



Inter-Society Color Council News

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Inter-Society Color Council News

Number 379 May/June 1999

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Please note: Deadline for submission of material is the 1st of each even numbered month. Material received after the 1st may not be printed until the following issue.

All submissions must be in English.

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May/June

1999

ISCC ANNOUNCES PPG AS NEW SUSTAINING MEMBER

PPG Industries, Inc., is honored to join the growing list of respected companies who are Sustaining Members in the Inter-Society Color Council. PPG, established in 1883, is one of the world's largest makers of protective and decorative coatings, flat and fabricated glass products, continuous-strand fiber glass products, and industrial and specialty chemicals.

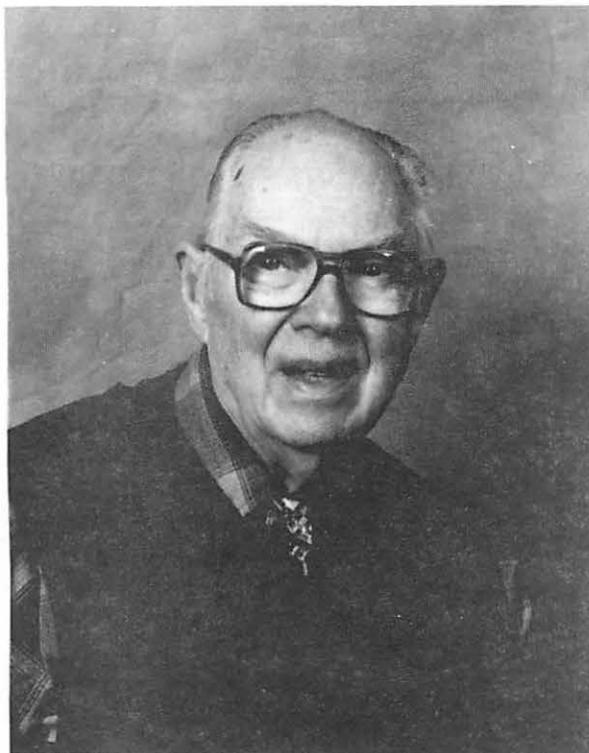
The company participates in virtually all segments of the coatings market - automotive original and aftermarket, industrial, and architectural professional and consumer. As such, the company recognizes and understands the critical role color plays in adding value to coatings applications. PPG is a leader in the development, application and trending of color. For the automotive aftermarket, PPG developed the Prophet color matching system which provides accurate, instrumental color matching for body shops. The company developed a state of the art, award-winning color palette for professional and do-it-yourself painters called Voice of Color, which contains nearly 2000 colors arranged intuitively for easy, efficient selection. PPG's automotive original coatings business takes its technical and styling expertise globally to our customers and suppliers with highly designed exhibits and a/v programs that help automakers make successful color selections.

PPG is devoted to providing color expertise based on products that support customer requirement for aesthetic appeal, environmental appropriateness and advanced technology.

PPG is proud to support the ISCC and the vital role it plays in the advancement of color in the arts, sciences and industry.

**PROFESSOR FRED W. BILLMEYER, JR.
TO RECEIVE THE 1999 AIC DEANE B. JUDD AWARD**

Prof. Fred W. Billmeyer, Jr. is to receive the 1999 AIC Deane B. Judd Award in Warsaw, Poland in late June 1999 at the AIC Interim Meeting. He will join the following list of honored recipients:



Professor Fred W. Billmeyer

- 1975 Dorothy Nickerson
- 1977 W. David Wright
- 1979 Günter Wyszecki
- 1981 Manfred Richter
- 1983 David MacAdam
- 1985 Leo M. Hurvich,
Dorothea Jameson
- 1987 Robert W. G. Hunt
- 1989 Tarow Indow
- 1991 Hans Vos,
Pieter Walraven
- 1993 Yoshinobu Nayatani
- 1995 Heinz Terstiege
- 1997 Anders Hård,
Gunnar Tonnquist,
Lars Sivik

Professor Billmeyer is being honored for a lifetime of significant contributions to the field of colour. First and foremost he is being recognized for his dedication to the area of colour education, where he directed and mentored 30 post-baccalaureate and many more baccalaureate candidates in the field of colour science. He established and directed The Rensselaer Color Measurement Laboratory. He published over 275 articles and thirteen books on colour and polymers. He drafted at least a dozen important and widely used American Society for Testing and Materials (ASTM) consensus standards. In 1998 he received the coveted Frank W. Reinhart Award for his outstanding contribution to ASTM in the area of terminology standardization. He trained approximately 1,000 students from industry in the principles of colour technology. He founded and served as Editor-in-Chief of the leading colour journal in the world, *Color Research and Application*. He has held leadership roles in the Inter-Society Color Council. His most notable contribution to AIC was as the host and organizer of the AIC 1977 Quadrennial Meeting in Troy, NY, Color '77. He authored the "AIC Annotated Bibliography on Colour Order Systems." His international Contributions to colour have also taken place through the CIE, where his work has been recognized in the areas of tristimulus value calculation and fluorescence measurements.

Professor Billmeyer's contributions to the field of colour science have shown endless devotion as he continues to work in the field today. Please join the AIC in honoring Professor Fred W. Billmeyer, Jr. for his lifetime achievements in the area of color science as he receives the 1999 AIC Deane B. Judd Award.

Edited from AIC Newsletter 13, 1999

THE 1999 GODLOVE AWARD CITATION FOR CALVIN S. MCCAMY

The Godlove Award, the highest honor bestowed by the ISCC, is in recognition of a lifetime of distinguished service to the color community. Looking through the list of recipients, it seems that the expectations of the

Awards Committee are that the recipients must distinguish themselves with a lifetime of accomplishments in color prior to retirement. They then must demonstrate that life begins at retirement with a host of additional contributions.



This year's recipient, Cal McCamy, exemplifies this tradition of excellence. In theory he has been retired for almost ten years. Those of us who have been privileged to have worked with him on various technical committees (and that includes a good many people in this room) know that he has had a continued impact on color science, particularly in the area of standardization. Chairing ASTM E-12.03 Committee on Geometry, he has contributed to the work of almost every subcommittee in E-12 Committee on Color and Appearance. His understanding of the technical concepts, his command of

the English language, and his precision have resulted in new terms for important but previously unnamed phenomena, together with precise definitions so that they are unambiguous and well understood. This precision and unambiguity have impacted many a standard in ASTM, CIE, ISO and ANSI.

