant #8: Labirinto A/ Labyrinthe (2020), in Série Instantes Cromáticos/ Chromatic Instants (APCor ed.)”, in Ventura + Partners. Archinews #55, 2º trimestre 2021. Soares, H. 2021. “Chromatic Instant #9: No Matter (2021), in Série Instantes Cromáticos/ Chromatic Instants (APCor ed.)”, in Aires Mateus. Archinews #56, 3º trimestre 2021. Barreiros Duarte, R. 2021. “Chromatic Instant #8: Cavalos do Céu/ Sky horses (2017), in Série Instantes Cromáticos/ Chromatic Instants (APCor ed.)”, in Raul Lino Silva. Archinews #57, 4º trimestre 2021.

Science Communication in collaboration with RTP - Radio Televisão Portuguesa Our associates Zélia Simões and João Pernão, both gave interviews to the TV series “A Arte da Cura”/ (translation: The Art of Healing), exhibited from the 2nd of December to the end of February 2022: A Arte da Cura. Episódio 1. Dos Primórdios da Medicina ao Império Romano. (2021). RTP2. 2 de

Dezembro, 22:50. [Consultado a 18 de Dezembro de 2021]. Available at: <<https://www.rtp.pt/play/p9539/e586267/a-arte-da-cura>> A Arte da Cura. Ep. 2 – Idade Média: da Estagnação ao Avanço dos Árabes. (2021). RTP2. 9 de Dezembro, 22:50. [Consultado a 18 de Dezembro de 2021]. Available at: <<https://www.rtp.pt/play/p9539/e586267/a-arte-da-cura>>

### APCor MEMBERS

APCor supported the nomination of Jean-Philippe Lenclos - our honorary member - to the CADE Award. We also endorsed Maria João Durão nomination to the AIC Board elections for the position of Secretary / Treasurer (2022-23). The elections took place at the AIC 14th Congress 2021-Milan General Assembly Meeting. The Portuguese Colour Association continued to be represented by its members at the main forums of colour discussion throughout the world:

### PUBLICATIONS

Duarte, R. (2021), ALI e BABÁ, Rui Barreiros Duarte, Lisboa. Durão, M. J., 2021 ‘Celebrating the Harmony of Our Identities on the ‘International Colour Day’, Colour Connections Sydney 2021 - Book of Abstracts of the Colour Society of Australia National Conference, Australia, Sydney. Pp 61-62 Leonardo, C., Martinez, L.M., & Ramos, F.R. (2021). Cor e tipografia em capa de livro: Emoções, atratividade e intenção de compra. Revista Brasileira de Expressão Gráfica, 9(1), 44-68. Martinez, L.M., Rando, B., Agante, L., & Abreu, A.M. (2021). True colors: Consumers’ packaging choices depend on the color of retail environment. Journal of Retailing and Consumer Services, 59, 102372. <https://doi.org/10.1016/j.jretconser.2020.102372> Pinheiro A.P., Duarte, R. (2021), Blue in Alentejo: authenticity and sustainability. The International Scientific Conference of the Color Society of Russia: Selected papers / ed. by Yulia A. Griber and Verena M. Schindler. Smolensk: Smolensk State University Press, pp. 277-282. Pinheiro, A.P., Duarte, R. (2021), “Color and Sustainability in Fashion Design: DUARTE, Portugal”. AIC 14th Congress Milano 2021, August 30th – September 3rd 2021, Online Edition. Book of Abstracts, p.85. White, A.R., Martinez, L.M., Martinez, L.F., Rando, B. (2021). Color in web banner advertising: The

influence of analogous and complementary colors on attitude and purchase intention. Electronic Commerce Research and Applications, 50, 101100. <https://doi.org/10.1016/j.elerap.2021.101100>

### PRESENTATIONS

Martinez, L.M., Weitzel, K., & Martinez, L.F. (2021). The influence of complementary colors on consumer behavior: An e-commerce interior design application. Paper presented at the 5th Theory and Applications in the Knowledge Economy (TAKE), Universidade Portucalense, Porto, Portugal, July 7th-9th. Conte, V. 2021. Atlas da Cor-Emoção (Atlas of Colour-Emotion). Seminários Interartes & Intermedia #7 (webinar) Verónica Conte, talk with Cristiana Vasconcelos Rodrigues (Professor Universidade Aberta, researcher CEC-FLUL), moderated by Sandra Camacho (researcher CEC-FLUL). Universidade de Lisboa, Faculty of Letters, Centro de Estudos Comparatistas.

### EXHIBITIONS

EXPOSIÇÃO COLECTIVA DE ARTE: SONHO /DREAM Artes Plásticas Poesia. Claustros da Biblioteca Municipal de Portalegre, de 17 de Julho a 16 de Outubro de 2021. “Voar na idade dos sonhos, 1, 2, 3”. Pintura a óleo: Rui Barreiros Duarte.



Book "Colour, Urban Space, Architecture and Design"



"Chromatic Instant #8: Labirinto A/ Labyrinthe (2020)" by J.-P. Lenclos



"Chromatic Instant #9: No Matter (2021)", by Helena Soares



"Chromatic Instant #7: Casa en barrio Coghlan, Ciudad de Buenos Aires AR/House in Coghlan neighbourhood, Buenos Aires city, AR (2018)", by J. L. Caivano



// SLOVENIA //

## Slovenskemu združenju za barve

### SSC - Slovenian Society for Colours

Colour blindness is unfortunately one of the diseases that affect the perception of information from the environment. There are many people with different types of colour blindness that make it impossible to perceive one of two or more colours. And since we humans evaluate almost 80% of all information with our eyes, it is important that this information is presented correctly. Natalija Vodopivec's thesis (under the mentorship of Assoc. Prof. Dr. Raša Urbas) investigated how certain commonly used graphic designs need to be designed so that people with colour blindness can see them correctly. The study included an overview of some commonly used graphic designs such as restaurant menus, bus plans and various types of simple graphs and diagrams. The study showed that adaptations can be made that are suitable for both people with normal vision as well as for people with colour blindness. The specifics of the graphic designs, the amount of information and detail, and of course the main purpose of the visualisation were considered.

#### Colour Memory Analysis

People are known for having poor and inaccurate colour memory. The ability to remember colours depends on the characteristics of an individual as well as on the situation in which the colour needs to be recalled. An unreliable colour memory can lead to unpleasant surprises when selecting a certain hue, for example, when buying an apparel. However, this can be improved by offering suitable support or association. The aim of our study (Stjepić and Bračko, Tekstilec, 2021, Vol. 64(3), 260–271) was to analyse long-term colour memory for selected associative colours, comparing it with a short-term memory. Observers were asked to recall the selected colour either on the basis of the description or name of the brand either on the basis of a grey-scale image

of its logo. The way the template was presented had a noticeable effect on the long-term colour memory. When the image was presented in grey, the results were better. On the other hand, the descriptive rendering of reference colours did not contribute to better results. Generally, much better results were achieved when testing short-term memory.

Another study (Kristina Skerbiš: The influence of geometric shape on short-term colour memory, master's thesis; mentor: Assist. Prof. dr. Sabina Bračko) revealed that short-term memory is influenced by the shape used to represent the colour. Four original colours were included in the study (blue, red, yellow and grey), presented in five different shades each, with variations in hue, saturation and lightness and three different shapes (square, triangle, circle). The observations were made on a computer screen. Although it was not possible to make generalisations regarding the positive or negative influence of a certain shape, better results were achieved in the case of associative colours and shapes (blue circle and yellow triangle). However, this was not the case with the red square. Also, the influence of the shape was less pronounced with highly saturated colours.

#### AIC2021 CONFERENCE MILANO

Some of our members attended the conference and presented selected research results (Blaznik, Kovač, Bizjak and Bračko, Fastness of black dye-based ink-jet printing inks in aqueous solution in the presence and absence of oxygen). The whole event was a wonderful experience and we enjoyed sharing the ideas during the conference days.

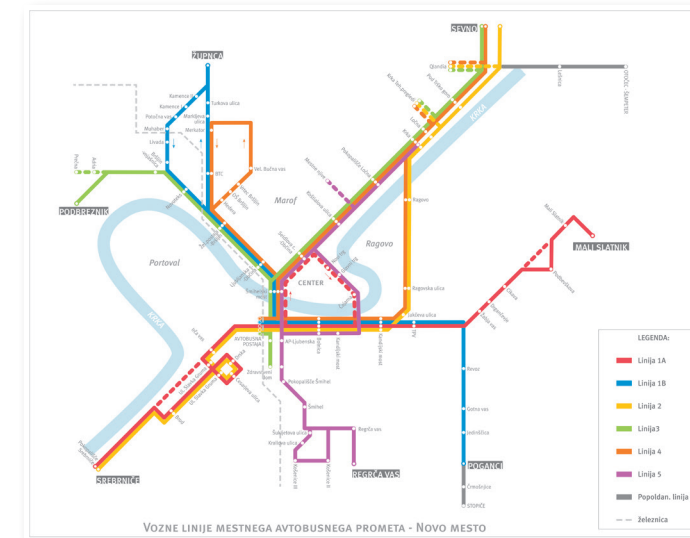


Figure 1: Unadapted bus map, unsuitable for colour-blind people

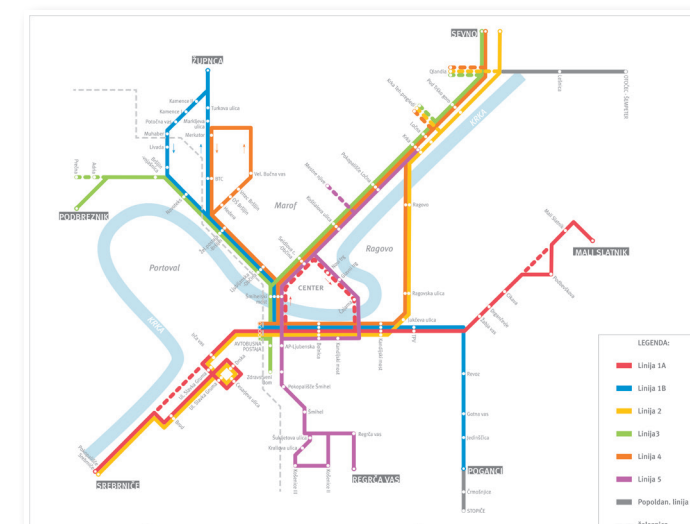


Figure 2: Bus map in colours, adapted for the colour-blind people

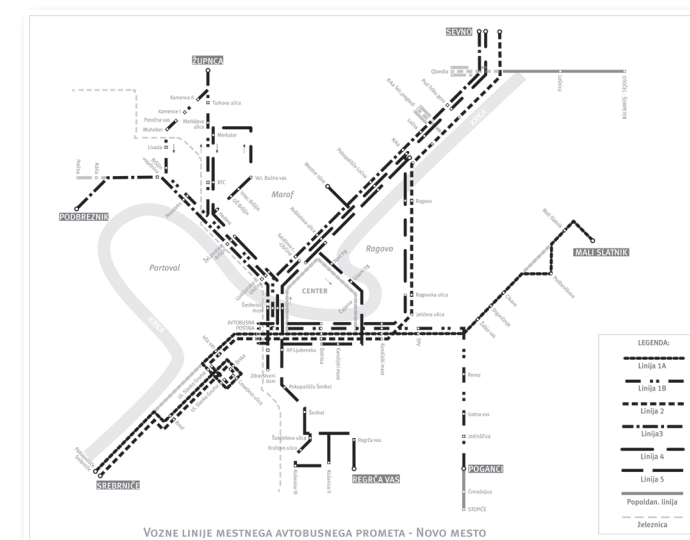


Figure 3: Bus map in greyscale, adapted for the colour-blind people





// SPAIN //

## Comité del Color Sociedad Española de Óptica

CEC - Color Committee Spanish Optical Society

Our committee maintained its customary activities participating in different events around color (conferences, workshops, courses, seminars and outreach activities) and preparing the upcoming events for 2022, mainly the XIII Congreso Nacional del Color that will be finally done on-line from 29th of June to 1st of July 2022. This conference is organized by the Center for Sensors, Instruments and Systems Development (CD6) and the Faculty of Optics and Optometry of Terrassa (FOOT), both at the Universitat Politècnica de Catalunya (UPC).

