



Inter-Society Color Council News

Issue 438a

March-April 2009

2009 ISCC Annual Meeting Preliminary Program

Organizers of the 2009 ISCC Annual Meeting with Dave Wyble, Chair, are excited about the program for this meeting. The meeting will be held June 8 at the Rochester Institute of Technology (RIT) in Rochester, New York. The preliminary list of speakers and topics is shown on Page 7 of this newsletter.

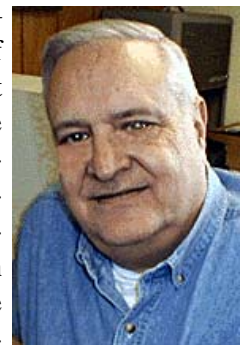
Also, in this newsletter is an update of the Munsell Color Science Laboratory's, 25th Anniversary Symposium. See page 6. The Symposium will be held June 7, also at RIT. Details for both meetings, including a registration form, and updates of the two meetings can be found in this newsletter and on the ISCC web site, www.iscc.org.

ISCC 2009 Election

The nominating committee, chaired by Rob Buckley, has announced the slate of candidates for the 2009 ISCC election. All members of the ISCC have an opportunity to vote for secretary, treasurer and up to three directors. Members have until April 30, 2009 to return a ballot to the ISCC Office, by email (isccoffice@cs.com), fax or mail, whichever method is easiest for you. A ballot form is provided with this newsletter. Biographies of the candidates follow.

Treasurer: *Hugh Fairman*—

Hugh is a 1958 graduate of Princeton University and spent the early part of his career in the chemical coating industry. During this time, he obtained expertise in the field of color and appearance science, a field in which he is widely published. At the present time, he is actively engaged in this area of color science as a partner in Hemmendinger Color Laboratory. Hemmendinger Color Laboratory makes and calibrates material standards used in the calibration and verification of spectrophotometric analysis. He is also active in Resource III, Inc. (resourceiii.com), a company engaged in the development of third-party software for spectrophotometric analysis and computer color-matching. In addition, he consults for clients in the color and appearance field with particular reference to precision and accuracy of spectrophotometric measurement.



Continued on page 2

Contents

ISCC Annual Meeting Preliminary Program ..	1
ISCC 2009 Election	1
ISCC Welcomes New Members!	3
New ISCC Web Feature! "Job Wanted"	
Space for ISCC Members on ISCC.org ...	3
CORM 2009, Annual Conference and Business Meeting	4
HUE ANGLES: Language and Color Perception	5
Munsell Color Science Laboratory 25th Anniversary Symposium	6
Color Research and Application: IN THIS ISSUE Volume 34, April 2009	8
Member News	
CIC17 — Call for Papers	9
GIA Museum Unveils Emerald Crystal...	9
CALENDAR.....	10
Publications Available from ISCC Office	11
ISCC Sustaining Members	12
ISCC News Editor	12
ISCC Member Bodies	12

New ISCC Web Feature for ISCC Members

See Page 4 for instructions for placing a free "job wanted" ad and a resumé on the ISCC web site, www.iscc.org.

ISCC EXECUTIVE OFFICERS

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Secretary: Jack Ladson—Jack is an expert with the Color Science Consultancy. He studied Optics at the University of Rochester and Mathematics at MIT. He is the current Secretary of the ISCC. He chairs ASTM committees on spectrometry and colorimetry and on image based color measurement. He is a member of the BOD of Society of Plastics Engineers, CIE USNC, CORM, AATCC, Detroit Color Council, American Statistical Association, and American Society for Quality.



Ladson has published more than 35 papers on color, digital imaging, color appearance, instrumental performance, and process control. He has been awarded patents on color technology. Jack is an invited lecturer US, Europe, and Asia.