Cal's first career was in the Navy in World War II. Based on his entrance tests, the Navy realized they could not risk losing him at the front. So he served in places such as Notre Dame, Indiana and the Panama Canal. After receiving a B.S. in Chemical Engineering and an M.S. in Physics from the University of Minnesota, he taught Physics at Clemson University, while starting up a color measurement laboratory in 1951. Deane Judd recruited him in 1952 for the National Bureau of Standards (now the National Institute for Standards and Technology, NIST). His research here included precise measurement of transmittance and reflectance, image structure, aerial and satellite photography, optical filter theory, color vision and archival preservation of photographic films.



NBS provided industry with many calibration materials. Cal observed that international standards used by NBS in calibrating densitometry standards called for transmission measurements with an integrating sphere, while industry practice in calibrating densitometers used reflectance of these materials over a white diffuser.

Resultant errors in industrial measurements were because of inappropriate procedures in calibrating the standards. Cal led the effort to correct these discrepancies, changing calibration procedures to match industry use of these standards, thus ensuring accuracy of densitometry. Often consulted by other government agencies, he applied color and optics to a variety of problems. Be wary of having a private conversation behind closed doors. Cal taught the FBI and the CIA how to listen in by monitoring vibrations on glass windows.

Cal was Chief of the Image, Optics and Photometry Section in 1970 when Macbeth Division of Kollmorgen (now GretagMacbeth) recruited him as Vice President of Research. Over the next twenty years he directed and participated in research on precise light and color measurement, color filter design, simulation of daylight, geometric attributes of appearance, densitometry in photography and color printing, color order systems, color standards and related mathematics. His consulting for government agencies continued. While heading the photographic study for the congressional investigation of the John F. Kennedy assassination, he observed that duplicate photographs of the autopsy were offset, allowing binocular 3-dimensional viewing of key wounds.

You may not know it but Cal's work has touched our everyday lives. If you like accuracy in your color photographs, you have probably used the Macbeth Color Checker, invented by Cal. Your bank's computers can accurately read your checks because Cal specified the optical properties required of machine-readable symbols. This same specification allows accuracy at the check-out counter of your grocery store. You've heard "Clown's Alley" if you've ever been to the circus. Cal's composition for the organ was first used in the 1967 Macy's Thanksgiving Day Parade.

Most precise people are very difficult to get along with. From what I hear, Cal was no exception. However, many years ago, he was dining with a young lady. He arranged the food on his plate with his usual precision: the mashed potatoes with a standardized 3 centimeter depression for the gravy, the meat cut into regulation bite-sized morsels, the vegetables neatly arranged on the other side of the meat. The young lady watched this careful exercise, then reached over with her fork and mixed the potatoes, gravy, meat and vegetables on his plate. Since that day, Mabel has been a moderating influence in Cal's life. Mabel, we owe you a debt of gratitude. With one felled swoop of your fork, you converted Cal into a person we could all work with!

Cal has authored over a hundred papers, written numerous standards, served on the advisory boards of many organizations, been recognized as a Fellow of several professional societies, received the Bruning Award of the Federation of Societies for Coatings Technology. It is my pleasure to present to you this year's ISCC Godlove Award Recipient, Calvin McCamy.

*Allan B. J. Rodrigues
E.I. Dupont de Nemours*

Coming Soon to a Mailbox near you.....

July/August ISCC News

Annual Meeting Reports,

Pictures and more colorful news!



THANKS TO ESTÉE LAUDER

On behalf of the Inter-Society Color Council (ISCC), I want to thank all the participating people at Estée Lauder for their kind sponsorship of the Feb. 6 Board of Directors meeting at their Northtec Trevoise facility. The meeting went very smoothly, facilitated by the people at Northtec. In particular, Jack Ladson's preparatory efforts and the efforts of Teresa Ruiz were noteworthy. Jack's introductory presentation about Estée Lauder made very clear the history of the company, and also the importance of color technology in its products. We also received and appreciated some nice gifts. Once again, I thank Jack, Teresa, and the entire Northtec staff for sponsoring our Board meeting, and introducing all of us to Estée Lauder.

Michael H. Brill

ISCC ELECTS NEW BOARD OF DIRECTORS

Three new directors joined the ISCC Board of Directors at the close of the Annual Meeting in May. Elected to three year terms (1999 - 2002) were Dr. Daniel G. Phillips of Creanova, Inc., Piscataway, NJ, Dr. Arthur W. Springsteen of Labsphere, Inc., North Sutton, NH, and Mr. Ralph Stanziola of Industrial Color Technology, Neshanic Station, NJ. They will be replacing Dr. Helen H. Epps, Mr. James R. Keiser and Dr. Cynthia A. Brewer whose terms will be completed. Mr. William Gresho of Delphi Delco Electronics in Kokomo, IN, was appointed to serve a one year term (1999 - 2000).

Dr. Phillips is Manager of the Color Science and the Industrial Colorants Laboratories at Creanova, Inc., a major manufacturer of pigment dispersions. He has been involved professionally in plastics, ink, and for most of his career, the coatings industry. His interests in color science are in the industrial application of computer color matching and color difference measurement as



well as color order systems and video-to-hard copy representation of color. Dr. Phillips received a B.S. and Ph.D. in Chemistry from Rensselaer Polytechnic Institute, where he was a graduate student in the color science program under Professor Fred Billmeyer. He has been an ISCC member for 25 years. Dr. Phillips is a member of the Federation of Societies for Coatings Technology (FSCT), the Society of Plastics Engineers (SPE), and the American Chemical Society.

Dr. Springsteen is the Principal Scientist and Director for Advanced Development at Labsphere, Inc. He has held the position of Principal Scientist since



1993, before which he was head of the reflectance research division. Dr. Springsteen has developed reflectance in-

strumentation, high and low reflectance materials and coatings, along with a variety of other materials during his tenure at Labsphere. He holds six patents and is presently involved with the development and marketing of new products. Dr. Springsteen received a B. S. in Chemistry from St. Francis College, Loretto, PA; following a M.S. in Chemistry from Marshall University, Huntsville, West Virginia, following with a Ph.D. in Organic Chemistry from West Virginia University. Dr. Springsteen has been a member of the Council for Optical Radiation Measurements (CORM) Board of Directors since 1991, Chair of the Optical Properties of Materials Technical Committee of CORM and Secretary of CORM since 1995. Dr. Springsteen was a member of the National Research Council of the United States and is currently a member of the American Association of Textile Chemists and Colorists (AATCC), the American Society for Testing and Materials (ASTM), the American Chemical Society (ACS), the Council for Near-Infrared Spectroscopy and the Society for Applied Spectroscopy.

