

## **CLOSING SESSION**



## **Closing ceremony speech from AIC President**

Paula J. ALESSI  
Eastman Kodak Company

To my esteemed AIC friends and colleagues and to the organizers and members of the Brazilian Color Association, it is my distinct honor and pleasure to present a short closing speech. I would like to summarize the journey we have been on together for the last three days. Let's see what we have learned by looking through the Color and Paint lens that lit our way on our color journey in Porto Alegre together. First we were enlightened on the concept of fluorence by Osvaldo da Pos. Then in our session on color perception, we heard a new theory from Jesús Zoido and his Spain colleagues, a color naming method to evaluate the impression of colored patterns from Shoji Sunaga, how some hues are remembered more easily than others from Helen Epps and how color ratings for safety signs change between young and elderly people from Haruyo Ohno. In the ECD architecture section, we learned about a structuralism system for an office complex from Mari Ferring, how color and light interact in architectural designs from María de Mattiello, about Paul Scheerbart's utopia of colored glass from Gertud Olsson and about Le Corbusier's color keyboard arranged as the keys on a piano from Verena Schindler. In the section on architecture and landscape, we heard Vojko Pogacar talking about his twelve-period seasonal color typology based upon astronomical and geometrical correlations, Michel Cler's paper on color globalization (which was presented by Verena Schindler), and Richard Kjellström on the local colors and the identity of a region. In the color emotion section, we learned about the different emotions evoked by looking at small chips as opposed to viewing the same colors in rooms from Beata Stahre, about the associations people make regarding different colors from Helen Epps on behalf of Naz Kaya and about how it is difficult to relate color combination sensations to colorimetry in a linear way from Aran Hansuebsai on behalf of Suchitra Sueeprasan.

On the second day, during the colored space and design section, we learned from Luciano Guimarães about using color as information with positive and negative actions to form a model for the analysis of color. Monica Billger shared with us how first year architecture students use models, props, paint and lighting to build colored rooms that evoke many different kinds of responses and feelings. Next Maud Hårleman gave us insight on the positive and negative emotions that different colors can evoke in full-scale rooms facing north and south. Then Karin Fridell Anter shared the role of painted surfaces in architecture. The example that impressed me the most was the one dimensional stucco relief that was created to give the illusion of texture and depth.

In the session on color education, Garth Lewis gave us an impressive live demonstration of how a gradient tool on a computer monitor can be used as a mixing tool to teach students about simultaneous contrast and color mixing as it relates to paints. Renata Pompas shared color teaching plans for Italy on behalf of herself and her co-author, Lia Luzzatto, with a very lively and entertaining video to the end the presentation.

Next, we had the pleasure of hearing an invited lecture given by Mônica Araújo, on behalf of Robert Hirschler, discussing how attending the SENAI/CETIQT Color Institute in Rio de Janeiro provides the student with a learning experience through engaged actions rather than a teaching experience of listening to lecture after lecture.

In the aesthetics and harmony section, Claudia Stern gave us food for thought on how color in sculpture just happens naturally, not necessarily intentionally. Nelson Bavaresco shared his harmonic composition scale consisting of 24 complementary colors according to their

lightness. Next Helen Gurura shared her research on using colors found in supermarket packaging in a study on the importance of background color when interpreting the appearance of the foreground color.

In the section on color order systems and paints, Kristina Holmberg explained how the NCS system has evolved to the 1,950 samples represented in 2004 and how the system is used widely in the paint industry. Berit Bergström shared many fascinating aspects of color communication between different paint materials and surfaces like gloss and matte. Professor José Caivano provided us with more insight into the concept of cesia as it relates to a new atlas of paint samples that he has been working on in conjunction with Sherwin Williams.

Finally, the last day ended with a delightful invited lecture from Daniel Lozano on the practical aspects of appearance in paints that are known to us all but we usually never take the time to formulate a complete understanding of these aspects and all their implications. He also gave us an appreciation for the fact that not everything we see can be accurately measured.

In the session on appearance and color difference, Dr. Ronnie Luo gave a talk on behalf of his two graduate students Ho, Cui and colleague, Rigg, telling us that color difference formulae like BFD, CMC and CIEDE2000 all perform well in their correlation to visual results for color differences from small  $\Delta E^*_{ab}$  values of 5 to large  $\Delta E^*_{ab}$  values greater than 10. Next Dr. Duangmal talked about color appearance of fruit juice containing vitamin C. We learned that adding vitamin C degrades the anthocyanin pigment, but it increases nutritional value and observers could not visually detect the color differences in the juice over time. We ended this session with Dr. Ronnie Luo giving us a very lively invited lecture on CIEDE2000. We learned that CIEDE2000 was designed to solve the imperfections of the 1976 CIELAB color difference formulae. We also learned how to apply measurement data and visual data to define the tolerances for our own particular applications. Another important learning was that we should use CIEDE2000 for blue colors, even though CIEDE2000 and CMC also perform similarly in many cases.

