



Inter-Society Color Council News

Issue 443

January-February 2010

ISCC Welcomes a New Memberbody The Society for Color and Appearance in Dentistry (SCAD)

The Society for Color and Appearance in Dentistry (SCAD) was founded in 2008 as a consortium of dental professionals and other experts interested in this area of aesthetic dentistry specifically related to scientific investigation and application of color and appearance in dentistry. The SCAD goals are as follows: To serve as a uniting force in the profession by promoting and fostering greater awareness for color and appearance in dentistry; to advance multidisciplinary collaboration and discovery among

industrial and institutional researchers, clinicians, laboratory technicians and others with an interest in color and appearance in dentistry; to create and implement educational and training programs on color and appearance for dental professionals and students; and to promote dental health for the general public through the advanced art and science of color and appearance in dentistry.

The membership of this Corporation consists of dentists, researchers, and other persons whose qualifications and classifications are established in the Bylaws. (See website: www.scadent.org.) Its journal, *Journal for Color and Appearance in Dentistry* (JCAD), is published online as a permanent single annual supplement to *Journal of Dentistry*. The first journal was published in 2009.

The Society for Color and Appearance (SCAD) has also become a member body of the International Federation of Esthetic Dentistry (IFED). This was officially voted on at the 6th World Congress IFED meeting in Las Vegas, August 2-5, 2009, IFED is a global organization of over 30 regional academies contributing to the progress and development of esthetic oral health and enhancing communication between member organizations worldwide. Although U.S. based, SCAD is proud to become the first IFED member not representing any particular country, region or continent.

The Society's second meeting in Newport Beach, California Bridging the Gap, Pioneering the Future, will be held on September 24-25, 2010. Please see the website for more details. The meeting will feature high-quality, evidence-based information on color-related issues in dentistry presented by many of the leaders in this field.

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If you have a question regarding color or appearance in dentistry, you may email info@scadent.org, to have your question answered by one of a large panel of experts.

The current President of SCAD is Rade D. Paravina.

Color Marketing Group Predicts Colors for 2010

In a December press release from Alexandria, Virginia, the Color Marketing Group (CMG), an ISCC member body, says that it's GRAPE. CMG, which has been successfully predicting color trends for 47 years, says this grape – officially called **Mardi Grape** – is a sophisticated crossover between purple, brown and gray. It's a transfer from fashion with European roots. Chosen by hundreds of color professionals as CMG's **2010 Next Color**, Mardi Grape used to be a fashion color. Now, it's all set to be the year's biggest star for everything else. Said CMG president James Martin: "Purple has been with us for a while now, but the big story today is that we're seeing purple as a neutral for the very first time. This purple is browner and grayer, a neutral we can love long-term. These days everyone is seeking versatile colors with staying power. Colors used to be the focus while neutrals were the understudies. Today, neutrals are the lead performers, chameleon colors that shift and change."

According to CMG, look for these additional color trends in 2010:

Red – Reds are strong with pink intuition; bright and clean with energy and excitement — a clean pop to go with neutrals.

Orange – A rich, sophisticated color that moves away from earth-based colors to an optimistic orange, seasoned with a touch of gray.

Yellow – A greener, more natural yellow, softened with gray.

Green – Optimistic and uplifting, a clear and bright accent green with a slight shift toward blue.

Blue – A saturated blue with gray influences; rich without being too luxe.

Beige-Brown – A true chameleon to complement darker hues, it can be either matte or metallic.

Neutral – Gray with a touch of purple, drawing inspiration from mineral, concrete and steel.

HUE ANGLES

(send contributions to mbrill@datacolor.com)

We're not quite at the millennium mark for Alhazen's *Book of Optics*. It brings to mind a story of how Alhazen got started in his "second career" that should inspire us all...

Engineering, Insanity, and 999 Years of Optics

A recent *Scientific American* article [1] prefaced the results of a photo contest by noting that we are approaching the millennial anniversary (2011) of Persian scientist Ibn al-Haytham's (Alhazen's) starting to write his *Book of Optics*. The article used Alhazen's discovery of the properties of a magnifying glass as a segue to the wonders of photography through microscopes—and hence to the contest.