### EVENTS

The committee supported activities in the framework of master's courses about color such as the "Master Erasmus+ COLOUR in Science and Industry (COSI)", organized by the University of Granada, and the "Master Erasmus Mundus EUROPHOTONICS and Master in Photonics (Course: Active and spectral imaging)", organized by the UPC.

The committee also supported several international conferences such as the Color Imaging Conference 2021 (CIC29) and the 14th AIC congress 2021. The committee participated actively in the organization of the XIII Reunión Nacional de Óptica, organized by the Sociedad Española de Óptica, in which there was a session devoted to color (November 22, 2021). Additionally, other conferences, workshops and seminars were organized along 2021 about different aspects of color. Some examples are listed next: "Filters and color vision: what happens to light until it reaches the retina?" offered within the framework of the II Cycle of Talks: Achromatopsia, and co-organized by the Association of People affected by Achromatopsia and Monochromatism of Blue Cones (November 21, 2021); "Can we measure color?, within the cycle "Ciencia en primera persona"

organized by the National Museum of Science and Technology and the CSIC (June 13, 2021); and "The spectrophotometer for color analysis" at the II Conference on construction materials in historic buildings, Santo Domingo, Dominican Republic (April 29, 2021). Other members of the committee also participated in the "Noche Mediterránea de las Investigadoras - MEDNIGHT 2021" with the contribution "La percepción visual al servicio del mal".

It is also remarkable the participation of the Committee in the International Color Day 2021. In this framework, the Faculty of Sciences of the University of Alicante, within the cycle of conferences "Without Science there is no future", organized the talk "Colors do not exist!" by Conchi Lillo (Dr. in Neurosciences from the University of Salamanca, Institute of Neurosciences of Castilla and León), which was broadcasted on the Faculty's YouTube channel.

It is to be noted that members of the committee (D. de Fez) have recently published a book chapter related with color entitled "La luz. Enigmas, mitos y tecnología" (Ed. Servicio de Publicaciones de la Universidad de Alicante, colección L'Ordit) and served as guest editots for the special issue "Hyperspectral Imaging and Its Applications" of the Journal of Imaging.

### RESEARCH HIGHLIGHTS

In the research section, we would like to highlight the work done by Khalil Huraibat, a current member of the Color and Vision research group of the University of Alicante (Spain). Huraibat, as part of his doctoral thesis, recently developed an accurate 3D digital reproduction tool for goniochromatic

materials (color strongly dependent on viewing and illumination angles), in collaboration with AkzoNobel painting company and Instituto de Óptica from Consejo Superior de Investigaciones Científicas (CSIC), Madrid (Spain). This research focused on the development of a new 3D rendering tool for improved and accurate visualization of the complete appearance of effect coatings, including metallic effects, sparkle, and iridescence. This work was carried out by: (i) building a specific rendering framework, using a multi-spectral and physically-based rendering approach (a series of effect coating samples were rendered on an iPad display, simulating how these samples would be viewed inside a Byko-spectra effect light booth); and (ii) validating through psychophysical tests the performance of

this rendering framework. Observers evaluated the most important visual attributes that directly affect the appearance of effect coatings, i.e., color, angular dependence of color (color flop) and the visual texture (sparkle and graininess). Observers were asked to directly compare the rendered samples with the real samples inside the Byko-spectra effect light booth. The results from the visual tests showed that the visual acceptability of the rendering was high (90%).

The outcomes of this research can be found in the following two peer-review articles (<https://doi.org/10.1364/JOSAA.413890>; <https://doi.org/10.1364/OE.438477>).

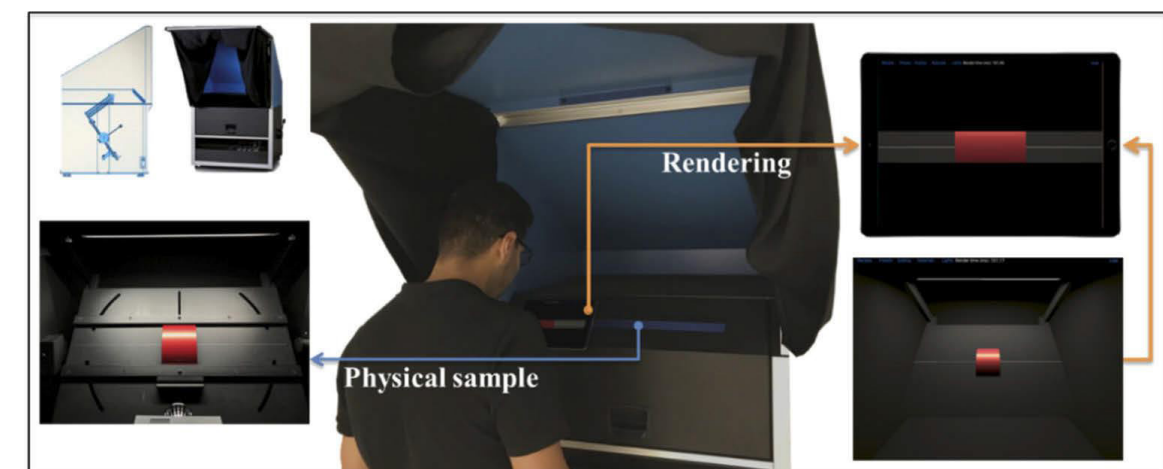


Figure 1. An observer comparing the 3D rendered samples using the spectral rendering with real-world objects inside the Byko-spectra effect light booth.



// SWEDEN //

## Svenskt Färgcentrum

SSF - Swedish Colour Centre Foundation

### PRISAD FÄRG/AWARDED COLOUR 2021

The first prize winner of awarded Colour 2021 with the theme “Colour & Status” was Frida Navratil with her project “Dedicated to Colour”. Colour and status have always been used as a marker for social or professional status, rank, and culture. Pic. 1

During autumn 2021 we have announced Awarded Colour 2022 with the theme “Power of Colour”. Inspired by this year's theme, you create an architectural element, a product, a room, an environment, an urban space, a phenomenon, an installation, an image or some other kind of experience where your feeling and experience of the colour's relationship to the theme “Power of Colour” will be your contribution. Your contribution should be visually strong with a clear and simple explanatory text.

The winner will be announced at the ICD 2022 festivities in March.

### THE YEARLY TEACHER'S SEMINAR IN SEPTEMBER

The yearly teachers' seminars “Young Colour Force” brings together our network of teachers in Swedish design- and architect's schools with the goal to raise the interest of colour education, both for students and teachers.

This year in September we arranged a digital teacher's seminar and we started with a practical workshop in the morning session. Eva-Lena Bäckström, Senior Lecturer, Umeå institute of design, Umeå University started with a digital colour exercise practical for distance learning. Berit

Bergström conducted a digital NCS exercise with the participants. The morning session ended with a presentation of Prasad Färg 2022 next theme “Power of Colour”.

In the afternoon we had an invited very colourful speaker, Sweden's most influential and colourful textile designer Wanja Djanaieff showing a very impressive textile creation with lots of colours! Frida Navratil, the winner of Prasad Färg 2021 presented her project “Dedicated to Colour”. The day ended up in a fruitful and colourful discussion with a mix of long experience and young creativity.

### MEMBER'S MEETINGS

This year has not been a “normal year” because of the Pandemic and we had a lot of digital meetings instead.

In March we had a digital celebration of the International Colour Day. We had an invited speaker Sara Garanth who gave a talk titled “Who is afraid of orange, yellow and violet?” We also celebrated the ICD by announcing the winners of Awarded Colour 2021. The three finalists had prepared a video which presented the entries. This was much appreciated.

In April we could listen to a talk by Philip Warkander who has written a book about Sara Danius who was the secretary of the Swedish Academy. The talk did focus on Sara's high-profile clothing creations and her literary research. Sara was very aware of the colour choice of her clothes in official situations.

In May we had a digital talk “Color hybrids – Artistic laboratory work on the color and depth of

spatial objects” by two architects and researchers, Malgorzata Zboinska and Eva Amborg from Chalmers University of Technology.

In August we had a guided tour at Millesgården, Art gallery, who had an exhibition about a famous Swedish textile and ceramic designer Stig Lindberg 1916-1982. Pic 2.

In September we had a guided tour at Liljevalchs in a new extension of the old museum. The new part of the museum is designed by the Swedish architect Gert Wingårdh and the glass artist Ingegärd Råman. The concrete façade has 6860 embedded bottle bottoms in clear glass which makes the house very special.

In November our annual meeting took place as a digital meeting. After all formalities we could listen to a talk “Our Scandinavian colour scale of today-Past meets present” by Berit Bergström. Internationally Scandinavian colour design will probably always be synonymous with tasteful minimalism with lots of whitish and pale colours and light blond interiors. Analysis have been made in genuine environments to get a good representation of historical colours, especially the Rokoko and Neoclassicism period, which we have learned to appreciate and to which many people want to relay today. These colour palettes were presented in the colour talk. Pic 3.

Berit Bergström, International Contacts, bergstrom.berit@gmail.com info@fargcentrum.se  
Swedish Colour Centre Foundation, www.fargcentrum.se



Pic 1: The winner of Prasad Färg 2021 Frida Navratil together with Catrin Vagnemark and Bengt Ahlin, board members of the Swedish Colour Centre Foundation.



Pic 2: The August meeting: Stig Lindberg fabric “Melody”



Pic 3: The annual meeting talk: An inspirational colour interior from Vemdalen Church in the Rokoko/Chippendale style, a playful light and airy style.









// TAIWAN //

## 中華色彩學會

CAT - Color Association of Taiwan

Under the influence of the COVID-19 pandemic, the past year has been a period of global change. We have recognized the impermanence of the world. The pandemic forced the Color Association of Taiwan (CAT) to host its annual academic conference, a tradition for 21 years, online on November 27, 2021.

Doing so, however, enabled greater attendee interaction and more scholars in the fields of color research and application to be invited to discuss feasible color solutions in design. The success of the online conference may also enable ACA 2022 and AIC 2025 to be held in Taipei, Taiwan. We hope all will join us for these activities.

The ACA is a color association that was formed by a group of color scholars in Asia in 2013. Since then, six annual ACA conferences have been held, and many young scholars have been invited to participate.

The theme of the ACA 2022 conference is “Color for Future.” Scholars in the field of color research will be invited to discuss possible future color applications. As the Metaverse continues to develop, potentially infinite color applications are possible.

At the 2021 Annual Meeting of the CAT, 18 presenters and three color experts from Europe and the United States were invited to give online keynote speeches. The three experts and their speech topics were as follows:

- Dr. José Luis Caivano (former president of the AIC and professor at the Faculty of Architecture, Design, and Urbanism at Buenos Aires University, Argentina) gave a lecture

entitled “Are white, black, and grays colors?”

- Dr. Robert Hirschler (Chairman of the AIC Study Group on Colour Education) gave a speech entitled “What’s wrong with Itten’s “The Art of Colour?””
- Dr. Vien Cheung (Chairman of the AIC and professor at the School of Design of the University of Leeds, UK) gave a lecture entitled “Colourful Life.”

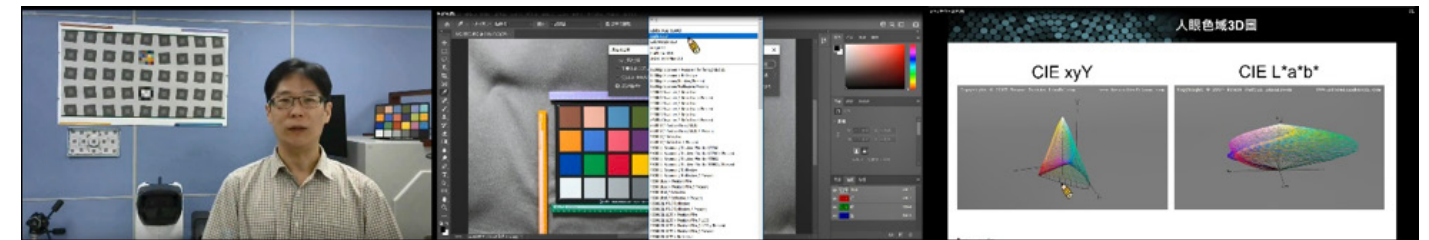
Because of differences and the impossibility of an on-site conference during the pandemic, the speakers delivered their lectures online. The lectures can still be accessed through the online conference system.