Mr. Stanziola founded Industrial Color Technology in 1985. Industrial Color Technology offers a variety of services primarily directed towards the solu-

tion of industrial problems which involve color control. This type of work was not new to Mr. Stanziola. In 1970 he was one of the founders of Applied Color Systems, Inc. and operated as Executive Vice-President and Technical Director.



Mr. Stanziola spent 9 years as Technical Representative and General Sales Manager for Davidson and Hemmendinger, and later for Kollmorgen Corporation, which had acquired Davidson and Hemmendinger. At the beginning of his career,

he spent nine years in Research and Technical Service for the Dyes Department of the American Cyanamid Company, Bound Brook, PA. Mr. Stanziola is the holder of two patents. He received a B. S. in Chemistry from Philadelphia College of Textiles and Science. Mr. Stanziola has lectured on color at colleges, universities and industrial sponsored courses throughout the United States, Europe, and Japan. He is a member of the American Association of Textile Chemists and Colorists (AATCC), the Detroit Colour Council (DCC), the Federation of Societies for Coatings Technology (FSCT), and the Society of Plastics Engineers (SPE). He was awarded the FCST Armin J. Bruning Award for his outstanding contribution to the science of color in coatings technology and the Technical Association of the Pulp and Paper Industry "Finest Faculty" Award.

William M. Gresho, of Carmel, Indiana, is a Senior Color Scientist for Delphi Delco Electronics Systems. He has spent 8 years in manufacturing research and has 25 years experience in product development. For the last six years he has been involved with the appearance technology of interior automotive electronic instrumentation, concentrating on the measurement and control of reflected, transmitted, and emitted color. Some of the areas of his expertise include the application and development of colorimetric methods for automotive interiors and instrumentation, and the measurement of color and light, vibration, acoustics, fluid flow and dimensional metrology. He is the

holder of two patents, four patent protective documents, and has published articles in various areas from basic research to applied design. Mr. Gresho received an M.E. in Electrical Engineering from Rensselaer Polytechnic Institute and a B.S. in Electrical Engineering from Lehigh University. He has also done graduate study in systems theory at Rutgers University. He is a member of the Detroit Colour Council (DCC) and the Society of Plastic Engineers (SPE).

Dr. Robert Marcus, Publicity

**ISCC'S 2ND PANCHROMATIC
CONFERENCE,
FEBRUARY 19-21, 2000
SAVANNAH, GEORGIA
"COLOR IN ITS SURROUND"**

In the tradition of ISCC Williamsburg and Panchromatic conferences, this meeting will foster intensive interactions within a small group of specialists from varied disciplines. This format will allow us to learn from, and build on, each others' work. We will compare neural models and appearance models, examine research methods, learn about new approaches and applications, and study the richness of using color surrounds in art and architecture. Please join us in Savannah for our second Panchromatic conference. Following are examples sampled from the many papers planned for presentation at the conference:

Where is the Color in Color Vision?

Steven K. Shevell, Visual Sciences Center
University of Chicago

Demonstration of the Effect on Colors of a Surround that Exhibits Color Assimilation

Joy Turner Luke, Studio 231, Virginia

On the Perception of Brightness and Contrast of Variegated Backgrounds

Mark D. Fairchild, Munsell Color Science Lab, RIT
Moving Color to Three Dimensional Space
Anna Campbell Bliss ASID

The Effect of Surrounds on Color Discrimination and Color Appearance

Vivianne C. Smith and Joel Pokorny,
Ophthalmology, Visual Science & Psychology,
University of Chicago

Vision and Drawing in Interdisciplinary Design

Christopher Rose, Architecture & Design,
University of Brighton

Simultaneous Contrast in Three Dimensional Images

James Schirillo and Ken Perkins, Psychology,
Wake Forest University

From Theory to Practice: A Discussion of Simultaneous Contrast in the Classroom, Digital Studio, and in Typographic Design

Carol Waldron and Barbara Martinson,
University of Minnesota

Measuring Color Adaptation on Monitors

Klára Wenzel, K. Ladunga, Coloryte Hungary Inc.

Color Theory and Interior Architecture

Mary C. Miller, *Color for Interior Architecture*

Effects of Surround Color on Color Measurement

David L. Spooner, rhoMetric Assoc., Ltd.

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**COLOUR ON THE INTERNET**

In the April Newsletter 1999 of the Colour Group (Great Britain) there is a report on the Meeting of the Colour Group about "Colour on the Internet", by Tony Walkden tony.walkden@gecm.com. The abstracts included in the report are:

- *The need for good use of colour on the Internet, by Tony Walkden,
- *A brief history of the Internet and the explosion of the WWW, by Trevor Wright,
- *Exploiting colour in the design of websites, by Chris French & Simon Granger,
- *How monitor calibration, gamma correction and colour palettes can affect web displays, by Lindsay MacDonald,
- * The Colour Group Website, by Patrick Forsyth,
- * The Colordome Website by Carole Anne Ferris

Jose Luis Caivano
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COLOR RESEARCH AND APPLICATION IN THIS ISSUE, JUNE 1999

We begin this issue with an article on "A New Method for Colour Measurements in Graphic Arts." In their article, A. Verikas, K. Malmqvist, L. Malmqvist, and L. Bergman describe some of the problems in color measurement for control of printing presses and present a method and a tool for color measurement directly on printed half-tone multicolored pictures as well as on the inverse (the color separation). They introduce the concept of color impression, which integrates information about the tonal values and ink densities. Finally they report on experimental investigations of a system that provides a way of fast and objective comparison between two pictures and also enables the user to examine variations in the printing process over time. According to the authors, the use of the system can result in reduced consumption of inks and therefore lessen the problems of smearing and printing through.