Quite apart from the science, one story of that beginning [2, 3, but not 4] has a message to us today. As a civil servant at age 45, Alhazen was called to Egypt by Al-Hakim bi-Amr Allah, the sixth ruler of the Fatimid caliphate, to regulate the flood waters of the Nile. At first Alhazen envisioned a dam where the Aswan now stands, but upon reconnoitering on the south border of Egypt, saw no way to bring that plan to fruition. Quickly realizing his inability, he retired from engineering. In that regime a "severance package" likely would mean your head cut off in a basket. To save his life, Alhazen feigned insanity, and was forthwith held in house arrest from 1011 until al-Hakim died in 1021. Under house arrest, he immediately began his *Book of Optics*, and thereafter generated many scientific works for the rest of his life (i.e., through 1039).

In the *Book of Optics* one finds the first modern scientific treatment of optics and vision. Alhazen methodically investigated the magnifying properties of a lens, and also its property as a "burning glass" when focusing the sun's radiation. He also was the first to project an entire image from outdoors onto a screen indoors through a small hole, and thereby to demonstrate and explain the action of a *camera obscura*. He had a theory of the Moon illusion (one of many such theories that still mark our landscape). He might have attributed the focusing aspect of a glass lens to the function of the lens of the eye, but the lens's inversion of the image (which is not evident in vision) was a stumbling block in those days.

One could go on: In the remaining decades of his life, Alhazen contributed to many more areas of science. A geometry problem named after him has stimulated recent publications, and his challenge to Ptolemy's cosmology was a fitting precursor of the Copernican revolution. Alhazen also described the modern scientific method (usually credited to Francis Bacon). He even noted that a prism splits light into colored components that have different refrangibility—a creditable forerunner of Newton's work more than 600 years later.

So what encouragement can we take from the example of Alhazen? When confronted by mid-life requirements to reinvent ourselves, we can remember Alhazen's "retirement" from engineering. Even after a good career goes awry, even after ten years of putative insanity, it is possible to propagate 1000 years of heritage in one's chosen field.

Michael H. Brill
Datacolor

REFERENCES:

1. G. Stix, "Illuminating the Lilliputian: 10 Bioscapes Photo Contest winners revealed," *Scientific American*, Dec. 2009. (www.scientificamerican.com/article.cfm?id=illuminating-the-lilliputian-bioscapes-winners)
2. <http://en.wikipedia.org/wiki/Alhazen>
3. Lorch, Richard (2008), "Ibn al-Haytham", *Encyclopædia Britannica*, (<http://www.britannica.com/EBchecked/topic/738111/Ibn-al-Haytham>)
4. Roshdi Rashed, "A polymath in the 10th century", *Science* **297**, p. 773 (2002), (<http://www.sciencemag.org/cgi/content/full/297/5582/773>).

Member News

CIC18 Call for Papers

Papers are being requested for the eighteenth Color Imaging Conference to be held November 8–12, 2010 in San Antonio, Texas. The conference is sponsored by Society for Imaging Science and Technology and the Society for Information Display. Original work on a relevant topic will be considered by the Technical Program Committee when submitted in the form of a draft paper (2,000–3,500 words, including 750 words on results). Submissions are due April 12, 2010.

Details for submitting a paper can be found at www.imaging.org/IST/conferences/cic/



American Coating Association

On Jan. 1, 2010, the National Paint and Coatings Association (NPCA/FSCT) changed its name to the American Coatings Association (ACA). The change marks the culmination of the merger between the National Paint and Coatings Association and the Federation of Societies for Coatings Technology, which was approved in 2008 and finalized in 2009.

In addition to the new name, the organization has also adopted a new logo, reminiscent of the color wheel. The image is intended to evoke the organization's combined mission and bring to mind the science involved in manufacturing, research and development of the industry's products, as well as the products themselves.

Call for Abstracts for NPIRI Technical Conference 2010

The National Association of Printing Ink Manufacturers is seeking abstracts for presentation consideration at the 2010 Technical Conference.

Abstracts are requested for any ink or ink related technology/ innovation, process or system improvement topic for consideration at the conference.

The 54th annual NPIRI Technical Conference is being held on October 19-21, 2010 at Sanibel Harbour Resort, Ft. Myers, Florida.

Pantone Names Turquoise Color of the Year for 2010:

Pantone LLC, an X-Rite company, announced PANTONE® 15-5519 Turquoise, an inviting, luminous hue, as the color of the year for 2010 on Dec 8, 2009. Combining the serene qualities of blue and the invigorating aspects of green, turquoise evokes thoughts of soothing, tropical waters and a languorous, effective escape from the everyday troubles of the world, while at the same time restoring our sense of well being.