Office of Director (2009-2012)

Leslie Harrington—Leslie is the director of The Color Association of the United States. She is considered a leading researcher in the field of color strategy. This work concentrates on understanding the emotional and cognitive facets of color in the contexts of products, brands, and built environments. Prior to her work with The Color Association, she was founder and President of LH Color. She has held various senior management positions in color marketing for over 25 years. Her diverse client list includes firms in the home, consumer goods, pharmaceutical and cosmetic industries. As an expert in color, she has appeared on NBC's The Today Show, ABC's Good Morning America, CBS's Ali & Jack, City TV and Fox News. She has also been featured in The Wall Street Journal, New York Times, Toronto Star and other publications, including The New Yorker, Greenwich Magazine, Yankee Magazine, Men's Health, O Magazine, and Real Simple. She is a member of the American Society of Interior Designers and the Interior Designers of Canada and also served on the executive board of directors of the Color Marketing Group. She holds a BA in Interior Design, MBA from the Stern School of Business, New York University, and a PhD in Business Management.



Continued on page 3

Ann Laidlaw—Ann is the Global Supply Chain Program Manager with X-Rite's Industrial Color and Appearance business. She has responsibility for supporting supply chains with the implementation of comprehensive color programs, and investigating innovative applications of color management to textiles and related industries. Ann is an active member of ISCC, CORM, SPE, and DCC and has served on both ISCC and CORM Boards. She is also active in AATCC, and is a former chair of the Color Measurement Test Methods committee. She currently chairs the C2C Interest Group in AATCC, and is a frequent participant in industrial short courses. Her interests are in color communication, color difference metrics, and sample measurement issues.



Ann received her BS in Textile Science from the University California, Davis, and her MS in Color Science from Clemson University. She worked for Burlington Industries and then joined SheLyn. When SheLyn was acquired by GretagMacbeth, she stayed on to manage the industrial applications team.

Nathan Moroney—Nathan has over fifteen years work experience in product engineering and advanced research in areas relating to color imaging. He has both undergraduate and graduate education in color science with an emphasis on software and imaging. Nathan has over thirty papers and other publications, with ten invited presentations. He holds fifteen US patents on technologies ranging from large format printers to projectors, from halftoning to image enhancement, and from gamut mapping to non-photorealistic rendering. He was an associate editor for the Journal of Imaging Science and Technology and helped to organize four technical conferences. He was also the technical chair for CIE Division 8 technical committee 8-01 which developed the CIECAM02 color appearance model and is a fellow of the Society for Imaging Science and Technology. He is a member of the IS&T and the ISCC and is currently a Principal Scientist for Hewlett-Packard Laboratories.



New ISCC Web Feature! “Job Wanted” Space Available to ISCC Members on ISCC.org

ISCC members always have the ability to place a “Job Wanted” ad in the ISCC newsletter free of charge. Please follow the guidelines on the back of the newsletter for submission dates.

What is new? ISCC members have the opportunity to place a Job Wanted ad on our website and attach a pdf of your resumé – also free of charge.

Please send your Job Wanted ad and resumé to the ISCC office at isccoffice@cs.com for inclusion in the ISCC news and on the ISCC website.

Criteria for the ad: name, title, contact info, and job wanted. If you do not include a resume, then one or two brief sentences describing your experience may be included.

ISCC Welcomes New Members!

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CORM 2009 Annual Conference and Business Meeting

The 2009 CORM conference will be held on May 5 – 8, 2009 in Gaithersburg, Maryland, in cooperation with the National Institute of Standards and Technology (NIST). The conference is structured to provide interaction between the optical radiation industry and National Metrology Institutes (NMIs) such as NIST, the National Research Council (NRC) of Canada, and the National Center for Metrology (CENAM) of Mexico.

The conference theme is *Solid State Lighting Standardization and Integrating Sphere Design, Measurements, and Applications*, with program outline:

Tuesday, May 5	AM	NIST Workshop on Solid State Lighting Measurements and Standards
	PM	CORM technical committee meetings
Wednesday, May 6		Paper Sessions on Solid State Lighting Frunk Grum Memorial Banquet and Lecture (Dr. Rolf Bergman)
Thursday, May 7	AM	Paper Session on Integrating Spheres
	PM	NIST Lab tour / BoD meeting
Friday, May 8	AM	Paper Session on Integrating Spheres

All the meetings (except the NIST lab tour) will be held at the Gaithersburg Holiday Inn, www.higaitersburg.com. Further information and the online registration form can be found at www.cormusa.org.