The CAT connects international color academia, enables cooperation and innovation, and enables mutual development of color application methods and research directions.

The CAT co-organized the government-funded iPAS Certified Color Planning and Management Color Specialist exam through its fourth year. The exam comprises three topics: basic color science, the practice of color planning, and colorimetry. Over 1,000 people apply to take the exam each year; most are college students from design-related departments, but social professionals also actively participate. In the past year, the pass rates for the basic color science, practice of color planning, and colorimetry exams were 43%, 39%, and 24%, respectively. To inform people of potential applications of digital color, the Industrial Technology Research Institute commissioned CAT members to design 10 modules for online micro-courses, with each module including 20 minutes of

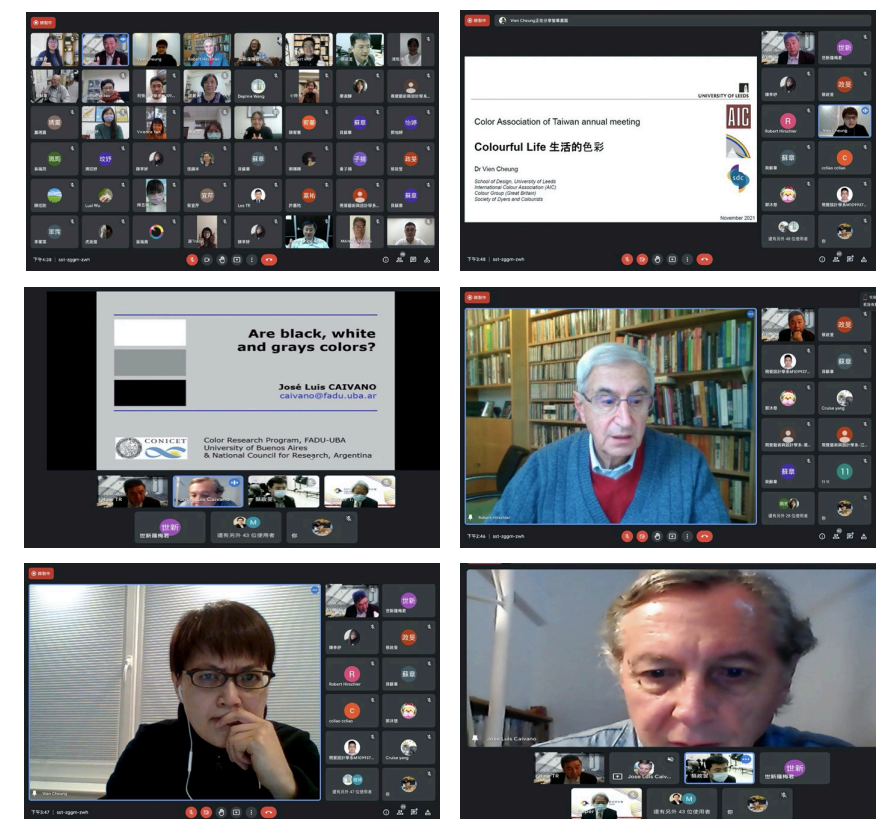
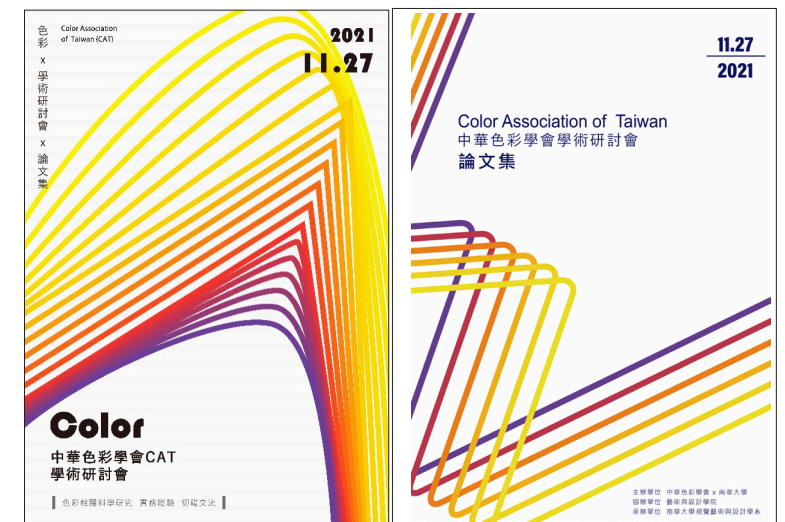
video content and online post-course assessments. The content of the 10 modules is listed in the following:

No.	Module
1	Color application in image editing software
2	Color application in graphic design software
3	Color measurement for image reproduction
4	Digital quality assessment of color reproduction
5	Color order system and color chips
6	Color analysis and simulation
7	Color management I
8	Color management II
9	Color application in video editing software
10	Color application in 3D modeling software



Professor James Shyu cofounded the CIE-Taiwan International Lighting Vocabulary Group. The group is a task force comprising CAT members and industry experts, who consolidate English translations of Chinese vocabulary related to color and lighting to improve color education and industrial applications. The working group is expected to complete the translation of the CIE International Lighting Vocabulary by the end of this year.

Taiwan underwent numerous unexpected events and changes in 2021. The CAT resumed meetings in March, and CAT members and teachers celebrated International Colour Day (ICD). The CAT received photos from members who joined in the ICD celebrations at their schools. Undergraduate professors taught color theory, chromatics, color calibration, color management, color planning, and their applications at Huaan University, Chinese Culture University, Taitung University, Ming Chuan University, National Taiwan University of Science and Technology, Shih Hsin University, and Nanhua University. This year, Sun Yat-Sen elementary school in Taoyuan City was included. Children were taught color matching and its applications in daily life.







// THAILAND //

## Color Society of Thailand CST

In 2021, it was quite hard to organize the activities because of the continued COVID-19 situation. Nevertheless, we managed to organize an activity through online, it was the CST Seminar in Color for Industry. There were many people from industry and academia participated in the seminar. There were many interesting topics such as Photoreceptor cells in the human eyes, Colored objects, Color system, Color tolerance, and metamorphism, Measurement geometries, and Color example preparation. The speakers were Dr. Pichayada and Dr. Kitirochna. The seminar was held once a week for three times in total.

In addition, our team attended and presented papers in The 6th Asia Color Association (ACA) Conference 2021 “Color and Culture” on November 2nd – 3rd, 2021. It was organized by Prof. Adi Djoko Guritno of Gadjah Mada University. It was held through online by Department of Argo – Industrial Technology, Faculty of Architecture

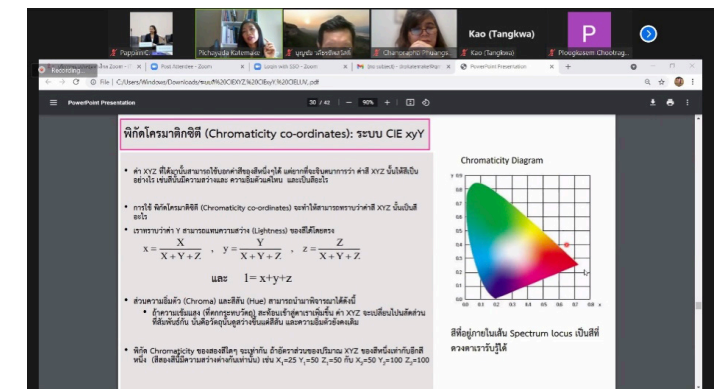
Technology and the Graduate School of Gadjah Mada University, Yogyakarta, Indonesia. Prof. Mitsuo Ikeda, professor at CRC and coordinator of ACA, was invited to be keynote speaker. Associate Professor Dr. Pichayada Katemake, the president of CST, was one of the invited speakers. There were 11 papers presented at the conference from Thailand. The next 7th ACA will be held in Taiwan to be organized by Prof. Tien Rein Lee.

In this year, 2022, there is up-coming project, “The 1st Annual Conference of CST” It will take place on February 24th – 25th through online. There are three invited speakers, Prof. Miho Saito from Japan, Prof. Alain Tremeau from France, and Prof. Stephen Westland from England. In addition, there is a company exhibition on 24th, the first day of the event. The company will show new technology, new products, and research and development (R&D) in color technology.

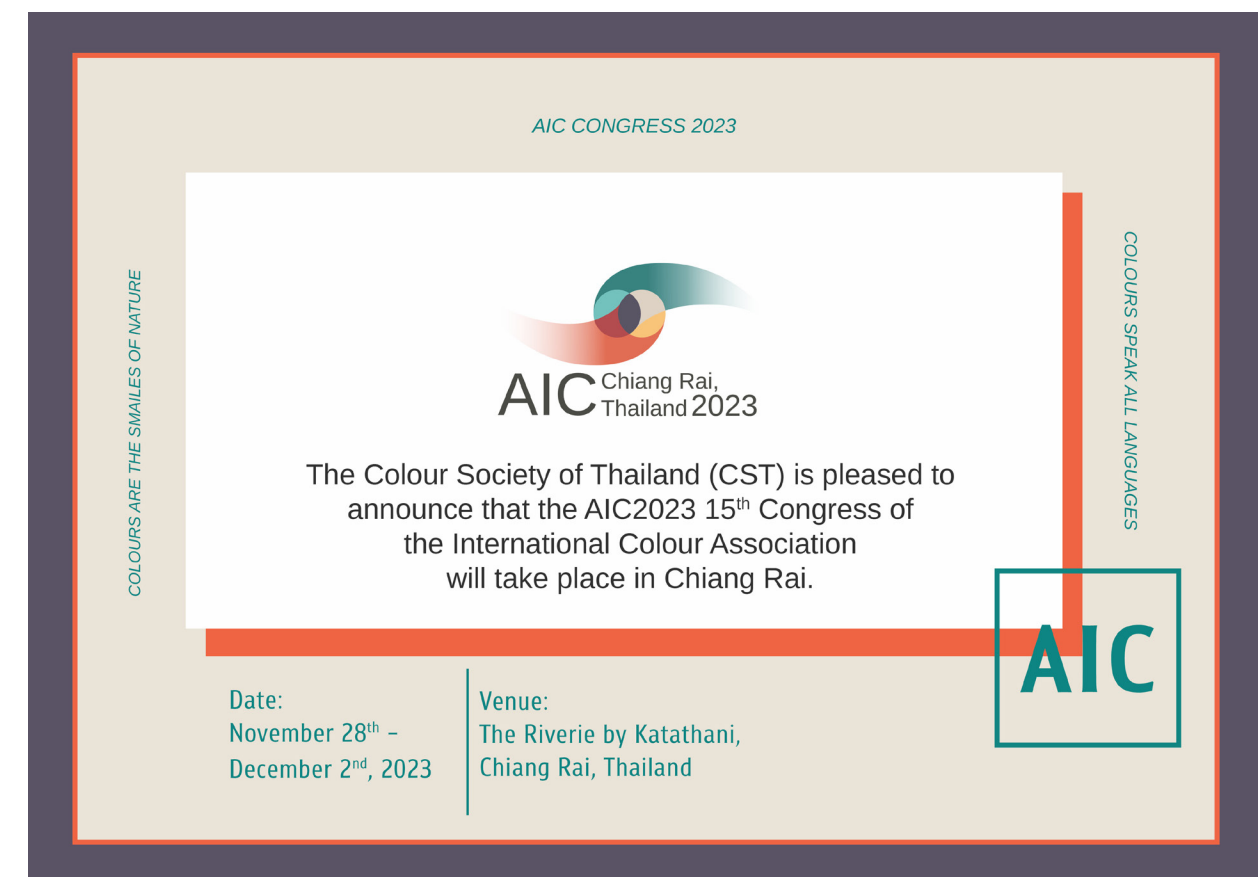


The 1st Annual Conference for CST

In the future, we invite the 2023 International Colour Association (AIC) Conference in the theme “Color in Nature and Culture”. Thailand will be a host to welcome everyone to join the event. It will take place on November 28th – December 2nd, 2023 at Chiang Rai, the most northern city of Thailand close to the Golden Triangle looking over Laos and Myanmar, a full of nature and ancient culture. You can enjoy the best season, nice and cool in Chiang Rai. Easy to reach by airplane. We sincerely hope to see you all at the AIC2023 Thailand.