“In many cultures, Turquoise occupies a very special position in the world of color,” explains Leatrice Eiseman, executive director of the Pantone Color Institute®. “It is believed to be a protective talisman, a color of deep compassion and healing, and a color of faith and truth, inspired by water and sky. Through years of color word-association studies, we also find that Turquoise represents an escape to many – taking them to a tropical paradise that is pleasant and inviting, even if only a fantasy.”

Whether envisioned as a tranquil ocean surrounding a tropical island or a protective stone warding off evil spirits, Turquoise is a color that most people respond to positively. It is universally flattering, has appeal for men and women, and translates easily to fashion and interiors. With both warm and cool undertones, Turquoise pairs nicely with any other color in the spectrum. Turquoise adds a splash of excitement to neutrals and browns, complements reds and pinks, creates a classic maritime look with deep blues, livens up all other greens, and is especially trend-setting with yellow-greens.

See Pantone’s web site for more information, www.pantone.com/pages/MYP_mypanone/myInfo.aspx?ca=75&pg=20706.





Call for Papers, ISCC Annual Meeting Oct. 5-6, 2010

We are now soliciting Interest Group presentations for the ISCC Annual Meeting (part of AATCC/ISCC Joint Conference *4M: Multi Media – Multi Material: Color Control*), in North Carolina State University. By **May 30, 2010**, please send your 1-2 page abstract and 100-word speaker biography to one of the three Interest Group chairs:

Interest Group 1 — Color Research: Ann Laidlaw (ALaidlaw@XRite.com)

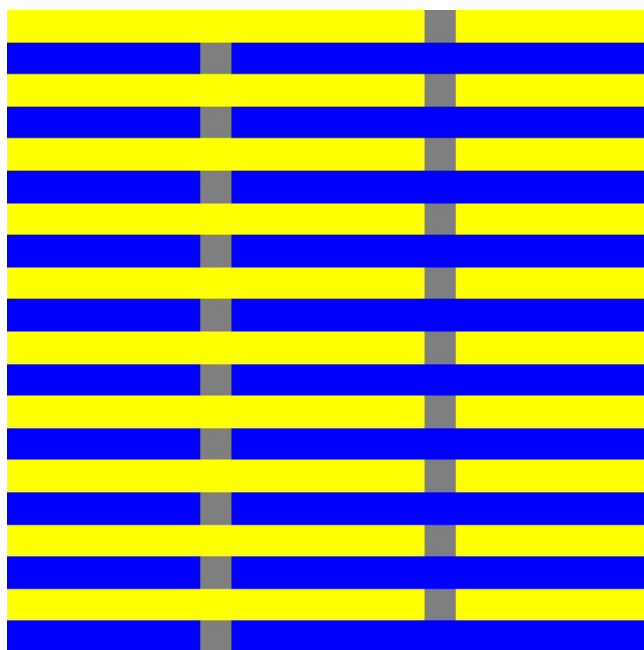
Interest Group 2 — Industrial Applications: James Roberts (Jim.Roberts@altana.com)

Interest Group 3 — Art, Design and Psychology: Barbara Martinson (bmartins@che.umn.edu)

Puzzle

In lieu of a puzzle for this newsletter, we show an optical illusion. Below, the squares in the blue stripes are the same as the squares in the yellow stripes. To check this out, make a mask with two holes that just fit over a square of each type. This optical illusion is a favorite of Joy Turner Luke and a frontispiece page in one of David Wright's books.

The editors invite readers to submit their own optical illusions for publication in a future newsletter.



International Day of Color and Light

From the AIC newsletter, the Portuguese Color Association proposed in 2008 the creation of a day for the celebration of color on an international and world scale. The idea was presented at the AIC executive committee meeting 2008 in Stockholm (see www.aic-colour.org/internationalcolorday.pdf), discussed in more detail in Sydney, and taken to the General Assembly. The date for celebration is proposed to be March 21, the "equinox." Around the equinox, night and day are approximately equally long, symbolically relating to the complementary nature of light and darkness, expressed in all human cultures. The March equinox is preferred to the September one because March 21 has been declared by the United Nations as the International Day for the Elimination of Racial Discrimination, and also, in Australia, as the Harmony Day for the promotion of community participation, respect and a sense of belonging in celebration of Australia's cultural diversity. Thus, the AIC asks all its members (regular, associate, and individual) to express agreement on the initiative and on the planned date (March 21), or in case of disagreement to suggest another date with the pertinent arguments to support it. Once a general consensus has been reached, the AIC will share the proposal with other international associations related to color and light. Finally, an application will be presented to competent international organisms to formally establish the International Day of Color and Light.