The NIST Workshop will feature presentations by NIST scientists on photometry and colorimetry fundamentals, measurement issues with LED/SSL products, and recently-published standards for SSL, including IESNA LM-79, LM-80, RP-16 addendum, ANSI C78.377, and those in progress in the CIE (TC1-69–color rendering, TC2-63–high power LEDs), IESNA, and IEC.

The NIST lab tour will include the newly-developed Spectral Tunable Lighting Facility for color rendering and vision experiments. Participation in this tour requires advance registration (see registration form).

Paper sessions include 14 presentations on SSL measurements and standards, and 14 presentations on integrating sphere design, measurements and applications. Sample papers are shown below.

Cameron Miller, Vyacheslav Podobedov, Lawrence Knab, and Jon Crickenberge, NIST, *Selection and Characterization of Proficiency Test Artifacts for NVLAP Solid State Lighting Products Testing Accreditations*

Eric Richman, DOE, *SSL Standards and Test Methods Development: The need for Industry and the Energy Star Driver*

Emil Radkov, GE Lumination, *LED Life Prediction: Towards a General Approach*

Wendy Davis, Cameron Miller, Vyacheslav Podobedov, and Yoshi Ohno, NIST, *NIST Spectrally Tunable Lighting Facility*

Yuqin Zong, Pei-Ting Chou, and Yoshi Ohno, NIST, *A Practical Method for Measurement of High-Power AC-driven LEDs*

Andy Jackson, Philips, *SSL Interconnects*

Greg McKee, Labsphere, *HalfMoon and Integrating Sphere Performance comparison for 2p Flux Measurements*

Sid Rane and Angelo Arcchi, SphereOptics, *UV and VUV Integrating Sphere Coatings*

Art Springsteen, Avian Technologies, *Integrating sphere coatings; what has and is being used, advantages and disadvantages*

Leonard M. Hanssen, Alexander V. Prokhorov, and Boris Wilthan, NIST, *Hemispherical-directional integrating sphere for high temperature reflectance factor measurement*

Julian Chang, Boeing, *Visual Signaling: Aerial Refueling Tanker's PDL (Pilot Director Lights) Improvement for Pilot's Visual Acuity*

Continued on page 9

HUE ANGLES

(Send contributions to Michael H. Brill, mbrill@datacolor.com)

At the 2007 IS&T/SID Color Imaging Conference, Terry Regier gave a keynote address on how color discrimination is influenced by linguistic categories in the right but not in the left visual field. Now he revisits the topic with noted color/language expert Paul Kay. While reading, you might contemplate, *how do I try this at home?*

Language and Color Perception

Does language affect perception, or not? The yes-or-no framing of this question obscures an interesting possibility. Several recent studies on color suggest that language does indeed affect perception (or at least perceptual discrimination) – but it does so primarily in the right visual field (RVF), and much less if at all in the left visual field (LVF), a pattern suggested by the functional organization of the brain. Thus, half of our perceptual world is viewed through our native language, and half is viewed without a linguistic filter.

This pattern was first shown in a study [1] that probed the discrimination of colors straddling the boundary between green and blue, a boundary present in English but absent in many other languages. The study found evidence for categorical perception of color – faster discrimination of colors from different categories – but only in the RVF, not in the LVF. This lateralization was disrupted by a concurrent task that interfered with verbal processing, but not by a concurrent task of comparable difficulty that interfered only with non-verbal processing – suggesting that the pattern is verbal in origin. Other studies replicated and extended this finding, exploring the cross-cultural and developmental origins of our tendency to view half of our visual world through language, and half of it less so if at all.