CST Seminar in Color for Industry



The poster for 2023 15th Congress International Color Association





Inter-Society Color Council

// UNITED STATES //

## Inter-Society Color Council ISCC

### MEETINGS

ISCC hosted three virtual meetings in 2021. The first was Color Impact 2021: For the Built Environment followed by the Second ISCC Annual Symposium on Color Education. The final virtual meeting was the ISCC Annual Meeting.

The Color Impact 2021: For the Built Environment was a virtual conference from June 12-15. The Inter-Society Color Council and the International Association of Color Consultants-North America collaborated as co-hosts to make this conference a success! The 133 participants represented 24 countries and 6 continents with North America and Europe having the greatest representation. With the conference focus being the Built Environment, 75% of the attendees came from the architecture and interior design side of color. Other attendees were from the education, art and science side of color plus combinations thereof. This was a very well-organized online event featuring lively personal interactions. The presentations were stimulating and captivating providing insights into how color in the built environment has been changing over time among some basic and constant elements.

The Second Annual ISCC Symposium on Color Education was held virtually on Saturday, June 25th. There were 96 participants from 19 countries and most registrants attended for free because the cost was included in the registration fee for the Color Impact 2021 conference. The theme of this year's Symposium was "Perspectives on Color Education". The first session included talks by four color educators from different disciplines who presented each of their approaches and featured student work from their innovative courses. The second session featured broader presentations by color educators

looking ahead to the future of color education in the 21st century. There was a lively 30-minute Question and Answer period at the end of each session. Videos of the presentations were posted on a password-protected page of the Color Impact 2021 website (<https://colorimpact2021.com/>) for registrants not able to participate in the event.

On September 20th, ISCC hosted the virtual Annual Business Meeting. Seventy people attended the event. Bevil Conway opened with a fascinating and stimulating keynote webinar called "The Brain: the Artist's Medium". The business portion of the meeting featured reports from all executive officers and chairs of all active ISCC projects. Awards were also given to deserving individuals.

### COLOUR LITERACY PROJECT

The Colour Literacy Project is a joint project between ISCC and AIC. This work is conducted within the ISCC/AIC Joint Colour Literacy Project Committee. Please see more information on the work of this cooperative effort in the Colour Education AIC Study Group section of this Annual Review.

### PUBLICATIONS

The ISCC News was published quarterly in 2021. Dr. Michael Brill's Hue Angle columns featured such fascinating topics as "Into Something Rich and Strange", "Ruminations on Eating Photons", "Color Coding the Pandemic" and "If CIECAM is the Answer, What is the Question?". We also enjoyed an entry from Ellen Carter who shared "In This Issue" from Color Research and Application. Another quarterly entry is "A Blast from the Past" written by Paula J. Alessi, which reminisces on valuable historic content from ISCC newsletters that were

published 50 years ago. Each issue featured other delightful articles on ISCC activities that occurred throughout the year. ISCC is pleased to offer the entire newsletter archive online at <https://iscc.org/> Newsletter from the years 1933 – 2020.

### WEBINARS

ISCC's highly successful online webinar series continued in 2021. It began in January with a webinar given by Dr. John Barbur, the Optics Chair from the City University of London. His presentation, "Color Assessment for Health and Employment", revealed a new refreshing approach to color assessment that overcomes the problems of past techniques. As is tradition, our March webinar commemorated International Colour Day, when Dr. Andy Towns, an industrial organic chemist at Arkema UK Ltd., presented "Now You See It, Now You Don't: Industrial Chromism". The audience marveled at his examples of color-changing materials and products in various industries. The May webinar featured Ms. Kine Angelo, a professor of architecture and design at Norwegian University of Science and Technology, speaking on "The Greying of Norway". We learned that there is a slow change in the coloring of Norwegian architecture from reds, yellows and greens to a more uniform achromatic color scheme. In November, Dr. Stephen Westland, Professor of Science and Technology at the University of Leeds, presented "Unraveling the Effects of Coloured Environments and Coloured Lights". Dr. Westland described a framework that tries to make sense of the different effects created by coloured environments and lights.

These webinars are free and open to anyone around the world. Each one usually lasts about 60 minutes. Some of these presentations are available online to ISCC members. If you are interested in learning more about our webinars, please go to <https://iscc.org/SeminarSeries>. If you join our LinkedIn online community, you will get notices about the webinars.

### FLOUESCENT FRIDAYS

Fluorescent Fridays are free webinars aimed at university students interested in color. The first of these was held in February to celebrate Valentine's Day by discussing "Seeing Red – What is the Perfect Red?" The Fridays in April and June featured a rapid-fire five-minute-per-speaker style event showcasing the diversity of student research in color among art and science students. The October event was inspired by Juan Serra Lluch's Color for Architects

book as architectural and industrial design students responded to real life cases from companies and institutions with creative chromatic solutions.

### AWARDS

The Nickerson Service Award is presented for outstanding, long-term contributions towards the advancement of the Council and its aims and purposes. The 2021 Nickerson Service Award was presented to Dr. Frank O'Donnell for his dedicated service to ISCC leading Interest Group I and serving on Board of Directors, as President-Elect, President, and Past President and Treasurer throughout his 40-year ISCC membership!

The ISCC Godlove Award is given for long-term outstanding contributions in the field of color. The 2021 Macbeth Award was presented to Dr. Mark Fairchild to celebrate his lifelong career as a color researcher, author and color educator.

ISCC was proud to recognize the accomplishments of two of its members with these coveted awards in 2021!



*Dr. Frank O'Donnell, the Recipient of the ISCC 2021 Nickerson Service Award*



*ISCC President Dave Wyble presents ISCC 2021 Godlove Award to Dr. Mark Fairchild*





// UNITED STATES //

# Color Marketing Group CMG

Color Marketing Group® (CMG) holds a multitude of events throughout each year to promote the common interest of our members for color marketing across all industries. Our events meet our mission to create accurate and relevant color and trend forecast information by connecting global color professionals in their shared passion.

In response to the pandemic of 2020, our Color Forecasting Committee transitioned our in-person events to virtual events and in 2021 we continued to forecast in the virtual world allowing us to provide color forecast information to our members. Throughout 2021, CMG held 15 virtual ChromaZone® Color Forecasting workshops during which 180 participants shared their trend stories for 2023, forecasting a total of 874 color directions. The goal of each Workshop is to develop a color palette associated to three, directional color trend stories. CMG's Steering Committee then curates these colors, agreeing upon 64 color directions for 2023 – 16 for

each of our four forecast regions of North America, Europe, Asia Pacific and Latin America. Also, in 2021 we continued to offer a range of online events to foster engagement in the color community, allowing our members to remain connected. ColorChat™ discussions on Zoom covered topics such as Color and Wellbeing, and Sustainability. ColorSpeak™ webinar events, delivered by CMG industry leaders, shared insights on CMF, Trend Spotting, and Color Naming.

As in the previous year, our 2021 International Summit remained virtual, attracting even more color design professionals from around the world as they tuned in to hear our color predictions for 2023 and beyond, delivered by our volunteer Regional Liaisons. Featured speakers address the Summit theme of “CREATE!” and attendees participated in a myriad of online events to share and collaborate with other global color design professionals.

In 2022 CMG will celebrate 60 years of color forecasting. Our Color Forecasting Committee is currently examining CMG's six decades of archived color forecasting data and the results will be shared during CMG's 2022 International Summit to be held in November. In advance of then, CMG will, once again, offer a range of in-person and virtual color forecasting events including an in-person European Conference May 18-20 and our first in-person North American event will since the pandemic will be held April 4-5 in Cleveland Ohio.



CMG Color Chat

MEMBER VIEWPOINTS ON A MULTITUDE OF COLOR TOPICS

## The Evolution of CMG's World Color Forecast™

Examining the shifts and their impact between the hue families over the last decade of color forecasts.

Sign up in Events at [colormarketing.org](https://colormarketing.org)

Thursday Feb. 25 | 12PM EST

Montaha Hidefi,  
CMG VP Color Forecasting







// UNITED STATES //

## International Association of Color Consultants/Designers IACC -NA

The IACC-NA had eventful year in 2021! Lots of continued online activity with the hopes of returning to in person meetings in 2023. The highlight of our year was Color Impact 2021 in June. We were the collaborating association (along with ISCC) in helping to make this conference possible. Below are noted highlights of our year:

### Color Impact 2021-For the Built Environment

- Members Jean Hoskin, Amy Woolf, Ellen Divers, Laura Mercurio, Lindsay Thivierge, and Karen Collins worked hard to represent and contribute to the success of the conference.
- 2020 IACC-NA thesis candidates, Ellen Divers, Sheri Petersen, Karen Collins, each presented a short synopsis of their work, during the conference.
- Ellen Divers also contributed as a main presenter. Her paper- Beyond hue: the affective response to value and chroma was also published in The International Scientific Conference of the Color Society of Russia: Selected Papers. 2021, pp. 154–159, [http://color-lab.org/files/283/bop\\_rucolor2020\\_with0.pdf](http://color-lab.org/files/283/bop_rucolor2020_with0.pdf)
- In the final session, Jill Pilaroscia provided many thoughtful, scientific examples of perception applied to design. She said she is not just creating a color design, but “answering a question, solving a problem.”

Webinar presentation by Lori Sawaya in February 2021, “The Pieces to the Color Puzzle” was a great overview of the understanding of color theories and the science behind them.

We are continuing to publish a quarterly newsletter with association updates that include:

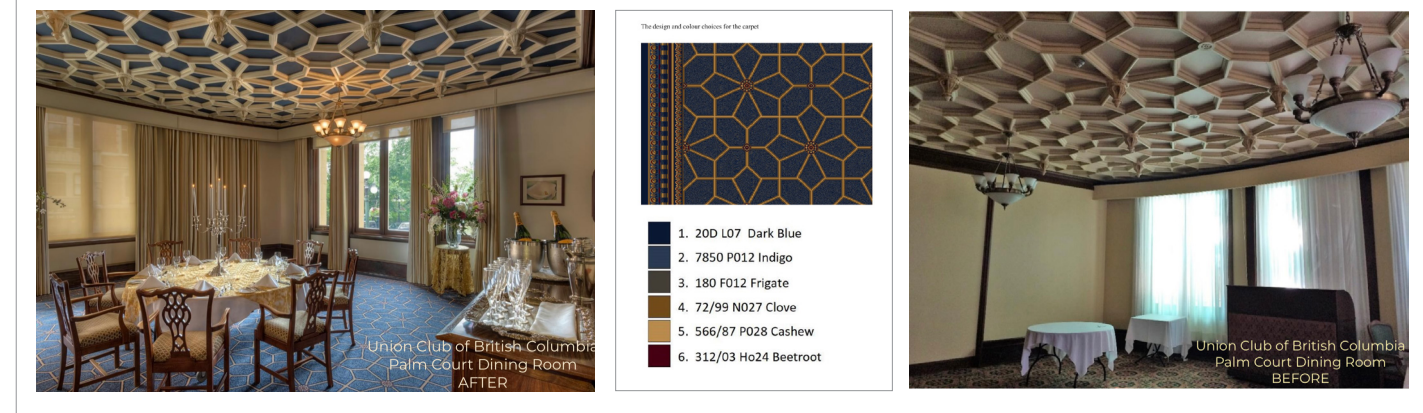
- Research articles are being added in the member’s section of our website
- A different member featured on the website every quarter
- Member profiles with portfolios in the website’s “Find a Consultant” section is one of the most important benefits of membership with us.
- Blog posts are available on the website

Starting October 15th 2021 we started our first monthly Zoom socials

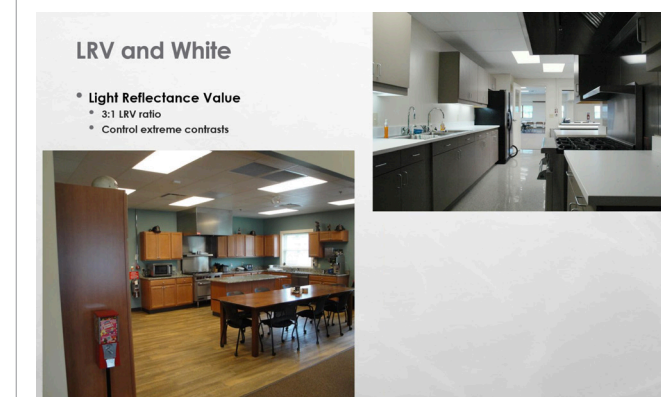
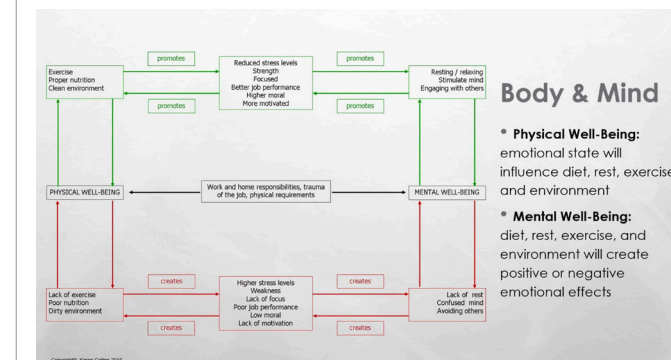
We now have 4 members, Leslie Bellavance, Christy Addis, and Stacey Moore, more recent graduates of the education program, who are beginning to work on their thesis to achieve fully accredited IACC Color Consultant.