Joint Meeting of ISCC/ASTM E12/CIE Div. 1

Standards:

What they are - What will they be? What should they be?

Princeton University, Princeton, NJ
June 14 – 18, 2010

June 14-18 will be a full week of interesting meetings with three organizations. ASTM Committee E12 on Color and Appearance will meet on June 14-15 for their bi-annual committee meetings. The ISCC Special Topical Meeting will be on June 16. Finally, CIE Division 1 will hold its technical sessions and committee meetings on June 17-18.

For the ISCC Meeting, all the speakers and titles are now confirmed:

- **Wendy Davis**, NIST, “Color quality: Where we are; what’s next?”
- **Hugh Fairman**, Resource III, “Reflectance bandpass correction for the ASTM”
- **Changjun Li**, Univ. Leeds, “Tristimulus integration”
- **Rolf Kuehni**, Color Consultant, “Mensurating a perceptual object color solid.”
- **Ronnier Luo**, Univ. Leeds, “Color and vision in the CIE—now and in the future“
- **Maria Nadal *et al.***, NIST, “Broad band illumination and spectral detection enhancement for the NIST five axis reflectometer”
- **Danny Rich**, Sun Chemical, “Documentary standards in graphic reproduction: Pathway to quality or highway to mediocrity? “
- **Ann L McCarthy**, Lexmark International Inc, “Balancing ‘automatic color’ and artistic intent: The role of color standards”
- **Jan Henrik Wold**, Univ. Of Oslo, “XYZ colorimetry — still a relevant concept for a colorimetric standard?”
- **Dave Wyble** et al., RIT and Tech. Univ. Darmstadt, “Repeatability analysis of multiangle spectrophotometers”
- **Robert Buckley**, Xerox Corp., “Digital color image preservation: Immortal documents, mortal standards”
- **Philip Wychorski**, Orion Standards LLC, “Standards review process— United States National Committee of the CIE”

For more information, please contact Michael Brill (mbrill@datacolor.com) or Jack Ladson (jack.ladson@verizon.net) for program details, and Hugh Fairman (resourceiii@rcn.com) for arrangements. Look for updates at www.iscc.org .

Presentation Program
Joint Meeting of ISCC/CORM
Lighting in Artistic, Commercial, and Retail Spaces
March 2-3, 2010, Gaithersburg, Maryland

A joint meeting of The Inter-Society Color Council and the Council for Optical Radiation Measurements entitled *Lighting in Artistic, Commercial, and Retail Spaces* will be held on March 2-3, 2010 at NIST. The conference will be applications-based and looks to draw a field of experts from a wide range of interests. Updates concerning the meeting, including housing, will be posted at www.iscc.org.

Yaniv Morgenstern and Richard Murray, York University, *Statistical Regularities in Natural Illumination and Their Role in Human Perception of Shape from Shading*

Mark Rea and Jean Paul Freyssinier, Lighting Research Center, *A Test of a Two-Measure Color Rendering Proposal*

Yoshi Ohno, NIST, *Experiment on Color Rendering Preferences*

Terry McGowan, Lighting Ideas, Inc., *Functional and Decorative Lighting - What's The Difference and Why Is It Important?*

Gersil Kay, Conservation Lighting International, *Oh Say, Can You See?*

Cameron Miller, NIST, *From NIST to Field Measurements and Everything in Between*

Nick Lena, Gamma Scientific, *Commercial Lighting Measurements Methods, Metrics, and Myths*

Michael Grather, Luminaire Testing Laboratory, *Development of IES Files and How to Use Them*

Richard Murray, York University, **Yaniv Morgenstern**, York University and **Wilson Geisler**, University of Texas, Austin, *An Omnidirectional Photometer for Measuring Ambient Light*

John Reginaldi, Pilar Services, Inc., *Security Lighting*

Gordon Anson, National Gallery of Art, *Exhibition Lighting: Calculating the Complex Interaction of Space and Object*

Steven Weintraub, Art Preservation Services, *Artist's Intent and the Determination of Color Temperature Preference and On Cognitive Elements of Illumination*

Steven Weintraub, Art Preservation Services and TBA, *Cognitive Elements of Illumination*

Panel Discussion: *Color Constancy and the Qualitative Experience of Color Perception*

Security: As a U.S. Government facility, NIST requires that all attendees must pass a security check. U.S. citizens will be required to show some form of government-issued photo ID. Foreign citizens must submit documentation to NIST; this form is available from the ISCC web site. All attendees must check in at the main gate of NIST to receive a temporary badge allowing entrance to the site.