If color categories affect perception, at least in half the visual field, where do those categories come from? Why do languages have the color categories they do? An influential universalist view of color naming holds that color categories across languages are organized around the universal focal colors black, white, red, green, yellow, and blue. A recent relativist challenge holds in contrast that there are no such universal foci, and that color categories are defined at their boundaries by largely arbitrary linguistic convention. Both of these views are partly supported and partly challenged by existing data, which show universal tendencies in color naming, coupled with interesting cross-language variation of category boundaries.

This complex picture can be accounted for starting with the observation that perceptual color space is irregular, in the sense that the maximum possible saturation varies unevenly across hue/lightness combinations. One proposal [2] is that color naming reflects optimal or near-optimal partitions of this irregular space. Recently, this idea was formalized and tested against empirical data [3]. A well-formedness measure was defined that captures the extent to which a given categorical partition of color space maximizes perceptual similarity within color categories and minimizes it across categories. Across the 110 languages of the World Color Survey – a database of color naming from non-industrialized societies worldwide – color naming tended to be near-optimal in well-formedness. At the same time, linguistic convention may get some wiggle room: Often, similar but different partitions are roughly equally well-formed, suggesting a middle ground between “nature” and “nurture” in color naming across languages.

Neither of these findings – that language affects color perception primarily in the right visual field, or that color naming is near-optimal – is anticipated by the traditional universalist-versus-relativist debate over language and perception. Instead, these findings suggest novel perspectives on the relation of language and perception.

[1] A. Gilbert et al. (2006). Whorf hypothesis is supported in the right visual field but not the left. *PNAS* 103, 489-494.

[2] K. Jameson & R. D’Andrade (1997). “It’s not really red, green, yellow and blue: an inquiry into perceptual color space,” in *Color Categories in Thought and Language*, C. L. Hardin and L. Maffi (eds.), Cambridge University Press, 295-319.

[3] T. Regier et al. (2007). Color naming reflects optimal partitions of color space. *PNAS* 104, 1436-1441.
Terry Regier, University of Chicago
Paul Kay, University of California at Berkeley

Munsell Color Science Laboratory 25th Anniversary Symposium



The Retrospective and Prospective Views of Color Science
Rochester NY, June 8, 2009

Schedule

- 8:30 **Welcome**, Roy S. Berns, Director Munsell Color Science Laboratory.
- 8:45-9:30 **The Wright Trichromator and Color Matching Functions**, Robert W. G. Hunt, Kodak Limited (retired) and Visiting Professor at Leeds University.
- 9:30-10:15 **Color Science and Imaging: Future Opportunities**, Nathan Moroney, Principal Scientist at Hewlett Packard Laboratories.
- 10:15-10:45 **Coffee Break**
- 10:45-11:30 **Reflections on a Life in Color**, Calvin S. McCamy, National Institute of Standards and Technology (retired) and Macbeth Corporation (retired).
- 11:30-12:15 **Computer Aided Appearance Design**, James A. Ferwerda, Associate Professor Center for Imaging Science and member of Munsell Color Science Laboratory at Rochester Institute of Technology.
- 12:15-1:45 **Lunch**
- 1:45-2:30 **Three Attributes: From Newton to Munsell**, Rolf G. Kuehni, Bayer Corporation (retired) and Adjunct Professor at North Carolina State University.
- 2:30-3:15 **The Munsell Foundation and a Century of Color Research**, Joy Luke, Studio 231.
- 3:15-3:45 **Coffee Break**
- 3:45-4:30 **Color Differences: Past, Present and Future**, Alan R. Robertson, National Research Council Canada (retired).
- 4:30-5:15 **Lighting in the 21st Century: Opportunities and Challenges**, Mark S. Rea, Director Lighting Research Center and Professor of Cognitive Science at Rensselaer Polytechnic Institute.
- 5:15-5:45 **Twenty Five Years of Research at the Munsell Color Science Laboratory**, Mark D. Fairchild and Roy S. Berns, Professors, Center for Imaging Science and members of Munsell Color Science Laboratory at Rochester Institute of Technology.
- 5:45-6:00 **Virtual Tour of the Munsell Color Science Laboratory**, Mitchell R. Rosen, Research Assistant Professor Center for Imaging Science and member of Munsell Color Science Laboratory at Rochester Institute of Technology.
- 6:00-7:30 **Open House and Reception in the Munsell Color Science Laboratory**