Finally, a new board was elected this year.

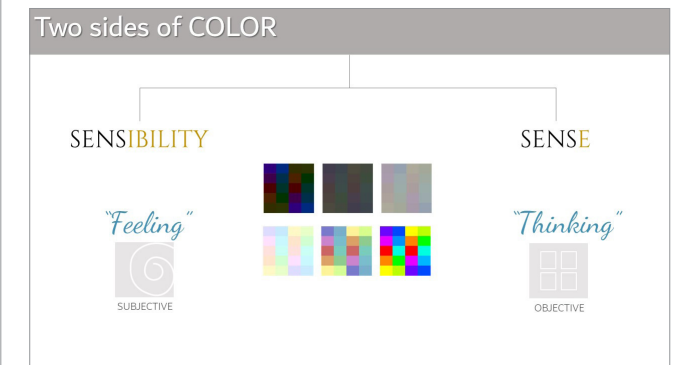
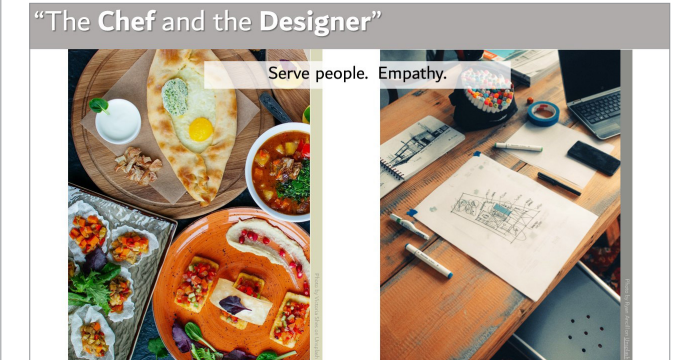
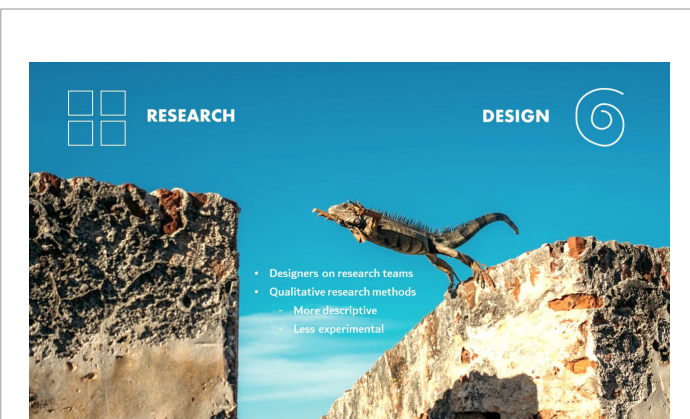
- Sheri Peterson, President, former Vice President
- Christy Addis, Vice President, new to the board
- Laura Mercurio, Treasurer, renewed position
- Suzi Kades, Secretary, renewed position



Sheri Peterson Design  
The Impact of Colour in the Hospitality Environment



Karen Collins  
The Use of Color in Fire Stations to promote Well-Being



Ellen Divers Design  
Color Design: Sense and Sensibility





# SG AD

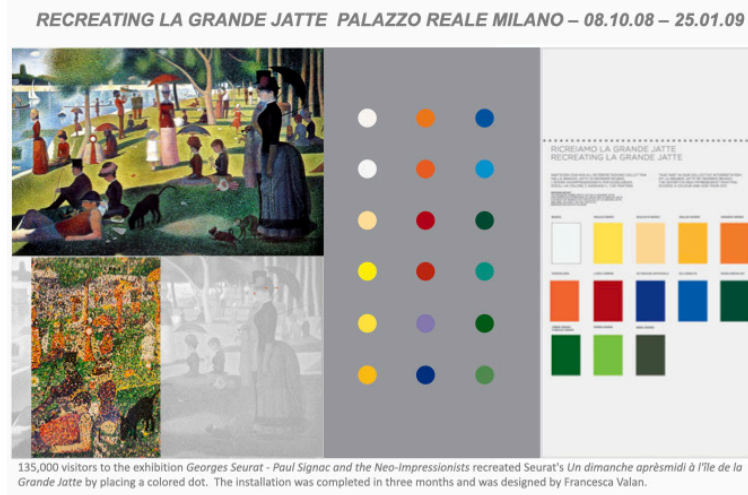
## ART AND DESIGN

Chairman: Maria João Durão (Portugal)



Top image Larissa Noury's painting-fashion colour relations.

Bottom image Francesca Valan's work, part of the SGAD Virtual Exhibition



**SG AD has**  
**50 members from**  
**25 countries**

The AIC Study Group on Arts and Design-SGAD brings together a plethora of areas that concern theory and practice in the domains of the 'Arts and Design'. It aims to create a network where artists and designers communicate and disseminate their work and provide incentive for research in the disciplines englobed by the SGAD. Its members come from 33 countries: Argentina, Australia, Austria, Belgium, Brazil, Chile, China, Croatia, Egypt, Finland, France, Germany, Hungary, India, Iran, Italy, Israel, Korea, Japan, Mexico, Norway, Peru, Poland, Portugal, Singapore, Slovenia, Spain, Sweden, Switzerland, Thailand, Turkey, UK and the USA.

In 2021 the SGAD held the Workshop 'INTERDISCIPLINARITY OF COLOUR APPLIED TO ARTS AND DESIGN' (1st September 2021) hosted by the AIC 2021 Congress -Milan. The Workshop comprised two invited lectures: Jeannette Hanenburg presented Art Classes at Ações Sociais Amigos Solidários (ASAS)- Florianopolis, Brasil. Room with a view - A case study, and Larissa Noury presented Tactile painting & Haute Couture, followed by the first edition of ARTS & DESIGN VIRTUAL EXHIBITION curated by the Chair of SGAD, Maria João Durão.

Art Classes at Ações Sociais Amigos Solidários (ASAS)-Florianopolis, Brasil. Room with a view - A case study

Jeannette Hanenburg's bio- Professionally involved with colour for almost 20 years now. As a 'late bloomer', I developed my professional skills by following colour courses by experts and companies around the world. How colour can be applied in different contexts, always keeping the laws of science in mind, is something that fascinates me immensely. The effect of colour is always in flux and to keep developing my own knowledge, I am an active member of various international colour associations, 4 AIC study groups

and visiting meetings and congresses around the world. Activities/ expertise: • Owner House of Colours, Training and Advice Colourprofessionals •President Belgian Colour Association – ICA Belgium – member AIC • Board member ILA, International Light Association • Marketing & Development Colournostic – Coaching with Colour.



Jeannette Hanenburg with her Brazilian students.

Jeannette Hanenburg with her students - Art Classes at Ações Sociais Amigos Solidários (ASAS) – Florianopolis, Brasil.

Abstract: The aim of these art classes is to have underprivileged children experience the possibility to express their feelings and expose emotional distress through colour and art. In this talk you will see the proceedings of this work. In 2016, I taught the principles of mixing colours, how to use colours to express emotions, and to make this into an art work. I went back to Brazil in 2019 and worked with the new art teacher Fabiola Aguiar Machado. The exercise we developed is based on the art period of Renaissance paintings, 'Room with a view', and stands for an outlook on dreams, future, nature and freedom. The children were asked to make a room with a view, imagining their own future and dreams. After completion a magazine was made with their work. In the magazine, not all paintings are published because of the depressed state of mind of some children. For them an immediate psychological treatment was arranged. Art is a way of expressing yourself and your emotions, and gives the opportunity to show ones view of the world. This exercise, once more, showed the worrying situation of many children.

Tactile painting & Haute Couture

Larissa Noury's bio- President Founder of "Colour-Space-Culture" Association. PhD in Arts (Bordeaux, 2003) and Architecture (Saint Petersburg, 1988), Professor of Colour at ITECOM Art& Design, Paris. Author of 3 books "Colour in the city", 2008, "Symbolic. Colour in the city", 2010 and "Symbolic of colours. Art, Design, Architecture", 2020, she is a colorist for Art, Design and Architecture. Golden medal of International Lepine Design competition. Invited professor High School of Fine Arts and Architecture in United

States, China, Japan, Sri Lanka, Korea, United States, India, Emirates, Australia, Malaysia, Spain etc. She has done more than 30 solo shows, and group exhibitions. Her work is in many private collections and in nine museums.

Larissa Noury with one of her tactile paintings.

Abstract: The connection between art and fashion is obvious from the end of XIXth century. Art has often been a major source of inspiration for dress designers of XXth century: we can mention some creations by Paul Poiret, Sonia Delaunay, Elsa Schiaparelli, Coco Chanel, Yves Saint Laurent, Jean-Charles de Castelbajac and Givenchy. In their profession, art is a part of fashion. The designers paraphrase the masters of painting. My inspiration comes from my own painting, from within. Jean Marie Pujol, couturier who worked with Dior and Yves Saint Laurent at the time, designed several dresses to be painted using my technique to perpetuate the union of art and fashion. With this personal style, we created a series of hand painted dresses "Tableaux Vivants / Living Paintings" presented during my exhibitions and international events. A constant transformation, beauty of nature, the interaction of forms and images... It is towards this universe of harmony that I invite you. Everything lies in the pondering of both visual and tactile beauties, which conceal thus a created space. [www.youtube.com/watch?v=5-YKLUXJomg](http://www.youtube.com/watch?v=5-YKLUXJomg) This type of art, beyond the visible, enriches us by its power and its self-fulfillment.

ARTS & DESIGN VIRTUAL EXHIBITION featured works by 37 artists and designers: Saadet Akbay (Turkey), Natacha Antão (Portugal), Harald Arnkil (Finland), Doreen Balabanoff (Canada), João Brehm (Portugal), David Briggs (Australia), Annamaria di Cara (Australia), Vien Cheung (UK), Verónica Conte (Portugal), Guler Demirbas (Turkey), Sarah Frances Dias (Portugal), Maria Paula Giglio (Argentina), Becky Gooby (UK), Etsuko Funabiki (Japan), T. Jarutach (Thailand), S. Jiravanichkul (Thailand), Ichiro Katayama (Japan), P. Katemake (Thailand), Agata Kwiatkowska-Lubańska (Poland), Simone Maffei (Brazil), Eda Mally (Austria), Luisa Martinez (Portugal), Zena O' Connor (Australia), Renata Pompas (Italy), Milena Quattrer (Brazil), A. Radsamrong (Thailand), Joana Perry Saes (Portugal), Cristina Salvador (Portugal), Filipa Santos (Portugal), Kim van Savooyen (The Netherlands), Zélia Simões (Portugal), Helena Soares (Portugal), Pousi Swailem (Egypt), Elza Tantcheva (UK), Gulru Tunca (Turkey), Francesca Valan (Italy), Sumio Yano (Japan).

AIC Study Group on Arts and Design

Contact: [sg-ad@aic-color.org](mailto:sg-ad@aic-color.org)

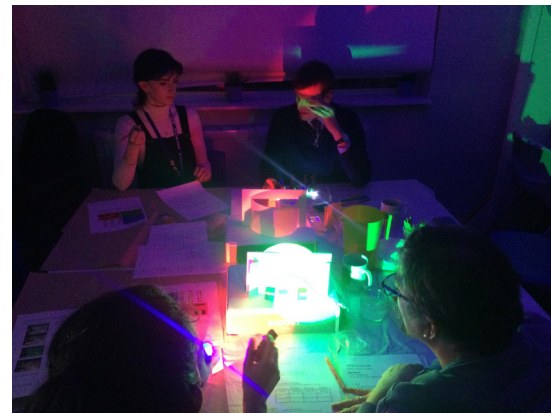




# SG CE

## COLOUR EDUCATION

Chairman: Robert Hirschler (Hungary and Brazil)  
Co Chair: Maggie Maggio (USA)



Studying the mixing of coloured lights using laser torches

Teachers doing exercises during the Eye Opener series.