Registration: A registration form is included with this newsletter and it is available on the ISCC and CORM websites (www.iscc.org and www.cormusa.org). All attendees must be pre-registered.

Conference technical contacts:

ISCC: Dr. David Wyble, Munsell Color Science Laboratory, wyble@cis.rit.edu, (585) 475-7310

CORM: Dr. Art Springsteen, Avian Technologies LLC, arts@aviantechnologies.com, (603) 526-2420

Color Research and Application IN THIS ISSUE, February 2010

Color can affect conspicuousness. We open this issue with two articles that use color as a parameter in searching for an item or piece of information. In our first article “Ultra-Large Color Difference and Small Subtense,” Robert Carter and Rafael Huertas examine the use of various color difference metrics in modeling frequency of eye movements of observers being asked to find a particular color in a field with diversely colored objects. This is quite different from the usual use of color difference metrics, to assess matching. Most color difference metrics have been developed to be used with small color differences (1-5 units) in specimens of 2 to 10 degrees of visual field. In this article, color differences are an order of magnitude larger than usual, and visual targets are only a degree in subtense. The effect of the elongation of the visual targets is examined as well as the relative merits of various color difference metrics in predicting the performance of observers. Minimum color difference to ensure conspicuousness is given for each metric.

Leonard A. Breslow, J. Gregory Trafton, J. Malcolm McCurry, and Raj M. Ratwani want to extend this search application. Multicolor scales are useful for coding categories, and lightness scales are particularly useful in coding quantities in an order. Is it possible to develop a coding system that can do both tasks? In our next article, “Algorithm for Generating Color Scales for Nominal & Ordinal Coding,” Breslow and his coauthors introduce the Motley algorithm that can both categorize and order, thus allowing the user to determine both absolute and relative quantities efficiently and accurately. They compare the effectiveness of two possible Motley’s scales to other systems such as grayscale, rainbow, weather, and hue-saturation-brightness (HSB) scales.

Staying in the textile arena for our next article, Ali Shams-Nateri examines a technique for color formulation using both principal component analysis and the first derivatives of the absorbance spectra of dyes. In “Prediction of Dye Concentrations in a 3-component Dye Mixture Solution by a PCA-Derivative Spectrophotometry Technique” Dr. Shams-Nateri discusses the principles of the technique and the comparison of results with other Beer-Lambert techniques.

Our next three articles focus on the response to color in terms of harmony, preference, and emotional response. First, Ferenc Szabo, Peter Bodrogi, and Janos Schanda discuss the “Experimental Modeling of Colour Harmony.” They describe the development of color harmony models based on CIECAM02 hue, chroma and lightness and the testing of the models with visual experiments both on a display and additionally using Munsell chips. They compare their model with five existing color harmony theories: three classical and two recent mathematical models.

Most often when we are choosing a color, we have in mind an object that we want in that color, either paint for a room, a certain piece of clothing, or a ripe apple in the store. Thus, when we are expressing our color preference, it is usually for an object color. But there are other modes of appearance such as colored lights. How do these relate to our color preference? In our next article Uravis Tangkijviwat, Kitirochna Rattanakasamsuk, and Hiroyuki Shinoda report on experiments examining “Color Preference Affected by Mode of Color Appearance.” They consider not only object color and light color, but also what they call “unnatural object color” mode. They also investigated the relationship between color preference and the perceived color attributes (perceived chromaticness, whiteness, and blackness) and the mode of appearance. In general they found that the brightest and most saturated colors were preferred, but that color attributes as well as appearance mode played important roles in preference.

Color provides not only information that helps us to understand the physical world (is the fruit ripe?), but also carries symbolic and associative information (I had better stop at this corner). Thus color is a compelling visual cue for persuasive communication. In “Emotional Response to Color Across Media,” Hyeon-Jeong Suk and Hans Irtel describe two experiments where they compare the colorimetric parameters to three emotional dimensions: valence (sad to happy), arousal (relaxed to excited), and dominance (small/weak to dominant/controlling). One experiment was using physical specimens on Munsell colors; the second was using an electronic display showing colors. They found that the emotional response to the chroma and lightness of a color varies more strongly than that of hue change. In addition, they found differences between the two media, but they did not find a systematic explanation

for these differences. In general, the results tend to support similarity in affective judgments of color stimuli in both media.