Preliminary Program

Inter-Society Color Council 2009 Annual Meeting and Munsell Color Science Laboratory 25th Anniversary Symposium June 7, 2009, Rochester NY



We are very excited about the wide array of interesting presentation scheduled for the Annual Meeting this June in Rochester. Speakers for the preliminary program include:

Barbara Martinson, University of Minnesota

Practice-based Research in Design

Alexander Logvinenko, Glasgow Caledonian University,

A spherical object-colour space

Robert Buckley, Xerox and Franziska Frey, RIT

Color Imaging in the Cultural Heritage Community

James A. Perkins, RIT,

The Use of Color in Medical Illustration

Rob Buckley, Xerox,

Image Archiving

Mark S. Rea and Jean Paul Freyssinier, RPI/LRC,

A test of a two-measure color rendering proposal

Anders Nilsson, Scandanavian Colour Institute,

Comparing the steps of NCS and the Munsell colour order systems using the evolvement of ΔE formulas

Brian Gamm, RIT,

Modelling Paper Fluorescent Behavior

Michael H. Brill, Datacolor,

Optimal Pseudocolor and the Longest-Path Problem

Maria E. Nadal and C. Cameron Miller, NIST,

Reflectance Factor Measurement Complications Due to Near Infrared Fluorescence

Fritz Ebner, Xerox,

What is Sustainability and how do our actions affect it?

Accommodations and other arrangements are being made now. As more information becomes available, it will be posted to www.iscc.org. If you have any questions or concerns, or if you would like to help, please contact David Wyble, General Chair, at (585)475-7310 or wyble@cis.rit.edu.

Color Research and Application IN THIS ISSUE Volume 34 April 2009

The Munsell Color Order System is often used to specify the color by designers for products or interiors among other things. However, technically the Munsell System is defined only under Illuminant C. Often the illumination will be quite different from Illuminant C. Therefore, it is desirable to have target tristimulus values under the desired illumination. In our first article of this issue, Ali Shams Nateri discusses the “Estimation of CIE tristimulus values under various illuminants.” The author compares methods for estimating tristimulus values of Munsell colors under a new illuminant given their tristimulus values under an old illuminant. In particular he compares principal component analysis (PCA) with a method of multiple linear regressions. The author shows that mean-subtracted PCA outperforms the multiple linear regression method.

Our next article deals with color matching in the textile industry. Often to achieve special effects, textile fibers are dyed to various colors and then these colored fibers are woven or knitted together producing unique color effects. Rong Li, Yang Song, Feng Gu, and Wei Pan describe “Spectrophotometric Color Matching Algorithm for Pre-colored Fiber Blends” based on the Stearns-Noechel model. In their experimental testing of the model they predicted and examined three and four component blends with good results.

Observer metamerism is the basis of the work described in our next article. Wen-Guey Kuo, Yuh-Chang Wei, Alex Liu, Shang-Ming Lin, and Yi-Ting Shu performed an experiment employing a set of thirty-one metamers subtending about 1° visual angle to derive new deviate observers. Then they used these new deviate observers to estimate the performance of the six color difference formulae most frequently used and investigated in color industries and academies, in predicting the visual color difference. The results indicate that the performance of the color difference formulae in estimating color difference is significantly improved by the deviate visual functions derived in this study. The CIE94 color difference formula has the best performance in predicting the total visual color difference using the deviate visual functions and deviate visual functions. Their study is “The New Deviate Visual Functions Improving

the Instrumental Estimation on the Visual Colour Difference for the Metamers with about 1° Field Size.’