SG CE has  
210 members from  
39 countries

The SGCE had another extremely busy year. Our Colour Literacy Project (CLP - <https://colourliteracy.org/>) with a steering committee of 10 enthusiastic participants worked all year with monthly meetings of the whole team and weekly – biweekly meetings of smaller teams dealing with colour education from pre-school to university level and even one on Traditional Colour Theory.

There is no better way to learn about color than by hands-on explorations. In the spring term of 2021 and the fall/winter term of 2021/2022 the CLP early education team hosted six two-hour beta-test sessions with elementary school teachers from two schools. These exploratory sessions provided the project with the opportunity to test prototype materials for future use in the classroom.

These beta-test sessions were divided into two series: The Eye Opener Series and the STEAM Series (Science, Technology, Engineering, Art and Math).

### The Eye Opener Series

The exercises in the first session of this series focused on exploring the factors involved in visual perception. Exercises in the second session focused on expanding the ability to see and describe colours using a calibrated sorting set. The third session focused on shifting from 2D to 3D and included building two basic colour models. Fourteen teachers from two elementary partner schools participated in the Eye Opener Series in during March and April of 2021.

The sessions at Clinton Public School in Toronto, Canada, were coordinated by Liz Pead, a former art teacher at the school. At the time, the school was conducting classes online due to Covid so the

teachers were not able to meet together for the Eye Opener sessions. They participated in the virtual sessions from home. The sessions at St.Teresa RC School in Manchester, England, were coordinated by Colette Harrison, a governor of the school. The school was open for classes and with the support of the headmistress, Sandra Burgess, the virtual sessions were held every two weeks during staff training periods after school.

### The STEAM Series

This series was based on giving the teachers the opportunity to experiment with overlapping topics in colour education connected to STEAM (Science, Technology, Engineering, Art and Math.) The first two sessions focused on exploring light and the eye. The third session focused on exploring a range of mixing processes.

Eight teachers from St. Teresa participated in the first two sessions of the STEAM Series in 2021. (The third session was held in January 2022.) Again, the sessions were held after school during staff training periods.

The Joint AIC/ISCC Colour Literacy Project hosted a one-day virtual event featuring a variety of perspectives on teaching color presented by educators across disciplines. This event was a follow up to the first ISCC Symposium on Colour Education held in June of 2020.

The first keynote presentation was ‘Why Colour?’ presented by David Batchelor, artist and author of the seminal books “Chromophobia” and “The Luminous and the Grey”. Batchelor, speaking from his studio in London, included examples of his past and present artworks while reflecting on his lifetime of fascination with the subject of colour.

Presentations in this session included the following.

- Jennifer Logun, Adjunct Associate Professor at Pratt Institute, presented ‘Insight On Site’ a report on the influence of the Colour Literacy Project on this year’s Light Color and Design course, a two semester Freshman Foundation studio at Pratt.
- Agata Kwiatowska-Lubansk, Professor and vice-rector of the Jan Matejko Academy of Fine Arts in Kraków, Poland presented ‘Subtractive Color Mixing as a Support for Color Memory’.
- Jennifer Kruschwitz, Assistant, Professor at the University of Rochester Institute of Optics, presented ‘Connecting Optics Learning Outcomes Through Color by Use of a Monochrometer’.
- Rebecca Michaels, photographer and teacher at the Tyler School of Art and Architecture in Philadelphia, PA presented ‘The Art of the Three Color Process’.

### Second Session Presentations

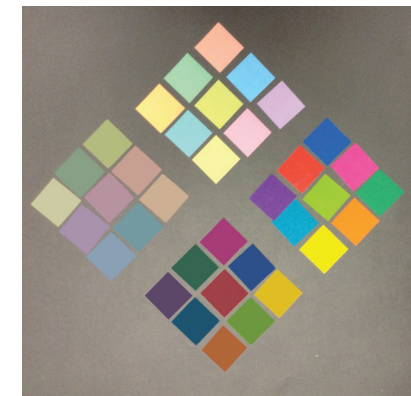
The second keynote presentation was ‘Bauhaus Influence on Colour Education: A Critical Homage’ by Robert Hirschler, Chair of the

Study Group on Color Education. This was followed by:

- Theresa-Marie Rhyne, author of “Applying Color Theory to Digital Media and Visualization” presented ‘Applying Albers Concepts to Visualizations’.
- Ingrid Calvo Ivanovic Ph.D. Candidate in Design Research, Politecnico di Milano presented ‘Colour Design Training Itinerary: A Framework for the Future of Colour Education’
- Maggie Maggio, Chair of the Joint ISCC/AIC Colour Literacy Project gave an update on the project and reported on the findings from the first professional development courses for elementary school teachers held in March and April of 2021.

Both sessions were followed by Breakout Sessions for Q&A and Discussion. Each speaker was available for a moderated Q&A in separate Zoom Rooms.

The Symposium concluded with a virtual Meet and Greet, an optional gathering in Zoom for networking following the event.

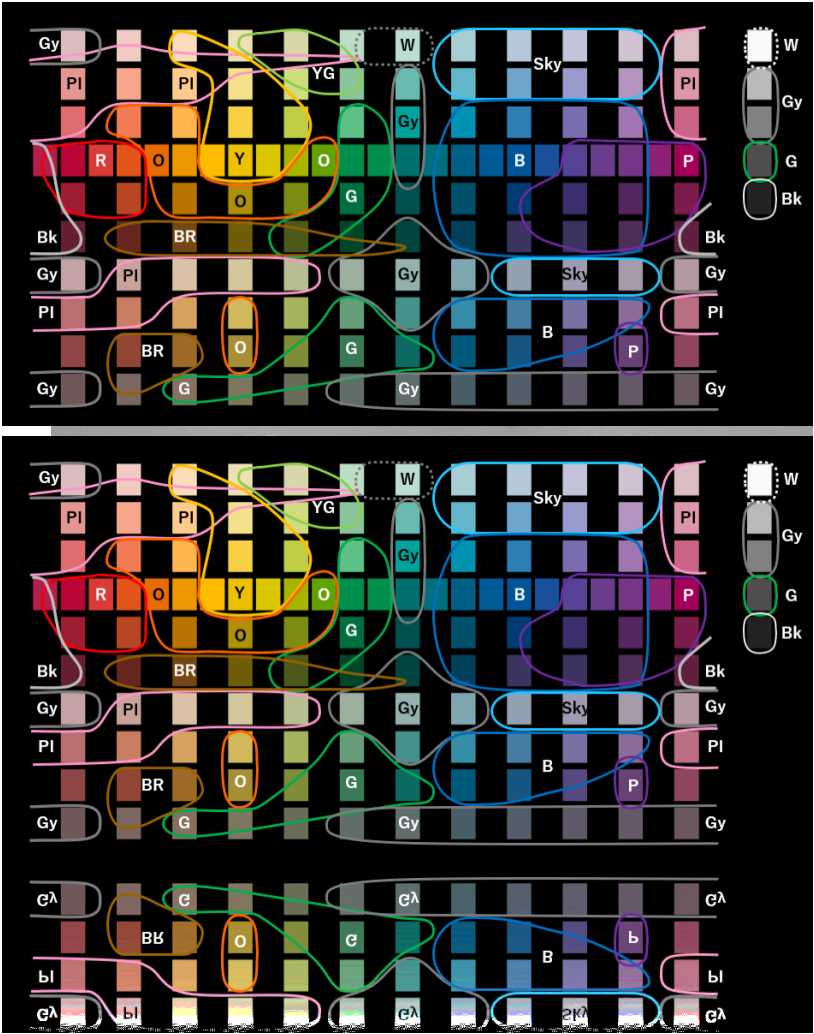


he CLP calibrated Sorting Set



Participants verifying the RGB components of the display with a hand-held microscope





# SG CVP

## COLOR VISION AND PSYCHOPHYSICS

Chairman: Katsunori Okajima (Japan)  
Secretary: Manuel Melgosa (Spain)

Fig.2 Distributions of commonly used colors for each color name are shown with a line around it by trichromats (top) and protanopia (bottom).

**SG CVP has  
98 members from  
16 countries**

The purpose of this Study Group (SG-CVP) is to discuss basic and practical studies on colour vision, colour appearance, colour discrimination, brightness perception of colours, colour preference and application tools for planning and testing universal colour designs, and to share useful information among the members. We deal with topics ranging from colour vision models to universal colour design including colour perception of the elderly.

Activities:

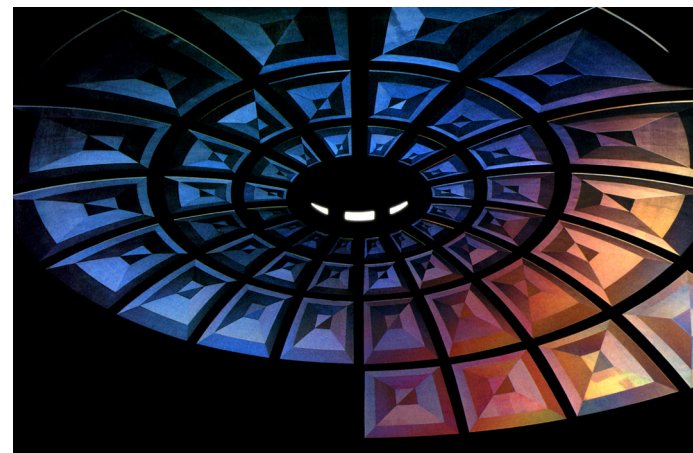
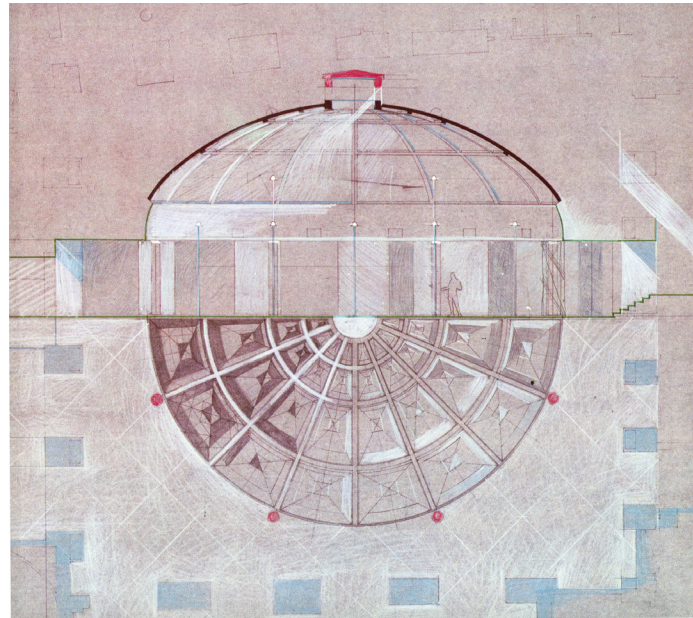
1. Currently, the number of members of the SG is 101 from 16 countries.
2. We are planning to hold our meeting at AIC2023.
3. We are hosting the SG homepage using the following Internet site: “<http://www.okajima-lab.ynu.ac.jp/CVPSG/>”.
4. SG members reported some interesting research related to the SG. Miguel Ángel Martínez-Domingo et al. have shown some techniques that allow them to observe and predict the variations in the appearance of three museum pieces (a Nasrid plasterwork and plinth, and two Ukiyo-e) with their illumination (illuminants D65, A and 9 CIE LED illuminants) (Fig.1). These techniques can be useful to decide 'a priori' the optimal illumination of museum pieces. They also provided some results on the preferred illumination for the Ukiyo-e by a panel of 20 Spanish observers. (“Some effects of LED light prototypes recommended by the CIE on the visual appearance of museum exhibits” Proc. XLVII Spanish National Lighting Symposium, 2021)



Fig.1 Images (500 lx) of the two Ukiyo-e under CIE LED illuminants V1 (left), B3 (center) and B5 (right), with CCTs of 2724 K, 4103 K and 6598 K, respectively.