Our final session was on colorimetry and textiles. Ana Marija Grancarić shared with us the use of UPF (ultraviolet protection factor) as a means of classifying cotton fabrics based on their ability to protect the skin from the radiation of the sun. It was interesting to find out that as the concentration of optical brighteners increases, so does fluorescence, but whiteness decreases. Next Martina Viková showed how photochromic textile samples can be used as sensors for UV radiation. Jennifer Gay taught us that UV calibration is necessary before you measure whiteness and instrumental whiteness evaluation is still better than visual evaluation, although some improvements need to be made in instrumental whiteness measurement. Jennifer's experiments showed that the portable instrument performs compatibly with bench-top instruments. Michal Vik presented a nice survey of various color difference formulae, from CIELAB developed in 1976 to CIEDE2000. Then he shared his laboratory results on many observations for textile color centers showing the performance of all these color difference equations using the PF/4 metric and the percent discrimination metric.

To close our conference, an invited lecture by Dr. Allan Rodrigues enlightened us on color technology and paint, with a concentration on automotive aspects. We saw wonderful demonstrations of video color styling for cars. He made us familiar with the importance of being able to measure gonioapparent color. Allan did an outstanding job of making us familiar with all the aspects of color and automotive paints that are successfully used today in the cars that we all drive.

Now it is time to express heartfelt thanks. First to the organizers and members of the Brazilian Color Association: Thank you so much for arranging the venue, for getting Fellini Turismo to help with our hotel arrangements and tours. Thank you to Office Marketing for registration and audiovisual assistance. Thank you to Professor Hanns-Peter Struck for his many hours of blood, sweat and tears in preparing the meeting. Thank you to Professor José

Caivano for completely arranging all aspects of the technical program. Thank you to NCS for sponsoring that wonderful Brazilian dinner and entertainment Thursday evening. Thank you to all speakers and poster paper presenters for enlightening us on new aspects of color.

Now lastly, it is time to say good-bye. I really don't like to even say good-bye. So let's say "until we meet again", hopefully at the AIC 10<sup>th</sup> Congress in Granada, Spain. As AIC President, I declare this AIC 2004 Interim Meeting on Color and Paints in Porto Alegre, Brazil officially closed. I wish everyone a safe journey home!



*Address: Paula J. Alessi, Eastman Kodak Company  
Rochester, NY 14650-1925, USA  
E-mail: paula.alessi@kodak.com*

## **Next AIC Congresses**

AIC Color 2005, May 8-13, 2005, Palacio de Congresos, Granada, Spain

Chairman: Javier Romero

Web: [www.ugr.es/~aic05/](http://www.ugr.es/~aic05/)



AIC Color 2009, September 20-25, 2009, Luna Park, Sydney, Australia

Chairman: Nick Harkness

Web: [www.aic2009.org](http://www.aic2009.org)