Next we have a two-part article, “Proposal for Selecting Two-Color Combinations with Various Affections.” In “Part I. Introduction of the Method,” Yoshinobu Nayatani and Hideki Sakai describe a procedure to assist color designers in picking color combinations that achieve a certain feeling or mood such as pleasantness. The basis for this work was developed by the Color-Harmony Committee organized at Electro-Technical Laboratory in Japan in the 1960s, but only published in Japanese. New technical developments in color imaging have led to the wider implementation described in this current article. “Part II – Demonstration of the System” contains implementations of the equations given in the first part of the article. The color visualizations in this part should help the readers understand the characteristics of the system.

Following the articles on a system to help designers pick color combinations to achieve certain feelings, we have another article that explores how people are affected when surrounded by color. In “Color, Arousal and Performance- A Comparison of Three Experiments” Rikard Küller, Byron Mikellides, and Jan Janssens discuss the psychological and physiological effects on people of colored room interiors. They found that there were multiple ways in which the people were affected. First, the perception of the room changed. But also the colors had an impact on the emotions and physiology of those who stayed in the rooms. The authors point out that one practical implication is that a moderate use of good color design will serve to improve the overall mood and well-being of people.

Since we are talking about the mood and well-being of people, readers might not be surprised to hear that we cap off our issue with our final full-length article about red wine. The color of wines has been assessed both instrumentally and visually in very different ways. There are several instrumental scales which have been used. But the final assessment generally is that of the wine taster, and he assesses the wine color in a standard tasting sampler. Begoña Hernández, Carlos Sáenz, Javier Fernández de la Hoz, Coro Alberdi, Santiago Alfonso, and José M. Diñeiro first review the both the instrumental and visual evaluation of wines. Then they present the results of their study of over 30 red

wines, being measured in two positions, rim and center, and the correlation with the assessment of color by wine tasters. Don't miss "Assessing the color of red wine like a taster's eye."

This month's Color Forum comes from the United Kingdom. In "Notes toward a Verifiable Vector Algebraic Basis for Colorimetric Modeling" David P. Oulton describes his personal unease about the complexity of color-difference modeling. Therefore, he uses the journal's forum to draw attention to these issues, and to present a new approach to experimental design, and to colorimetric analysis. Then he invites your comments.

Our Communications and Comments section contains a report on the "Optical Tools to Assess Naturalness of Cosmetic Films." Achieving the optical properties of young healthy skin by the use of cosmetics is a goal of many people and a whole industry has been built around it. In this report Prithwiraj Maitra, Angelina Balina, Steven Carlo, and John Glynn, Jr. discuss the measurement challenges and introduce wide-angle transmittance measurement via goniospectrophotometer as a valuable tool to include in the optical tool kit.

We also include in this issue, three meeting reports, and announcements about the forthcoming ISCC Annual Meeting and the Essentials of Color Science course to be given at Rochester Institute of Technology this summer. Karin Fridell-Anter reports on the AIC Interim Meeting that was held in Stockholm, Sweden in June 2008. C. Cameron Miller and Maria Nadal report on the "R, G, B's of Color" – the ISCC 2008 Annual Meeting and also on the expert symposium on "Perception, Measurement, and Application of Safety Colors," which followed the ISCC meeting.

Ellen C. Carter

Editor, Color Research and Application

CORM Annual Conf. & Meeting

Continued from page 4

For questions, contact the CORM 2009 Conference Chairs: Mr. Greg McKee, Labsphere, Inc., P.O. Box 70/Shaker St., North Sutton, NH 03260-0070, Ph: 603-927-4266, Fx: 603-927-4694, E-mail: gmckee@labsphere.com or

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Member News

CIC17 — Call for Papers

CIC17 will be held in Albuquerque, New Mexico November 9–13, 2009. The deadline for abstract submission is **April 8, 2009**. The call for papers is available for download and viewing at www.imaging.org/conferences/cic17.

Ever since its creation 16 years ago, CIC has been a showcase of the latest advances in color imaging science and engineering and has served as the principal international forum for color scientists, technologists, and students. Technical papers are invited, but not limited to the following areas: color theory, color in devices, color in systems, color in illumination, and specific color applications. A full listing is found in the call.