Kazuyuki Natori et al. reported color naming results of trichromats and dichromats. (Fig.2). In protanopia, colors called by the same name were spread out in the hue direction, and this was more pronounced for "orange," "brown," "green," "light blue," "blue," and "pink. More specifically, the most characteristic feature in protanopia was that "gray" is used for almost all BG tones and for various hues of low saturation and low lightness. In addition, pink was used for a wide range of colors with high lightness and low saturation in hues RP, R, YR, Y, and GY, while green was used for achromatic colors with low lightness. (“Color naming aspects of dichromats and trichromats” Journal of the Color Science Association of Japan. Vol.45, No.3, p.120)





# SG ECD

## ENVIRONMENTAL COLOUR DESIGN

Co-Chair: Verena M. Schindler (Switzerland)  
Co-Chair: Yulia A. Griber (Russia)

[www.aicecd.org](http://www.aicecd.org)



Figure 1 Clino Trini Castelli, Elevation (top) and Interior View (bottom) of the Dome. Drawing, Grey Light Pavilion, Cassina Showroom, 1985. ©2021 Courtesy ClinoArchives.Online.

Figure 2 Clino Trini Castelli, Interior of the Dome with Highly Retroreflective 3M Films. Grey Light Pavilion, Cassina Showroom, 1985. ©2021 Courtesy ClinoArchives.Online.

### New SG ECD members joining in 2021 included:

Aly Indermühle (AU)  
Amy Woolf (US)  
Anadi Martel (CA)  
Anna Marotta (IT)  
Asako Nakamura (JP)  
Carolina Belén Espinoza-Sanhueza (CA)  
Caterina Morganti (IT)  
Changying Xiang (NO)  
Daniela De Biase (IT)  
David Briggs (AU)  
Esra Küçükçilic (TR)  
Estelle Guerry (FR)  
Eva Fay (AU)  
Fabrizio Ivan Apollonio (IT)  
Firdevs Gökmenoğlu (TR)  
Francesca Fragiasso (IT)  
Francesca Salvetti (IT)  
Francesco Scullica (IT)  
Langqing Gu (DE)  
Laura Bellia (IT)  
Marcela Sepúlveda (CL)  
Márcia Hazin (PT)  
Marco Gaiani (IT)  
Margherita Cicala (IT)  
Marie-Pierre Servantie (FR)  
Martino Pavignano (IT)  
Michela Scaglione (IT)  
Pia López-Izquierdo Botín (ES)  
Simona Kemenater (IT)  
Ursula Zich (IT)  
Yannis Skarpelos (GR)  
Clino Trini Castelli (IT) – honorary member

On the occasion of International Colour Day 21 March 2021, we were pleased to announce four publications stemming from the International Scientific Conference of the Color Society of Russia (RUcolor2020), Smolensk, 1–5 December 2020. The conference publications are available for free: <http://color-lab.org/publikacii/>. A related paper presented at the AIC 2021 Congress during the special session “All the Recent Books on Colour” has been published: Schindler, V.M., Griber Y.A. (2021) “Publications: The International Scientific Conference of the Color Society of Russia”, in *Proceedings of the International Colour Association (AIC) Conference 2021*. Milan: AIC, pp. 1361–1366.

The AIC 2021 Congress was an important event. SG ECD honorary member Jean-Philippe Lenclos received the AIC CADE Award for Colour in Art, Design, and Environment which was established in 2015 to recognize those who excel in the areas of design, art, architecture, and the humanities. His nomination was supported by pro colore Swiss Association for Color, the Color Society of Russia, and Associação Portuguesa da Cor. Lenclos published a paper entitled “Living in Colour” (Figure 5) in *Proceedings of the International Colour Association (AIC) Conference 2021*. Milan: AIC, pp. 105–116, <https://www.aic-color.org>.

We are also very pleased and honoured to announce that the internationally renowned Italian designer Clino Trini Castelli accepted our invitation to be SG ECD honorary member (Figures 1 and 2). A related publication is: Castelli, C.T. (2021) “Umbrella Diagram: 1981–2021, Five Decades of Forecasts and CMF Design”, in *Cultura e Scienza del Colore - Color Culture and Science*, 13(02), pp. 84–90, <https://doi.org/10.23738/CCSJ.130210b>.

As well, during the AIC 2021 Congress the SG ECD meeting concerning the variability of colour in natural, built, and sociocultural environments took place on 1 September 2021. The program-

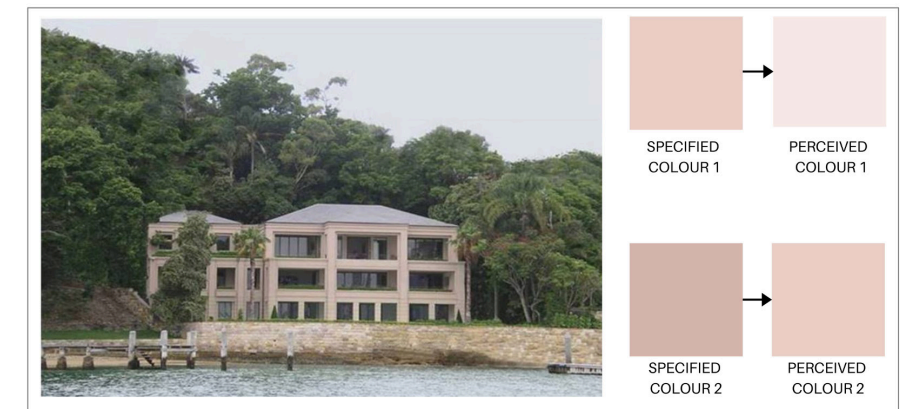


Figure 3 The impact of contextual colour and simultaneous contrast occurs in the built environment. Left: All central squares are the same colour while the backgrounds differ. Right: Specified colour change for two samples from the building. Image © Zena O'Connor.

me included nine presentations in the PechaKucha storytelling format. Stig Evans (Brighton, UK) talked about the making of his art-in-architecture installation London's Largest Painting completed in 2021 on two façades of the two high-rise towers One Crown Place by Kohn Pedersen Fox Associates (KPF). Monica Kuo (Taipei, TW) introduced the concept of landscape colour harmony based on colourful diversity (Figure 4). Jimena Vanina Odetti (Puerto Vallarta, MX) analyzed the colours of her own town located on Mexico's Pacific coast, which underwent major transformations while becoming an international tourist destination in the 1970s. Doreen Balabanoff (Toronto, CA) presented her observations about the phenomenology of colour in nature based on her empirical study of Lake Huron in Ontario. Pablo Manyé (Ceará, BR) unfolded his experience of the variability of colour in northeastern Brazil by analyzing unusual connotations of colour associations intimately related to the immediate socio-cultural environment. Beichen Yu (Edinburgh, UK) presented her research that explores how different social groups use saturated colours in the design of urban public space to pursue their interests. Zena O'Connor (Sydney, AU) explored colour variability by drawing attention to the distinction between specified or nominal colour and perceived colour (Figure 3). Francesca Valan (Milan, IT) distinguished between colour presence (existing historic colours) and colour distribution (new spatial colour harmonies) in her colour design project. And, finally, Kazim Hilmi Or (Hamburg, DE) analyzed the pandemic-related chromatic variability using the example of protective hygiene masks mandatory in public places in all countries since the beginning of 2020. A meeting report has been published: Schindler, V.M., Griber Y.A. (2021) "Meeting Report of the Study Group on Environmental Colour Design of the International Colour Association," in *Color Research and Application*, <https://doi.org/10.1002/col.22751>. Further reports include one in German distributed to pro colore members and another in Russian published in *Social Transformations* 32, 2021.

In 2021 we were saddened by the passing of two SG ECD members: Ulf Klarén (1944–2021) served as a senior lecturer and head of the Perception Studio at Konstfack, University College of Arts,

Crafts and Design in Stockholm (SE). Raúl Darío Suárez (1968–2021) was an architect and taught at the Faculty of Architecture, Urbanism and Design of the National University of Córdoba (AR).

Andrey Vladimirovich Efimov (1939–2021) was a Professor at the Moscow Institute of Architecture and Head of the Department of the Architectural Environment Design in Moscow, Russia. We are looking forward to celebrating 40 Years SG ECD (1982–2022). Several activities are planned such as lectures, conferences, publications, and an exhibition.



Figure 4 Colour changed not only the aesthetic appearance of the renovated housing façades along the seafront, but also the life of the citizens and their emotional attachment to the place. Zhengbin Fishing Harbour, Keelung, Taiwan. Photo © Min-Ming Chen.

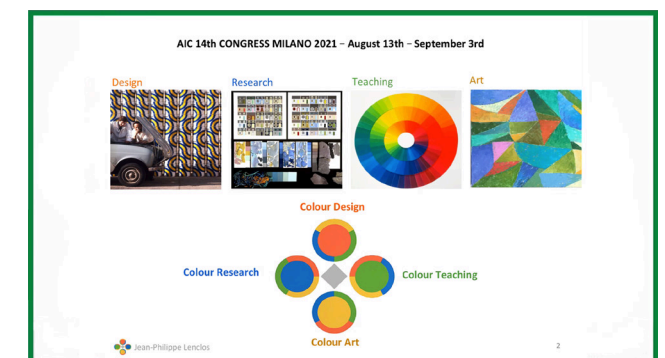


Figure 5 Jean-Philippe Lenclos' Colour Philosophy. Screenshot from his CADE Award Lecture at the AIC 2021 Congress.



# SGLC

## LANGUAGE OF COLOR

Chairman: Dimitris Mylonas (UK)  
Co-Chairman: Galina Paramei (UK)

<http://language-of-color.aic-color.org/>

*SGLC has 202 members from 46 countries*

*Twitter // @aic\_lc 591 followers*

*Facebook // @languageofcolour 918 followers*

The purpose of the AIC Study Group on the Language of Colour (SGLC) is to share information on and discuss studies on psycholinguistics, computational linguistics, semantics and semiotics of colour names and the relation of these to perception of colour and its underpinning cognitive and neural mechanisms. Key topics are colour cognition, colour naming and categorisation, colour memory, colour semantics and semiotics, cross-cultural differences and their intersection with digital technologies. Currently the SGLC has 202 registered members from 46 countries. Social networking platforms of the SGLC in Twitter (@aic\_lc) and Facebook (@languageofcolour) have currently 591 and 918 followers respectively.

In 2021, we hosted (Galina Paramei chaired) an SGLC (online) session at the 14th Congress of the International Colour Association (AIC) in Milan, Italy. Emanuela Valeriani and Lourdes García Ureña presented their work “The language of colour in the Bible” where

they reported on a novel methodology for accessing the meaning of colour terms in ancient/historical texts. Maria Del Viva presented results of her psycholinguistics study, co-authored by Ilaria Mariani, Carmen De Caro and Galina Paramei, on establishing three terms for ‘blue’ that appear to be basic for Tuscan speakers (Florence). Mari Uusküla presented here research on translation of colour terms between and within languages, as illustrated by Welsh and Italian. The session had more than 95 attendees; its highlights were included in a photo gallery of the congress closing ceremony.

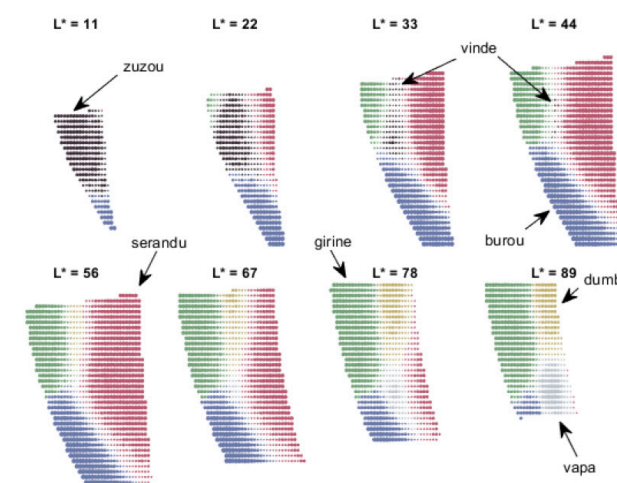
In 2021 members of our group have published a number of important publications related to colour language.