Over the last two years, beginning with the article by Fairman, Hemmendinger and Brill on "How the CIE 1931 Color-Matching Functions Were Derived from Wright-Guild Data," there have been several articles in this journal that seek to examine or explain the CIE system of colorimetry and ramifications of the choices that were made in its development. In this issue, there are other articles in this line. First, in "Inter-Observer Comparison of Color-Matching Functions," Claudio Oleari simulates and then compares two different observer pairs using a common frame of reference. In the first pair he compares the Vos Modification of the CIE 1931 Standard Colorimetric Observer and the CIE 1964 Supplementary Standard Observer. In the second pair he includes the CIE 1931 Standard Colorimetric Observer and the Vos Modification of the CIE 1931 Standard Colorimetric Observer. Dr. Oleari shows the value of using a common reference frame.

Next in a piece, which has the tone of a Color Forum article, Dr. Kees van Trigt discusses the CIE method of measuring and specifying color rendering properties of light sources. As Dr. van Trigt explains, "when

an interim solution to a problem is proposed, authors are aware why the proposal is provisional. Unfortunately, the trade-offs and assumptions are often not well documented. Sometimes they are discussed at conferences or in private conversations. When a method gains popularity, and its use spreads beyond the original inner circle of specialists, the assumptions tend to be forgotten." For these reasons, he calls renewed attention to the difficulties that were known at the time of development and also points out additional problems that appear to have been underestimated or overlooked in "Color Rendering, A Reassessment". He does this to provide an up-to-date assessment of the strong and weak points of the existing method and to re-open a discussion about the underlying principles.

Color monitors have become such a big part of color science in both its development and its application, that we have two articles in this issue investigating the usefulness of CRT Color Monitors in the study of color science. In the first article "Visual Determination of Hue Suprathreshold Color-Difference Tolerances Using CRT-Generated Stimuli" Drs. Ethan D. Montag and Roy S. Berns describe experiments to test the efficacy of using a computer-controlled cathode ray tube (CRT) to determine hue suprathreshold color-difference tolerances. These experiments were done in conjunction with the re-determination of hue tolerances of four different color centers that had been reported in earlier research. Thus it was possible to compare the data resulting from two different CRT techniques with data developed on physical samples in two different media. The authors concluded that the parametric effects can be studied more quickly and economically using a computer-controlled CRT display.

In the second article, J. R. Jiménez, J. F. Reche, J. A. Díaz, L. Jiménez del Barco, and E. Hita chose to tackle one of the most critical issues in color-reproduction systems... the fidelity with respect to the original image. No matter how an image is captured and managed, it is finally reproduced on a monitor. It is this reproduction that limits the fidelity, and thus the reproduction quality. Therefore in "Optimization of Color Reproduction on CRT-Color

Monitors" the authors seek to quantify the influence of the brightness and contrast level settings of a CRT-color monitor in the color reproduction of Munsell colors. By doing this, they are able to recommend optimal color settings for monitors.

Before I close this column, I would like to point out a series of comments on CIECAM97s that are included in the Communications and Comments section of this issue. Dr. Robert W. G. Hunt starts off the discussion with "Some comments on using the CIECAM97s Colour Appearance Model." These are followed by "Some Additional Comments on CIECAM97s" by John J. McCann. Finally Michael H. Brill adds "Demystifying CIECAM97s: A Reply to Hunt."

*Dr. Ellen C. Carter
Editor, CR&A*

SAVE THE DATE!!! JUNE 24-29-2001

The ISCC will have the honor of hosting the 9th AIC Congress in Rochester, New York at the Rochester Riverside Convention Center from June 24-29, 2001. Please mark your calendars now!!! This promises to be the most important color science meeting to attend in the year 2001. The Organizing Committee has already begun its work. For more details, please visit the ISCC web page at www.iscc.org/aic2001. Respectfully submitted,

Paula J. Alessi, Chair
AIC 2001 Organizing Comm.
Eastman Kodak Company
Rochester, New York 14650-1907

ATTENTION!

AIC NEWSLETTER ON THE WEB!

The AIC Newsletter 13 1998 can be found on the ISCC web page at www.iscc.org. Please check it out to see what has happened in the area of color in our neighboring countries around the world. Since AIC does not have their own web site, ISCC offered to provide this capability. The AIC wishes to thank the ISCC.

Respectfully submitted,

Paula J. Alessi
AIC Vice President



PROPOSED BY-LAWS CHANGES OFFICERS ELECTED BY POPULAR VOTE

When ISCC was founded in 1931, the members were all Member-Body delegates. Today, in 1999, the ISCC has 81 Member-Body delegates, but also many more individual members (599), including 9 Honorary, 24 student, and 42 retired members. Over the years, the ISCC has tried to accommodate to the change in membership. However, some more change is needed.

In 1989, the individual, Honorary, student and retired members were formed into one Member-Body, known as the individual member group (IMG). It was hoped that the IMG Member-Body would adequately represent the best interests of the individual members in the Member-Body structure of the ISCC. The integration of individual members into the Member-Body structure by forming the IMG delegation was a very nice way of giving voting power to the individual members. The IMG delegation can have up to 10 delegates with 3 voting delegates serving on a 3-year rotating basis. At each Annual Meeting, there was an IMG meeting, where delegates and a Chair of the IMG delegation were elected. Lately, attendance at these IMG meetings has been very low. Clearly the IMG Member-Body was not adequately serving its intended function. A way must be found to ensure equitable voting power for the individual members, who are the heartbeat of today's ISCC.

In recognition of the shortcomings of the current structure, the Board of Directors formed an Ad-Hoc Committee on IMG to propose a solution. This Ad-Hoc Committee was chaired by Ellen Carter with Paula Alessi, Karen Braun and Jack Ladson serving as members. After many long e-mail discussions, this Ad-Hoc Committee came up with three recommendations: · Disband the IMG Member Body, · Give direct voting power to all individual members in the election of Officers and Directors of the ISCC. This will allow individual members to play a more active and direct role in defining the leadership of the ISCC. · Retain the current practice that policies, publications, and any other items currently decided by vote would remain in the hands of the current voting group, comprising Member-Body voting delegates, Officers and Directors of the Council, and Chairs of Standing Committees.

If these recommendations are accepted, election of Officers and Directors will no longer be carried out by a majority of voting delegates, but rather by vote of all individual members. However, as is stated in Article I. Section 5a. of the ISCC By-Laws, "...the ultimate general authority and responsibility for the policies and affairs of the Council shall be vested in the Member-Bodies acting through their voting delegates and the Board of Directors".