For questions, please contact Diana Gonzales at cic17@imaging.org, or 703-642-9090 x106.

GIA Museum Unveils a 472 Carat Emerald Crystal

CARLSBAD, Calif. - March 16, 2009 - The Gemological Institute of America (GIA) announced today that its Museum will debut a recently discovered 472 carat (ct.) emerald crystal from the Muzo region mines in Colombia. It will be on exhibit until early fall 2009.

A gem-quality emerald crystal of this size is extremely rare. The four-inch hexagonal crystal possesses a color equivalent to the finest emeralds, according to Terri Ottaway, GIA Museum curator.

The El Itoco is displayed in a case that includes three other emerald crystals and an emerald and diamond necklace and earrings suite designed by Jean Schlumberger for Tiffany & Co., circa 1960.

GIA Museum exhibit viewings are free and available to the public through scheduled tours. Visitors must sign up for a tour by contacting guestservicesmailbox@gia.edu or calling (800) 421-7250, ext. 4116. Visit www.gia.edu for more information.

CALENDAR

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

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2009

- May 4 - 7** **Archiving 2009**, the Society for Imaging Science and Technology et al., Hilton Crystal City, Arlington, Virginia, 703-642-9090, www.imaging.org/conferences/archiving2009/
- May 5-8** **CORM's Annual Conference: Solid State Lighting Measurements and Applications, and Integrating Sphere Design, Measurements, and Applications**, Holiday Inn, Gaithersburg, MD, www.cormusa.org
- May 25-26** **CIE Midterm Meeting 2009**, CIE Central Bureau, organizer, Budapest, Hungary, ciecb@cie.co.at
- May 27-29** **LEDs and Solid State Lighting Conference**, CIE-Hungary, Budapest, Hungary, www.cie.co.at/index_ie.html
- Jun 1-3** **Light and Lighting, CIE Division 1 Meeting**, Budapest, Hungary, www.cie-hungary.hu
- Jun 7** **ISCC 2009 Annual Meeting**, in conjunction with the Munsell Color Science Laboratory Symposium, Rochester, New York 703-318-0263, www.iscc.org
- Jun 8** **Munsell Color Science Laboratory 25th Anniversary Symposium**, Rochester, New York, mcsl.rit.edu
- Jun 23-25** **ASTM E12, Color and Appearance**, American Society for Testing and Materials, National Institute of Standards and Technology, Gaithersburg, MD, www.astm.org
- Aug 11-14** **CGIV09, Computer Graphics, Imaging and Visualization Conference**, hosted by Tianjin University, Tianjin China, www.graphicslink.co.uk/cgiv09/
- Sep 27-Oct 2** **AIC 11th Congress**, Sydney, Australia, Organizer: Colour Society of Australia, Contact: Nick Harkness, www.aic2009.org
- Sep 29-Oct 1** **Color and Food: From the Farm to the Table, AIC Interim Meeting**, Mar del Plata, Argentina, Organizer: Grupo Argentino del Color, Contact: María L. F. de Mattiello gac@fadu.uba.ar.
- Oct 13-14** **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
- Oct 15-16** **CIE-USA and CIE-Canada technical and administrative meetings**, National Institute of Standards and Technology, Gaithersburg, MD
- Nov 9-11** **Seventeenth Color Imaging Conference**, The Society for Imaging Science and Technology cosponsored by the Society for Information Display (SID), Albuquerque, New Mexico, 703-642-9090, www.imaging.org
- Nov 15-17** **IES Annual Conference**, Illuminating Engineering Society, Seattle, Washington, www.ies.org

Blue or Red? Exploring the Effect of Color on Cognitive Task Performances

Ravi Mehta and Rui (Juliet) Zhu, researchers at the University of British Columbia in an article published in *Science*, Feb 27, 2009, showed that the colors around you do have some effect on your brain. The research was limited to the two primary colors red and blue. From a series of six studies, using various tasks covering a number of different domains, they demonstrated that red can heighten performance on a detail-oriented cognitive task,

whereas blue can heighten performance on a creative task

They write that their findings offer a wide range of implications for daily human life; that, depending on the nature of the task, different colors might be beneficial. For example, if the task on hand requires people's vigilant attention (e.g., memorizing important information or spell checking an article), then red might be particularly appropriate. However, if the task calls for creativity and imagination, then blue would be a better choice.