We close the issue with a book review and news from the AIC. First, Rolf Kuehni reviews Spillmann's book, *Farbe Systeme*, which is published in German. Then we have both the announcement and citation for the AIC Judd Award, which was given to Arne Valberg at the 11th Congress of the International Colour Association (AIC) 2009 in Sydney Australia last September.

Ellen Carter
Editor, *Color Research and Application*

Notice Regarding ISCC Dues

ISCC members will soon be receiving invoices for the 2010 dues. Please pay in a timely manner to Cynthia Sturke, ISCC Administrative Assistant. If you would like to read a more "colorful" newsletter, please consider renewing your membership and receiving the newsletter via email. It is less expensive for you, for the ISCC and you will be saving a tree, or at least a branch!



Call for Papers AIC 2010 "Color and Food: From the Farm to the Table"

Interim Meeting of the International Color Association Mar del Plata, Argentina, 28 September - 1 October 2010

ACI 2010 is being organized by the Argentine Color Group on behalf of the International Color Association. The theme takes into account that the topic of color in food was not addressed to in any previous AIC meeting. It comprises a variety of aspects from technology to design, including architecture, biology, chemistry, engineering, physics, as well as social and economic aspects. The following list is non-exhaustive, and is merely orientative of the variety of topics that could be addressed:

colorimetry	color technology
color instrumentation	color chemistry
color physics	color & appearance
lighting	commercial architecture
color design	packaging
advertisement	color communication
consumer expectations	color preferences
color psychology	

Visit www.aic2010.org for updated information.

To participate by presenting a paper or poster, please, prepare an abstract in English (not less than 300 words and not more than 500 words), following

the model provided in www.aic2010.org/CALL-aic2010.DOC.zip. And send this abstract to caivano@fadu.uba.ar. The deadline is March 30, 2010. The deadline for full papers of accepted abstracts is June 30, 2010

All abstracts, posters and full papers for publication in the Proceedings must be in English. The oral presentation of papers could be delivered either in English, French, German, or Spanish. However, if French, German, or Spanish are used for the oral presentation, the power-point that is projected simultaneously with the talk must contain, in addition to the pertinent images, the English translation synchronized with the speech. This is the responsibility of the author, and in these cases the power-point with the English translation must be submitted before August 30 for approval of the scientific committee.

Advanced registration which is necessary for publication in the Proceedings is from May 1, until 30 June 2010.

Additional information concerning the meeting may be found on the web site.

CALENDAR

Please send any information on Member-Body and other organization meetings involving color and appearance functions to:

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2010

- Jan 20-22** **ASTM E12, Color and Appearance**, Embassy Suites Hotel; Ft. Lauderdale, FL, www.astm.org
- Mar 2-3** **ISCC/CORM Special Topics Conference on Lighting in Art, Commercial and Retail Spaces**, National Institute of Standards and Technology, Gaithersburg, MD, ISCC - 703-318-0263, www.iscc.org; CORM - www.cormusa.org
- Mar 14-17** **TAGA 62nd Annual Technical Conference**, The Horton Grand Hotel, San Diego, California, www.printing.org/taga
- Apr 18-21** **2010 Annual Conference, Association of Printing Ink Manufacturing**, Arizona Biltmore Hotel, Phoenix, Arizona, www.napim.org/publicarea/Conv2010/Place.aspx
- Apr 26-30** **ASPRS 2010 Annual Meeting, Opportunities for Emerging Geospatial Technologies**, Imaging and Geospatial Information Society Town and Country Hotel, San Diego, California, www.asprs.org/SanDiego2010/index.html
- May 10-14** **LIGHTFARE INTERNATIONAL, 2010 Annual Trade Show and Conference**, Illumination Engineering Society, Las Vegas, Nevada, www.lightfair.com/lightfair/V40/
- May 16-20** **ANTEC 2010**, Society of Plastic Engineers, Marriot World Center, Orlando, Florida, specad.e-xyn.com/index.php?navid=124
- May 18-20** **AATCC's International Conference (IC)**, Georgia World Conference Center, Atlanta, Ga., USA, www.aatcc.org/ic/index.cfm
- May 23-28** **SID 2010 International Symposium, Seminar, and Exhibition**, Washington State Convention and Trade Center, Seattle, WA, www.sid.org/conf/sid2010/sid2010.html
- Jun 1-4** **Archiving 2010**, Society for Imaging Science and Technology, Den Haag, The Netherlands, www.imaging.org/ist/conferences/archiving/index.cfm
- Jun 14-18** **Joint Meeting of ISCC/ASTM E12/CIE Div. 1, Standards: What they are--What will they be?--What should they be?** Princeton University, Princeton, NJ, www.iscc.org/meetings/ST2010/
- Jun 14 - 18** **CGIV 2010: 5th European Conference on Colour in Graphics, Imaging, and Vision**, Society for Imaging Science and Technology, Joensuu Yliopisto and University of Eastern Finland, www.imaging.org
- Jun 29-Jul 2** **OEPT 2010, 2nd International Symposium on Optical Engineering and Photonic Technology**, Orlando, Florida, USA, www.2010iisconferences.org/OEPT