These measures require changes in the following changes to the ISCC By-Laws and Standing Rules:

1. In Article I., eliminate Section 5 (b) on the Individual Member Group
2. In Article I. Section 6 (a) on Voting Rights, remove ", including the IMG Member Body" from the paragraph labeled 1.
3. In Article III. Section 3 on Mode of Election, modify the wording of sentence one by replacing "the voting delegates" with "popular election by the membership at large, each member getting one vote."
4. In Article III. Section 3 on Mode of Election, modify the last sentence by replacing "before a vote" with "before the ballot is sent to the membership at large."
5. In Appendix A of the Appendices to the Standing Rules, under the Voting Section, in sentence one of the third paragraph, replace "the voting delegates" with "all members" and in sentence one of paragraph nine replace "voting delegates" with "members".

Please note that voting on publications will remain as is stated in the Standing Rules Section 2 (d) on Problems Committee in paragraph 6.

By publication of these recommendations in ISCC News, the entire membership is being informed 90 days before the voting process on the By-Laws and Standing Rules changes will take place. Anyone wishing to discuss these recommendations further is encouraged to contact:

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Ellen Carter, Ad-Hoc Committee on IMG Chair
Minolta Corporation
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ecarter@minolta.com

ISCC WELCOMES NEW MEMBERS

Mr. Jeff Alspach	Dupont Automotive Products, 945 Stephenson Hwy., Troy, MI 48007-2802	248-322-2112
Ms. Carlisle Bynum	2766 Log Cabin Drive, Smyrna, GA 30080	404-352-8352
Mr. David R. Brydges	Graphics Microsystems, Inc., 1284 Forgewood Ave., Sunnyvale, CA 94089	408-745-7745
Mr. Edward Coronado	Security Plastics West, Ltd., 3900 W. Military Hwy, McAllen, TX 78503	956-618-3989
Mr. Kurt Cyr	Kurt Cyr Interior Design & Decoration, 6840 Claire Ave., Reseda, CA 91335	818-881-0006
Mr. James J. Davis	GretagMacbeth, LLC, 617 Little Britain Rd., New Windsor, NY 12553	914-565-7660
Mr. Russell Dodd	CTI Group, Color Technology, Inc. 2455 NW Nicolai St., Portland, OR 97210	503-944-2313
Mr. Stephen Glasscock	Hallmark Cards, Inc. 2501 McGee, Kansas City, MO 64108	816-274-4457
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Ms. Jill Morton	Colorcom, 954 Kului Place, Honolulu, Hawaii 96821	808-373-1118
Mr. Richard M. Scott	Sherwin-Williams Co., 601 Canal Road, Cleveland, OH 44113	216-566-3929
Ms. Hao Sun	University of Chicago, 939 East 57th Street, Chicago, IL 60637	773-702-1987
Dr. Eric K. Zeise	NexPress LLC (Heidelberg/Kodak joint venture), 7 Creekwood Lane 7 Creekwood Lane, Pittsford, NY 14534	

WELCOME TO THE ISCC!

AMERICAN ASSOC. OF TEXTILE CHEMISTS AND COLORISTS

Color Measurement Test Methods
(RA36)Committee

Committee met in Charlotte, NC on February 25, 1999. After approving minutes of the last meeting, Charles Bino, the new Chair, welcomed Hal Good and Laura Scott as new members of the Committee.

Old Business:

I. Reports from Subcommittees

A. *Color Evaluation Video (Gray Scales and Chromatic Transference)*

Ann Laidlaw reported that there will be no mock video. Harry Hammond has a quote from a videographer for making the entire video at approximately \$13,000. Neri volunteered to work with Hammond on selecting specimens to demonstrate evaluation techniques.

B. *Lighting Communications Subcommittee*

Keith Hoover reported receiving spectral power distribution data collected by Thornton and Fairman. Hoover is looking at getting NC State students to do some radiometric measurements, to be compiled into a master database. Hoover hopes to begin measurement phase in two weeks.

C. *Gray Scale Training*

Laidlaw moved to remove this as an open item. Connelly seconded.

II. Letter Ballots

A. Committee letter ballot and concurrent Technical Committee on Research Committee (TCR) ballot on Visual Evaluation Procedure

1. Neri reported that of 148 TCR members polled, 93 responses were received. There were three comments from affirmative votes, four negatives with comments, and 19 abstentions. Of the 78 RA36 members polled there were 41 responses with three negatives with comments, four comments from affirmative votes and two abstentions.

2. Extensive discussion followed to resolve the negatives.

(a) Lane commented on negative regard-deed for alternate viewing angles. Document revised to include the option of other viewing angles.

(b) Lane commented on negative regard-

ing the 5 step Gray Scale rating. A reference is to be added regarding the 9 step Gray Scale rating.

(c) Vogel moved to add to 8.2.2 Magnitude evaluation to note that if this method is referenced by another that has a rating scale, the user can use the scale from the referencing procedure. Connelly seconded and motion was approved.

III. Other Documents in Review

A. Evaluation Procedure 1: Gray Scale for Color Change: Connelly reported that no work had been done.

B. Evaluation Procedure 2: Gray Scale for Staining: Connelly reported that no work had been done.

C. Evaluation Procedure 3: AATCC 5 Step Chromatic Transference Scale Vogel reported the new visual evaluation procedure under development above.

D. Evaluation Procedure 4: Standard Depth Scales for Depth Determination-Vogel referenced the new visual evaluation procedure under development above.

IV. Liaison with other organizations

A. ISCC: Laidlaw reported that ISCC Member Bodies have been restructured to include three voting delegates. Bino, Laidlaw and Connelly to be on the delegation.

V. New Business

A. Laidlaw reported that Wrennie Edwards of NC State University had looked at assessment of yellowing of textiles using Gray Scale for Color Change, Gray Scale for Staining, and Chromatic Transference Scale. Edwards data supported the use of Gray Scale for Staining for visually assessing yellowing of textiles.

R. Harold reported on the Color Symposium to be held in March 2000. The proposed location is Southeastern Coast of USA. Four themes have been discussed. Design, Lighting Issues and Concerns, Color Communications, and New Instrumentations, with a breakout session on the afternoon of the first day. Harold has an outline and will work with his subcommittee on refining subjects and obtaining speakers.

VII. Meeting adjourned at 12:00 noon.

Respectfully submitted,
Gregory Stehn
Secretary, RA36

NOTEWORTHY TALK ON CURRENT NIST WORK

Presented at the ASTM E12 Symposium on
"Industrial-strength" Appearance Research
Fort Lauderdale, Florida, January 27, 1999

Measurements and Predictions of Light Scattering by Coatings.