## Author Index

- ALESSI, Paula J., 335  
ÁLVAREZ, Ramiro, 47  
ARAÚJO, Mônica, 319  
ARJONA, Montserrat, 143, 147  
ÁVILA, María Mercedes, 253  
BAVARESCO, Nelson, 235, 315  
BECERRA, Paulina, 261  
BERGSTRÖM, Berit, 295  
BERNABEU, Eusebio, 9  
BILLGER, Monica, 27, 219  
BOLANCA, Ivana, 163  
BOLANCA, Stanislav, 159  
BOLANCA, Zdenka, 163  
BROZOVIC, Maja, 167  
BURUSIC, Josip, 77  
CAIVANO, José Luis, 113  
CARREÑO, Fernando, 9, 64  
CLER, Michel, 208  
CORDERO, Elisa, 243  
CUI, Guihua, 97, 117  
DA POS, Osvaldo, 3  
DALKE, Hilary, 239  
DE FEZ, Dolores, 143  
DE LASARTE, Marta, 143, 147  
DELGADO, Rafael, 151  
DUANGMAL, Kiattisak, 121, 155  
EPPS, Helen H., 18, 31  
ESTÉVEZ, Silvia María, 257  
FERRING, Mari, 185  
FRIDELL ANTER, Karin, 227  
GÁMIZ, Encarnación, 151  
GARCÍA GIL, Fernanda, 265  
GARCÍA LÓPEZ, Ana, 265  
GAY, Jennifer Kathrin, 134  
GIRELLI, Inés, 253  
GONÇALVES, Berenice Santos, 311  
GONZÁLEZ-VIDA, María Reyes, 273, 299  
GRANCARIĆ, Ana Marija, 125, 179  
GUIMARÃES, Luciano, 215  
GURURA, Helen, 239  
HANSUEBSAI, Aran, 35, 328  
HÅRLEMAN, Maud, 27, 223  
HERNÁNDEZ-ANDRÉS, Javier, 39  
HIRSCHLER, Robert, 134, 279  
HITA, Enrique, 52, 56  
HO, K. M. Raymond, 117  
HOLMBERG, Kristina, 109  
HUERTAS, Rafael, 56, 151  
HUNJET, Anica, 77  
IADISERNIA, Nicolás, 113  
INCATASCIATO, Adriana, 253  
IWASE, Masanori, 323  
JANČIJEV, Igor, 125  
JIMÉNEZ DEL BARCO, Luis, 52  
JIMÉNEZ, José R., 52  
KAYA, Naz, 18, 31  
KENYON, Phil, 97  
KJELLSTRÖM, Richard, 211  
KNESAUREK, Nina, 159, 167  
KOBAYASHI, Masashi, 247  
LEWIS, Garth, 285  
LÓPEZ, Mabel Amanda, 303  
LOZANO, Roberto Daniel, 83  
LUO, Ming Ronnier, 97, 117, 323  
LUZZATTO, Lia, 289  
MACDONALD, Lindsay W., 239  
MARICONDE, María Marta, 253  
MARTÍNEZ-VERDÚ, Francisco, 143, 147  
MARTÍN-GARCÍA, Juan Manuel, 151  
MATTIELLO, María L. F. de, 43, 47, 190  
MAZUECOS, Belén, 270  
MEDINA, José M., 52  
MELGOSA, Manuel, 56, 60, 151  
MELO, Cássia Cristina, 134  
MENGHI, Ingrid, 113  
MILKOVIC, Marin, 159, 163  
MIMA, Tomoko, 171  
MINCHEW, Carl, 97  
MRVAC, Nikola, 159  
NAKAMURA, Taeko, 328  
NIEVES, Juan L., 39  
NILSSON, Anders, 109  
NISHIDA, Yutaka, 323  
OHNO, Haruyo, 22  
OKAMOTO, Ikuko, 247  
OLGUIN, Guillermo, 253  
OLSSON, Gertrud, 194, 251  
PARAC-OSTERMAN, Djurdjica, 77, 179  
PARTAL, Daniel, 39  
PEREIRA, Alice Cybis, 311  
PÉREZ, María del Mar, 56  
PESCIO, Silvia, 47  
POGACAR, Vojko, 203  
POLO, Marta, 253  
POMPAS, Renata, 289  
PRIDMORE, Ralph W., 60  
PUJOL, Jaume, 143, 147  
PUNGRASSAMEE, Pontawee, 35, 328  
PUŠIĆ, Tanja, 125  
RIGG, B., 117

RIVAS, María José, 56  
RIZZO, Silvia, 307  
RODRIGUES, Allan, 103  
ROMÁN JIMÉNEZ, Gertrudis, 265  
ROMERO, Javier, 39  
RONCHI, Lucia, 73  
ROSITANI, Niccolò, 73  
SAICHEUA, Busararat, 155  
SAKOLNAKORN, O. Promsaka Na, 328  
SALINAS, Hugo, 43  
SÁNCHEZ-MARAÑÓN, Manuel, 56, 151  
SATO, Masako, 171  
SATO, Tetsuya, 35, 323, 328  
ŠAUPERL, Olivera, 175  
SCHINDLER, Verena M., 198  
SHIOIRI, Satoshi, 69  
SLUBAN, Boris, 175  
SRIMORK, Pisut, 35  
STAHRE, Beata, 27  
STERN, Claudia, 231  
SUÁREZ, Darío, 253  
SUEEPRASAN, Suchitra, 35, 121, 155  
SUNAGA, Shoji, 13  
SUTLOVIC, Ana, 179  
TARBUK, Anita, 125  
TEVA ALMENDROS, Sara, 265  
VIDA SÁNCHEZ, Teresa, 265  
VIK, Michal, 138  
VIKOVÁ, Martina, 129  
VILASECA, Meritxell, 143, 147  
VIQUEIRA, Valentin, 143  
WATANABE, Naotaka, 69  
WONGSIRI, Sekson, 121  
YAGUCHI, Hirohisa, 69  
YAMASHITA, Yukio, 13  
YEBRA, Ana, 56  
ZOIDO, Jesús, 9, 64