CALENDAR, Continued

- Sept 24-25** **Bridging the Gap, Pioneering the Future**, The Society for Color and Appearance in Dentistry (SCAD), Newport Beach, California, www.scadent.org
- Oct 5-7** **Joint Meeting of AATCC and ISCC, 4M: Multi Media - Multi Material: Color Control**, College of Textile, North Carolina State University, isccoffice@cs.com
- Oct 19-21** **2010 NPIRI Conference**, National Association of Printing Ink Manufacturers, Sanibel Harbour Resort, Ft. Myers, Florida,
<http://74.0.252.227/publicarea/techconf2010/techconf10CFP.aspx>
- 2011**
- Jun 7-10** **2011 AIC Midterm Meeting, Interaction of Color and Light**, Zurich, Switzerland,
Organizer: Pro/colore, www.aic2011.org

AIC Wiki Workspace

This is a project of the International Color Association built by Leonhard Oberascher and Helmut Leitner. Launched officially during the AIC congress in Sydney, last September 2009, the wiki is primarily a workspace for AIC members.

There is a considerable amount of public information planned, e.g., member lists, glossaries, book reviews, links to digital books on color, working groups, etc. Visit the AIC wiki at wiki.aic-colour.org/

The 4Cs of Diamonds

In the 1940s and '50s, GIA, an ISCC member body, developed the 4Cs Grading System™ to objectively compare and evaluate diamonds. The 4Cs are carat, color, clarity, and cut. The GIA Color Scale extends from D(colorless) to Z (light yellow or brown).

Color grades are determined by comparing each diamond to a master set. Each letter grade represents a range of color and is a measure of how noticeable a color is.

Publications Available from ISCC Office

ISCC 76th Annual Meeting Program and Abstracts, ISBN 978-1-4243-4273-0 \$25.00*

Color and Light by Fred W. Billmeyer Jr. & Harry K. Hammond., III. Authorized reprint from: ASTM Manual 17, Copyright 1996, ASTM International, 100 Bar Harbor Dr., W. Conshohocken, PA 19428.

\$5 ea or 20 copies/\$50.00

Demystifying Color by Bob Chung, 11 pages.
\$5 ea or 20 copies/\$50.00

ISCC 75th Anniversary Commemorative CD and Pin \$30*

Guide to Material Standards and Their Use in Color Measurement (ISCC TR-2003-1) \$50*

*Plus shipping and handling

Advertising Policy

The ISCC advertising policy for the ISCC News requires pre-paid color-related advertising 30 days in advance of the publishing date. The rates are:

\$100 business card-size \$250 1/4 page

\$500 1/2 page \$1,000 full page

The editor reserves the right to determine the acceptability of the advertising. A 20% discount is available for a yearly contract.

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ISCC Sustaining Members

Avian Technologies	www.avianttechnologies.com	603-526-2420
BYK-Gardner USA	www.bykgardner.com	301-483-6500
Color Communications, Inc.	www.ccicolor.com	773-638-1400
Datacolor	www.datacolor.com	609-895-7432
Hallmark	www.hallmark.com	816-274-5111
Hewlett-Packard Company	www.hp.com	650-857-6713
Hunter Associates Laboratory, Inc.	www.hunterlab.com	703-471-6870
IsoColor Inc.	www.isocolor.com	201-935-4494
Xerox Corporation	www.xerox.com	585-422-1282

ISCC Member Bodies

American Association of Textile Chemists and Colorists (AATCC)
American Society for Testing and Materials International (ASTM)
American Society for Photogrammetry & Remote Sensing (ASPRS)
The Color Association of the United States, Inc. (CAUS)
Color Marketing Group (CMG)
Color Pigments Manufacturing Association (CPMA)
Council on Optical Radiation Measurements (CORM)
Detroit Colour Council (DCC)
Gemological Institute of America (GIA)
Graphic Arts Technical Foundation (GATF)
Illumination Engineering Society of N. America (IESNA)
International Color Consortium (ICC)
National Association of Printing Ink Manufacturers (NAPIM)
Optical Society of America (OSA)
The Society for Color and Appearance in Dentistry (SCAD)
Society for Information Display (SID)
Society of Plastics Engineers, Color & Appearance Div. (SPE)
Society for Imaging Science and Technology (IS&T)