Based on these results, I think I should paint my office red!
Mary McKnight, Asst. Editor

Please watch the ISCC web site for the latest information on the Joint Meeting of ISCC/CORM, "*Lighting in Art, Commercial, and Retail Spaces*," to be held Oct. 13-14th, 2009, at NIST, Gaithersburg, Maryland. Program information will also be included in an upcoming ISCC Newsletter.

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. Discusses and explains ten myths about color.

\$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 is as follows: Pre-paid color-related advertising will be accepted 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.

Issue # 438a

Mar/Apr 2009

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All submissions must be in English. Please submit materials by the 15th of each even numbered month. Materials submitted later may be printed in the following issue.

ISCC Sustaining Members

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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. \(CAUS\)](#)
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[Optical Society of America \(OSA\)](#)
[Society for Information Display \(SID\)](#)
[Society of Plastics Engineers, Color & Appearance Div. \(SPE\)](#)
[Society for Imaging Science and Technology \(IS&T\)](#)
[Technical Association of the Graphic Arts \(TAGA\)](#)

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ISCC 2009 Annual Meeting and Munsell Color Science Laboratory 25th Anniversary Symposium

June 7-8 2009

Rochester Institute of Technology, Rochester, NY
Details at <www.iscc.org/meetings/AM2009/>

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

Registration Fees: (USD)	Until April 30		After April 30	
	Members	Non-members (includes membership)	Members	Non-members (includes membership)
ISCC Annual Meeting Only	\$250 %	\$300 %	\$275 %	\$325 %
Includes presentations, poster reception, awards luncheon, breaks, and MCSL Symposium proceedings.				
MCSL Symposium Only	\$250 %		\$275 %	
Includes presentations, evening reception, breaks, and proceedings.				
Both Meetings	\$450 %	\$500 %	\$475 %	\$525 %
Students	\$100 % (Copy of valid student ID must be included)			

Accompanying Person(s) Fees (does not include presentation sessions)

Sunday Awards Luncheon, June 7	\$25 %	\$25 %
Monday MCSL Reception, June 8	\$25 %	\$25 %
Total Amount Due (USD)		\$ _____

Pre-registration Cut-off Date: May 19, 2009. No refunds after this date. On-site registration available.

****Payment Method****

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

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Hotel Information: We have reserved a block of rooms at a special rate at the Radisson Hotel (585-475-1910) www.radisson.com/hotels/us/ny/henrietta/399, close to the RIT campus. For online registration, use the promotional code "0609inters" to get the \$89 rate. In person simply mention the Inter-Society Color Council when you make your reservations. A taxi from the Rochester airport will cost about \$20. The hotel offers a free shuttle. The Radisson is about a 20 minute walk to the conference facility. There will be shuttle busses to the sessions if you prefer to ride.

2009 ISCC Ballot

Election of Executive Board (2009-2011)

Jack Ladson **Secretary** ()

Hugh Fairman **Treasurer** ()

Election of Board of Directors (2009-2012 term)

Vote for **THREE** candidates

Leslie Harrington ()

Ann Laidlaw ()

Nathan Moroney ()

Return of Ballot: Please return the completed ballot to the Inter-Society Color Council Office by April 30, 2009.

Please respond by fax: (703)318-0514, Email: isccoffice@cs.com or by US Mail: Inter-Society Color Council, 11491 Sunset Hills Road, Reston, VA 20190.

It is important to sign the cover sheet of your fax or sign the back of your envelope when returning your vote.

Thank you.