T.V. Vorburger, E. Marx, M. McKnight, M. Nadal,
Y. Barnes, A. Thompson, M. Galler, F. Hunt, and
M. VanLandingham. National Institute of Standards
and Technology.

We show comparisons between calculations and measurements of angle resolved light scattering distributions from clear dielectric, isotropic coatings. The calculated distributions are derived from topography measurements performed with scanning white light interferometric microscopes. Kirchhoff formalism for light scattering is applied to the topographic images to derive the calculated scattering distributions. The measured distributions are obtained with the spectral tri-function automated reference reflectometer (STARR) developed by NIST having a detector with aperture half-angle of about 1.4° and an instrument signature with similar angular width, both of which are modeled in the calculations. Comparisons between the measured and calculated results are shown for two surfaces with rms roughness of approximately 150 nm and 750nm. This work is part of a project designed to advance appearance metrology through a systems approach. We are applying techniques in optical metrology, surface metrology, mathematical modeling, and computer rendering to the development of new methods of appearance characterization and image rendering of surfaces. Experimental and modeling research activities will be conducted in four areas: coating composition, microstructure of surfaces, reflectance properties, and appearance descriptions. The overall goal of this work is to support the capabilities for researchers and engineers to assess the effects of surface constituents on appearance properties and to design surfaces with appropriate appearance and durability properties.

Theodore Vorburger

INTERNATIONAL COATINGS EXPO (ICE '99)

With less than six months left before ICE '99, exhibitor response is strong as over 260 companies have reserved over 80,000 sq. ft. of space. The FSCT-sponsored event will be held October 20-22, 1999 at the Dallas Convention Center in TX. Held in conjunction with FSCT's Annual Meeting and the International Coatings Technology Conference, it will feature products and services of supplier companies to the international coatings industry.

The International Coatings Expo attracts the world's top technical personnel and its name reflects its truly worldwide appeal. Demographics from the 1998 Expo show that 84% of the attendees came from the U.S., and 16% from over 65 other countries. Over 56% of the attendees are involved in R&D and administrative and supervisory capacities. To reserve space contact:

Exposition Mgmt., Inc. 10425 Old Olive St. Rd.,
Ste. 103, St. Louis, MO 63141-5940;
tel: 314-994-9640; fax: 314-994-9650;
expomanage@aol.com.

All other inquiries: FSCT, 492 Norristown Rd.,
Blue Bell, PA 19422 tel: 610-940-0777;
fax: 610-940-0292; *fsct@coatingstech.org*.

For updates: *www.coatingstech.org*.

ADVERTISING OPPORTUNITY!

The ISCC advertising policy for the Inter-Society Color Council News is as follows Pre-paid color-related advertising will be accepted thirty days in advance of the publishing date. The rates are:

\$ 100	business card-size ad
\$ 250	1/4 page ad
\$ 500	1/2 page ad
\$1,000	full page ad

Artwork must be publisher ready and will be returned within 30 days after publication. The publishers reserve the right to determine the acceptability of the advertising. There is a 20% discount offered for a yearly contract. For further information contact: Tek Celikiz, ISCC News Editor or Cynthia Sturke, ISCC Office.

COLOR VISION - PERSPECTIVES FROM DIFFERENT DISCIPLINES

Edited by Werner G. K. Backhaus, Reinhold Kliegel and John S. Werner. Walter de Gruyter & Co., Berlin, New York, 1998, 344 pp., hardcover \$89.95, paperback \$49.95.

The study of perception, with color vision as a prototypical example, is implicitly, if not explicitly, a philosophical inquiry. Students of color must grapple with many philosophical issues in order to make progress in understanding what color perception is and how it works. How is it possible to objectively study the subjective realm of sensation and perception? What is the relationship between the mind (our experience of the quality of color) and the body (the anatomy and physiology)? What are the goals of color perception? What is the role of experience, culture and language in our perception of the world? What techniques are valid for answering these questions? Many of the chapters in *Color Vision - Perspectives from Different Disciplines* put these issues in the forefront making the volume a very provocative read.

This book is a collection of 18 chapters originating from a "Symposium on Color Vision" that took place in Potsdam in 1996. The goal of the symposium was to review the current state of color vision from a wide perspective of disciplines including neurophysiology, psychophysics, comparative color vision, molecular genetics, acquired and congenital color deficiencies, philosophy and art. As such the book is a snapshot of the research interests of the symposium participants at the time of the meeting. The editors state in the introduction that the book is conceptualized as a textbook for introductory courses at the graduate level. The goals of the book are to introduce those new to the field an introduction and to provide an overview and update on current research to established scientists. The wide scope of the material in the book is hoped to stimulate a broader perspective in those participating in color vision research.

The book fails to meet its goals of being a text or an

overview and update of current research. As an introductory text there is not enough basic material presented in an organized manner which would allow students to understand the fundamentals of color vision research. For the established scientist, the topics represented are too idiosyncratic to represent the current state of the art in the field. That is not to say the book is without merit. It does introduce readers to many aspects of color vision that they would not normally confront in their own research areas. This type of "cross-pollination" is very helpful in stimulating new ideas and new perspectives for one's own research endeavors.

Another characteristic of the book that detracts from its ability to be used as an introductory text is that there are numerous inaccuracies and inconsistencies presented by some of the authors. Anyone reading this book should keep in mind that the authors are expressing their own opinions, biases, and beliefs when presenting their own material. A textbook, however, should be more meticulous in its fact-checking. I would be wary using this as an introductory text because students may be confused by some of these errors and may not be able to separate fact from conjecture.

I do think that this book could be used quite effectively in a seminar setting for more advanced graduate students. The different authors' perspectives and opinions would certainly lead to lively debate and critical analysis. The various philosophical issues presented in the book would certainly stimulate students who are tired of the more traditional review article or textbook chapter. The chapters would also be useful as starting points for more in depth discussion of varied topics that students would not ordinarily be exposed to.

The book is reasonably priced, especially the paperback version. It is published on high quality stock and a number of authors take advantage of this with full color images and graphics. Notably, in chapter 1, John S. Werner uses many reproductions and full color graphs and charts in an interesting exposition on how the impressionist artist, Claude Monet, may have been influenced by concepts of color in his day and how his art may have been affected by vi-

sual impairments due to aging. There of this quality.