New ISCC Website Feature

The ISCC website (www.iscc.org) now has a new page featuring historical translations. Here is the hyperlink: <http://www.iscc.org/resources/translations.php>. You can get there through the home page via the first-level menu item "online resources" and "historic translations" in the second-level menu. The two inaugural items are Rolf Kuehni's translations of Luther's 1927 article, "On color stimulus metrics" and of Philipp Otto Runge's book "Color Sphere." Stay tuned for more items.

Joint Meeting of ISCC/ASTM E12/CIE Div. 1

Standards: What they are — What will they be? What should they be?

June 14 – 18, 2010

Mon-Tues ASTM E12; Wed ISCC; Thurs-Fri CIE Div 1
Princeton University, Princeton, NJ

Last Name/First Name _____

Badge Name _____

Affiliation _____

Address _____

City _____ State/Prov _____ Country _____ ZIP/Postal Code _____

Tel. (Include Int'l Code) _____ Fax _____

E-Mail _____

Registration Fees: (USD) **Before May 1, 2010** **After May 1**

ALL Meetings

ASTM, ISCC & CIE Combined (ASTM, ISCC, or CIE members)	\$335	\$350
ASTM, ISCC & CIE Combined (Non-Members)	\$360	\$375

Register for Individual Meetings

ASTM Meeting Members and Non-Members	\$25	\$25
ISCC Symposium - Members of ISCC	\$ 175	\$190
ISCC Symposium - Non-Members of ISCC (Includes a 1 year membership in ISCC - a \$75 value)	\$ 200	\$215
CIE Division I Meeting	\$ 125	\$140

Students (Copy of valid student ID must be included)

ISCC Meeting	\$ 25	\$40
ISCC Plus ASTM and/or CIE Division I Meetings	\$ 50	\$65

Total Amount Due (USD) \$ _____

Cut-off Date for registration: June 1, 2010. No refunds after this date.

Full, on-site registration available.

Payment Method (Please print clearly)

_____ Check or money order payable in U.S. Funds on a U.S. Bank to "Inter-Society Color Council"

_____ Charge to the following credit card: DISCOVER ___ MC ___ VISA ___ AMEX___

Credit Card No. _____ Expiration _____/_____

3 or 4 digit Verification Code _____ Signature _____

Return completed form by fax (703-318-0514), Email, or postal mail with payment to:

Inter-Society Color Council

Attn: Cynthia J. Sturke

11491 Sunset Hills Rd.

Reston, VA 20190, USA

Isccoffice@cs.com



ISCC/CORM 2010 Joint Meeting
Lighting in Artistic, Commercial, and Retail Spaces
 March 2-3, 2010
 NIST Green Auditorium
 Gaithersburg, MD

Last Name/First Name _____
 Badge Name _____
 Affiliation _____
 Address _____
 City _____ State/Prov _____ Country _____ ZIP/Postal Code _____
 Tel. (Include Int'l Code) _____ Fax _____
 E-Mail _____

Registration Fees: (USD) \$150.00 (Includes meeting, breaks and electronic copy (USB drive) of presentations and abstracts)
Students (Copy of valid student ID must be included) \$75.00

Total Amount Due (USD) \$ _____

Cut-off Date for registration: February 12, 2010. No refunds after this date.
On-site registration will not be available.

Payment Method

- Check or money order payable in U.S. Funds on a U.S. Bank to "Inter-Society Color Council"
- Charge to the following credit card: MC VISA

Credit Card No. _____ Expiration _____ / _____
(Please print clearly) Mo. / Year

Name/Address for Card Billing (if different from above)

Signature _____
(Please print clearly)

Return completed form (by fax or mail) with payment to: Kathryn Springsteen
 Avian Technologies
 PO Box 716, Sunapee NH 03782
 FAX: 603-526-2729
 e-mail: kathy@aviantechnologies.com

Note: Attendees who are not US citizens must be registered with NIST. Persons who are NOT US citizens or nationals must fill out the Foreign Visitors form and submit it with their registration.

Meeting fee does not include meals or accommodations. Suggestions for accommodations are on the ISCC web site.