Exemplary articles published in open access sources:

- Domicile Jonauskaitė and a big multi-national team, led by Christine Mohr, published a comprehensive investigation of universal associations between colour names and terms for emotions, as well as cross-cultural differences in individuals

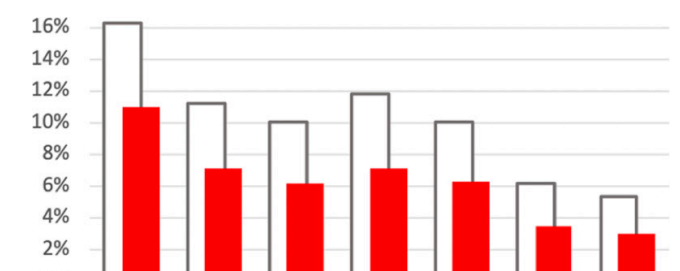
with inherited Daltonism [Jonauskaitė, D., Camenzid, L., Parraga, A., ..., & Mohr, C. (2021). Colour-emotion associations in individuals with red-green colour blindness. PeerJ: 11180. <https://peerj.com/articles/11180/>

- Dimitris Mylonas published a co-authored article on augmentation of the Himba colour lexicons reporting an evolution of Himba colour vocabulary over a period of 20 years, demonstrating mechanisms of augmentation of a colour lexicon by major terms, ‘green’ and ‘brown’, the process that can be generalised to other languages [Mylonas, D., Caparos, S., & Davidoff, J. (2022). Augmenting a colour lexicon. Humanities and Social Sciences Communications, 9(1), 1–12. <https://doi.org/10.1057/s41599-022-01045-3>].



Segmentation of CIELAB grid ( $n = 5,693$ ) of 4-unit bins at 8 lightness levels into 7 Himba colour terms: serandu ‘red’ 34.5%, grine ‘green’ 23.2%, burou ‘blue’ 22.9%, zuzou ‘black’ 8.1%, dumbu ‘yellow’ 7.7%, vaba ‘white’ 3.5%, and vinde ‘brown’ 0.2%.

- Yulia Griber co-authored a publication reporting a large-scale online study of intergenerational differences in colour vocabulary and colour-naming patterns for Russian speakers [Griber, Y. A., Mylonas, D., & Paramei, G. V. (2021). Intergenerational differences in Russian color naming in the globalized era: Linguistic analysis. Humanities and Social Sciences Communications, 8(1), 1–19. <https://doi.org/10.1057/s41599-021-00943-2>].



Percentage of occurrences of colour-term word types per age group of Russian speakers.

- An established group of colour vision scientists from Madrid published novel data on the way red-green dichromats name colours: Moreira, H., Lillo, J., & Álvaro, L. (2021). “Red-Green” or “Brown-Green” dichromats? The accuracy of dichromat basic colour terms metacognition supports denomination change. Frontiers in Psychology, 12: 624792. <https://doi.org/10.3389/fpsyg.2021.624792>

Finally, recently members of the SGLC established a strong presence in the journal Color Research and Application, whereby 3 group members now serve as Senior Editors, 4 as members of the Editorial Board, and 1 as a member of the International Advisory Board. <https://onlinelibrary.wiley.com/page/journal/15206378/homepage/editorialboard.html>

We continue to share the latest news on the development of the SGLC members’ research on the language of colour and the related resources on our website available at <http://www.language-of-color.aic-color.org/> and social media accounts.



// REMEMBERING //

IN  
MEMORIAM

Every year we remember those  
that we have lost but have left  
behind thier contributions to  
the color world.

by Roy Osborne  
Verena M. Schindler

Rita Janice Adrosko (North America)  
(1931-2021)

North American historian and curator. Adrosko served as supervising curator at the Smithsonian Museum of American history for 31 years, retiring as Curator Emerita. She was prominent in the world of textiles, lecturing at universities across the USA. Her publications include Natural Dyes and Home Dyeing (1968, 1971). Rita Adrosko was born on March 3rd, 1931, in Elizabeth, New Jersey, and died on September 11th, in Falls Church, Virginia.

Peter Gouras (North America)  
(1930-2021)

Professor of Ophthalmology in the Department of Ophthalmology of the Vagelos College of Physicians and Surgeons at Columbia University, Dr. Gouras, an exceptional clinician-scientist, was a pioneer in areas of retinal electrophysiology, color vision, and retinal pigment cell transplantation, moving the fields forward by constantly introducing original ideas and experiments. His publications include The Perception of Color (1991).

Bernard Guineau (France)  
(1935-2021)

French physicist and historian. His publications include Pigments et colorants de l'Antiquité et du moyen âge (1990), Glossaire des matériaux de la couleur et des terms (2005), and one co-written with the chemist and mineralogist François Delamare: Les Matériaux de la couleur (1999), translated as Colors: The Story of Dyes and Pigments (2000).

Alain Huet (Belgium)  
( 1936-2021)

Alain studying civil engineering at the Université Libre de Bruxelles, and worked in information technology while pursuing his passion for art. After colour training with Caroline Dujardin, he wanted to apply the digital processes of his profession to pictorial works. He created ChromaPicture, a colour analysis system that quantifies the colours in an image and displays the statistics in two ways: on the chromatic circle and in clusters in L\*a\*b\* space. Indices are calculated: the extent of the palette (number of colours), chromatic dispersion (aver- age distance of the identified colours from the average colour of the image) and chromatic complementarity (based on opposite colours on the chromatic circle). 1500 works (from Antiquity to modern art) were analysed and published on ChromaPicture.

Ulf Thorild Klarén (Sweden)  
(1944-2021)

Swedish illustrator and educator. In 1996 he published Vad färg är, and in 2014 collaborated with Karin Fridell Anter, Leif Berggren and Monica Billger on Färg och ljus för människan – i rummet, translated in 2017 as Colour and Light: Spatial Experience. Until his retirement in 2011 he served as a senior lecturer and head of The Perception Studio at Konstfack, University College of Arts, Crafts and Design in Stockholm, Sweden. Ulf was one of the leaders of the research project SYN-TES: Human colour and light synthesis.

Harald Liebedank Küppers (Germany)  
(1928-2021)

German chemist and reprographic engineer. Author of numeous books on color, including Farbe: Ursprung, Systematik, Anwendung (1972), translated as Colour: Origin, Systems, Uses (1973) and La Couleur: origine, méthodologie, application (1975), Die Logik der Farbe (1976), Das Grundgesetz der Farbenlehre (1978), translated as Fundamentos de la teoría de los colores (1980) and (The Basic Law of Color Theory (1982), DuMonts Farben-Atlas (1978) and Der grosse Küppers-Farbenatlas (1987).

Raúl Darío Suárez (Argentina)  
(1968-2021)

Architect, Master in Fine Arts and Argentine university professor. His sudden death at an early age left an academic void for his outstanding teaching vocation in the chairs of Morphology, and at the Color Institute of the Faculty of Architecture, Urbanism and Design at the National University of Cordoba (Argentina), an institution where he also was trained in postgraduate studies. The research work at the Institute and the community outreach projects related to urban color design were deeply affected. His expertise in the use of the Natural Color System for urban color studies was outstanding, as it was also his protagonism in the teams that he was part of. He actively participated in numerous national and international color conferences, showing a solid academic, professional and specific training in the management of form in its conformation, expression and chromatic meaning. He died in the city of Cordoba on June 5, 2021.

Andrey Vladimirovich Efimov (Russia)  
(1939-2021)

Dr. Arch. Andrey Efimov was Professor at the Moscow Institute of Architecture and Head of the Department of the Architectural Environment Design in Moscow, Russia. He was an Honorary Member of the Russian Academy of Arts and a Winner of the State Prize of the Russian Federation in 1997 for the concept “Architectural Illumination of the Central Part of Moscow” and again in 2000 for the project “Comprehensive Development of the Olympic Village.” For many years Andrey Efimov chaired a group of architects of the Scientific Research Institute of Theory and History of Architecture and Urban Planning, including V. Elizarov and V. Timofeev, that developed proposals for coloristics of cities such as Moscow, Yaroslavl (Central Russia), Surgut (Western Siberia), Irkutsk (Eastern Siberia), Yalta (Crimea), Kairakty and Kulsary (Kazakhstan), and Ashgabat (Turkmenistan). From 1996 to 2000 he was Chief Designer of Moscow.

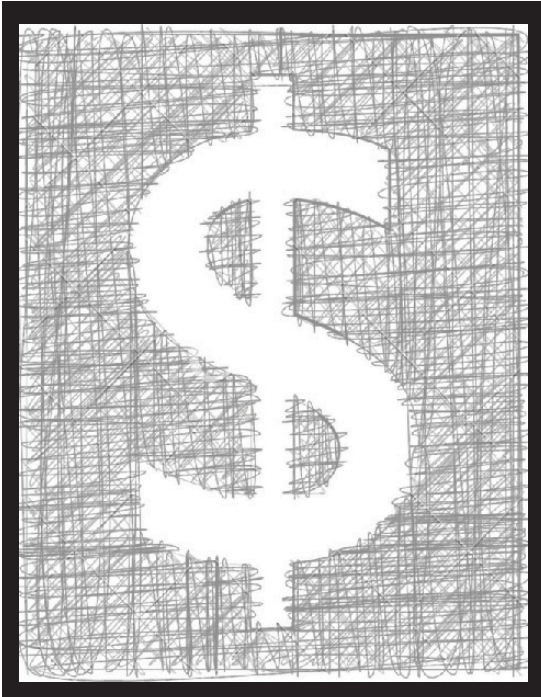
Gerald (Jerry) Stewart Wasserman (North America)  
(1937-2021)

North American psychobiologist, historian, and educator. His publications include Color Vision: An Historical Introduction (1978), which became a standard textbook for schools of optometry. Following undergraduate studies at New York University he gained a PhD in Psychobiology at Massachusetts Institute of Technology. Post-doctoral researches were undertaken at the National Institutes of Health where he developed methods of implanting electrodes into the eyes of horseshoe crabs for performing micro-recordings. His first faculty appointment was at the University of Wisconsin Madison, followed by tenure as Professor of Psychological Sciences and Director of the Sensory Coding Laboratory at Purdue University in Lafayette, Indiana. He received a US patent with Purdue University for enhancements to cochlear implants using computing techniques and was awarded first place in the John Hopkins University National Search Certificate of Achievement for enhancing the life of people with hearing disabilities. After 37 years at Purdue University, he retired as Professor Emeritus in 2012.



// FINANCIAL REPORT //

FINANCIAL REVIEW  
FOR 2021



Reconciliation statements of AIC bank  
and PayPal accounts for year  
1-Jan-2021 to 31-Dec-2021.

Prepared by the AIC 2020-21 Treasurer,  
Ralf Weber.

All figures are in Australian dollars (AUD).

Approved by AIC 2022-23 Auditors,  
Tien-rein Lee and Javier Romero

2021 Financial Status

AIC has three operating accounts: Business, Business Savings  
and PayPal.

**TOTAL FUNDS for year end 2021 // AUD \$29,104.63**

PayPal (Australia)

Opening Balance on 1st January 2021	\$579.90	
Income from members	+4,320.00	
Service Fees	-155.32	
Payments	-184.67	
Expenses	-812.17	Payments incl. service fees expenses for student awards, dropbox, wild apricot membership website
Closing Balance on 31st December 2021	AUD \$3,747.74	

St. George Bank Freedom Business Current Account (Australia)

Opening Balance on 1st January 2021	\$4,200.05
Income from members	2,827.23
Transfer from PayPal Account	0.00
Transfer from Savings	0.00
Expenses	-\$2,083.19
Closing Balance on 31st December 2021	AUD \$4,944.09

see itemized expenses below

ITEMIZED EXPENSES

Account service fees	110.00
Intern. bank fees	78.04
Reimbursements for CADE Medal - shipping, Printing, Postage, Parking, Bank Charges, NSDFT expenses, Durao Notary Expenses	1,341.94
AIC Status Maintenance with NSWDFI	553.21
TOTAL	AUD \$2,083.19

St George Bank Business Access Saver Account (Australia)

Opening Balance on 1st January 2021	20,410.52
Transfer to Savings	0.00
Interest	2.28
Closing Balance on 31st December 2021	AUD \$20,412.80





**AIC**

International Colour Association  
Internationale Vereinigung für die Farbe  
Association Internationale de la Couleur