The organization of the book is also lacking. Review and theoretical articles are mixed in with experimental papers. Perhaps a better thematic organization would help the flow of the book. For example, the chapter by Maureen and Jay Neitz on the molecular genetics of color vision would go nicely with Horst Scheibner's article on dichromacy. The four articles on non-human color vision might have made a more natural grouping.

I would briefly like to mention a number of chapters that I found particularly interesting. Petra Stoerig's chapter on residual color discrimination in cortically blind patients points out how the multiplexing of color and spatial vision allows patients who have no conscious awareness of vision to make wavelength discriminations. Christa Neumeyer contributes a fascinating chapter on color vision in lower vertebrates with descriptions of the techniques used to psychophysically evaluate animals' color vision. A step by step graphical description by Michael D'Zmura is a nice example of modeling color contrast gain control. The chapter by Hans Irtel on binocular brightness combination and Kenneth Knoblauch's chapter on infant color vision show how in two disparate areas of research, psychophysics and visual-evoked potential recordings, careful analysis and control of stimulus parameters can elucidate the properties of visual processing that were previously misunderstood. I found Rainer Mausfeld's treatise on perspectives for color research particularly provocative. He suggests a paradigmatic shift in the analysis of visual function from the traditional "elementaristic perspective" to an "ecological approach". Just as Judd (JOSA, 50, 254, 1960) responded to Land's demonstrations, a response to Mausfeld may claim that no new theories are required to explain his findings. It would be interesting to see how D'Zmura's model would process the stimuli used in Mausfeld's experiments.

*Dr. Ethan D. Montag
Assistant Professor
RIT, Center for
Imaging Science*

HANDBOOK OF COLOR SCIENCE

Revised Edition, Published in 1998,
Published by University of Tokyo Press,
1548pp. (6x9), ¥36000 (\$350)

A revised second edition of the HANDBOOK OF COLOR SCIENCE, edited by the Color Science Association of Japan, was published in June 1998 by University of Tokyo Press. Coming a full 18 years after the publication of the first edition of this acclaimed reference book, the completely revised and updated second edition into 33 chapters covering all aspects of basic and applied science.

Color Science is a multi-faceted field comprising contributions from many disciplines including physics, chemistry, biology, psychology, and engineering. Its applications affect our lives in myriad ways, from the clothes we wear and the food we eat to architecture, the fine and applied arts, and media of communication and entertainment.

This encyclopedic volume of more than 1500 pages, to which 120 scientists contributed, covers the entire range of subjects that are included under the subject of color. It begins with the basic relationship between light and color, discusses the range of colors found in nature and their psychological and practical meanings, and expands to discuss the uses human beings have made of color, from textile and paper design through filters and plastics, color printing and copying, and color television, up to the latest developments in technology like multimedia color management and color image information processing.

The first edition of this volume has been used as an indispensable resource by Japanese scientists, designers, and researchers in many fields for almost two decades. It has no equivalent in English. The greatly expanded and updated second edition will continue to be relied upon by professionals in all the fields for which color science is a necessary tool.

*Gorow Baba
Murakami Color Science
Institute of Technology
Tokyo, Japan*

IS&T AND SID ANNOUNCE 7th COLOR IMAGING CONFERENCE

Color Science, Color Engineering, Systems and Applications: Putting It All Together, on November 16-19, 1999 at The SunBurst Resort, Scottsdale, AZ. Tentative Program includes Tutorials, Technical Papers and Posters.

Tutorials

As in the past, this year's conference will feature a comprehensive series of tutorials on both basic and advanced topics in color science, measurement, imaging, technology, and image processing. Tutorials are planned on the following topics:

- Fundamental Colorimetry
- Instrumentation, Measurement & Calibration
- Color Appearance Models
- Color in Hardcopy
- Color in Displays
- Color Considerations for the Internet and Web
- Color Management Systems (CMS)
- Creating CMS Profiles
- Image Quality Assessment
- Digital Color and Tone Reproduction
- Color in Motion Imaging and Multimedia

Papers and Posters Program

Technical Papers and Posters are requested covering, but not limited to, the following topical areas:

- Color Engineering
- Color Science
- Color Standards
- Color Systems
- Applications of Color Science and Engineering
- Human Color Vision & Psychophysics
- Color Display Technologies
- Color Management
- Color in the Graphic Arts
- Color in Software Applications
- Color Appearance
- Color Image Processing
- Color Calibration and Measurement
- Color Scanning and Printing Technologies
- Capture of Color Images
- Color on the Internet and the Web
- Color in Video, Motion Pictures and Television
- Color in Digital Photography
- Color in Visualization and Virtual Reality
- Color in Multimedia

Special Features of the Program

The program will include keynote presentations by noted experts in the color imaging field, including Dr. R.W.G Hunt. Generally, the International Color Consortium (ICC) and several standards committees also hold meetings in conjunction with this conference. Authors are asked to address the conference theme of "Putting It All Together" in their papers and presentations.

An Invitation to Authors & Participants

Original work on the topics suggested in the Papers and Posters Program as well as others related to color imaging will be considered by the Program Committee when submitted according to the process described at <http://www.imaging.org/conferences/color7/authors.html>. Please submit a 2-3 page technical summary (1,000+ words), indicative of the final paper or poster content by April 2, 1999 to: papers@imaging.org or Color Abstracts; IS&T; 7003 Kilworth Lane; Springfield, VA 22151

If you have any questions, please contact the Technical Program Chairs listed below. Final decisions on presentation format (poster or paper) for all papers are at the discretion of the Technical Program Committee. Upon acceptance of your summary, you will be given instructions for the preparation of the full paper to be published in the conference proceedings and on the CD-ROM. Final papers are due by September 3, 1999 in electronic form.

General Co-chairs:

IS&T

Jack Holm, Hewlett Packard Labs,
1501 Page Mill Rd., 2U19 #100,
Palo Alto, CA 94304
Tel: 650-236-2436 Fax: 650-857-4320
jack_holm@hp.com

SID

Todd Newman, Canon Information Sys.
20300 Stevens Creek Blvd.
Cupertino, CA 95014
Tel: 408-342-2387 Fax: 408-342-2260
todd_newman@cisnc.canon.com

The Inter-Society Color Council is one of the Co-operating Societies.

DETROIT COLOUR COUNCIL SPRING MEETING



The DCC's first meeting was March 31, at the Northfield Hilton in Troy, MI Titled: Women in Design - Color and Trim Concept Vehicles. Four designers from Chrysler reviewed the thought processes they went through in picking the interior and exterior color schemes. The presentation included slides and the actual automobiles. Afterward, the audience had the opportunity to get a close look at each car and talk to its designer. The speakers and their cars (all convertibles) were:

- | | | |
|-----------------|--|---------------|
| -Valleria Allen | Jxtra | Aztec Gold |
| | - Like the Muscle cars of the 60's | |
| -Susan Moss | Allure | Scarab Pearl |
| | -Refined elegance with jewel-like features | |
| -Sue Howard | Tech 27 | Liquid Silver |
| | -For the new millennium. Removed exterior molding for a high tech appearance. | |
| -Kim Roycraft | Seamist | |
| | -Inspiration came from an old mansion - 1920 as vintage. Used a combination of Jade Green and Ivory on the interior. | |

Jim Keiser

COATINGS FOR ASIA 99

The preliminary technical program for Coatings for Asia '99 has been announced. The first Pan-Asian conference and exposition for protective and marine coatings, will be held August 30-Sept. 1, 1999, in Singapore. Jointly sponsored by Federation of Societies for Coatings Technology (FSCT), Oil & Colour Chemists' Association (OCCA), SSPC: The Society for Protective Coatings and JPCL/PMC. the event is designed for those who manufacture and supply chemicals and raw materials, suppliers of manufacturing plant and test equipment, those who purchase and specify protective coatings and related equipment, and applicators of protective and marine coatings. Technical sessions will feature presentations on coatings formulation and manufacturing, as well as coatings application and inspection.

About the Organizers: Federation of Societies for Coatings Technology (FSCT) is an individual mem-

ber organization of over 7,200 international professionals which provides technical, educational and professional development seminars, publications, and activities for the coatings industry. FSCT is an ISCC member body. Address: FSCT 492 Norristown Rd, Blue Bell, PA 19422-2350 USA, Tel: 610-940-077, www.coatingstech.org. Oil & Colour Chemists' Association (OCCA) (SURFEX Ltd.) is an international, UK-based, learned society and professional body. It comprises individual, qualified persons employed in, or associated with, the world-wide surface coatings industries. The word 'Oil' in its title refers to the vegetable oils, which once formed a major part of surface coatings' formulations. Priory House, 967 Harrow Road, Wembley, Middlesex, HAO 2SF, England Tel: +44-(0)-181-908-1086, www.occa.org.uk. The Society for Protective Coatings (SSPC): is an international association serving users and suppliers of industrial maintenance and marine coatings and equipment. It was founded as the Steel Structures painting Council, a non-profit www.sspc.org. PMC: Protective & Marine Coatings Asia/Pacific is the Asia Pacific edition of the Journal of Protective Coatings & Linings, published monthly by Technology Publishing Company in cooperation with SSPC. In addition to general industry news, PMC features information specific to the region. 2100 Wharton St, Suite 310, Pittsburgh, PA 15203 Tel: 1-412-431-8300, www.protectivecoatings.com.

Keynote Presentations: The conference will begin with two keynote lectures, tentatively scheduled as follows: The Painting Industry in SE Asia-Representative of Singapore Paint Makers Assoc.

- Special Considerations for Decorative and Protective Paints in a Tropical Locale-Dr. Loh Wah Sing, Productivity and Standards Board, Singapore.

Invited Lectures: Polymer Films from Microemulsion Polymerization—L.M. Gan and C.H. Chew, National University of Singapore and Institute of Materials Research & Engineering, Singapore. Water-repellent Coating Materials Based on Poly(methyl methacrylate) with Poly(fluoroalkyl methacrylate) Blends—S.H.Goh, Dept of Chemistry, National University of Singapore, Singapore.

General Information: For further details about the technical session on formulation and manufacturing,

contact FSCT at Blue Bell, PA. For additional information on the coatings application and inspection session, contact SSPC. For exhibit information: Exposition Mgmt, Inc., 10425 Old Olive St. Rd., Ste. 103, St. Louis, MO 63141-5940; tel: 314-994-9640; fax: 314-994-9650, expomanage@aol.com; or OCCA, tel: 44-181/908-1086; fax: 44-181/908-1219.

Hotel Information: Hotel reservations must be made through the following appointed agent: Hena Arshad, 534B North Bridge Rd., Singapore 188749. Tel:+65-337-6288;fax:+65-333-9266; cehrs@singnet.com.sg. The Marina Mandarin will serve as the Coatings for Asia '99 headquarters hotel. The full conference registration fee is \$S750 for members of the corresponding organizations (FSCT, OCCA, and SSPC). The non-member fee is \$S850. For registrations received prior to August 1, 1999, deduct \$S90. One-day registration (either August 30 or 31) is also available. The member fee is \$S440 and the nonmember fee is \$S500. For one-day registrations received prior to August 1, 1999, deduct \$S50. Fees may be paid in \$S, \$US, or £UK (pounds sterling). Contact Yvonne Waterman, Surfex Ltd., Priory House, 967 Harrow Rd., Wembley, Middlesex, HAO 2SF, UK; Tel: 44 (0)181-908-1086; fax: 44(0)181-908-1219.

THE SOCIETY FOR IMAGING SCIENCE AND TECHNOLOGY IS&T

Photo-Digital industry members will get a unique opportunity to learn about the latest development in conventional, digital and hybrid photo-image processing at an IS&T (www.imaging.org) symposium immediately preceding the 2000 Photo Marketing Association (PMA) International Convention in Las Vegas, NV. The meeting is sponsored by IS&T with support from PMA's Society of Photofinishing Engineers. The 2-1/2 day conference will include many semi-technical sessions that can be easily understood by marketing and other non-technical people in both large and small amateur/professional imaging provider companies, imaging retailers and companies producing products for use in this industry. The IS&T 11th International Symposium on Photofinishing Technology: Conventional, Digital & Hybrid Systems will be held in Las Vegas, January 30 to February 1, 2000.

For information on program details, registration or providing a presentation contact IS&T, 7003 Kilworth La. Springfield, VA info@imaging.org. tel: 703-642-9090; fax: 703-642-9094.

Marking the 20th anniversary of this biennial conference, the January 2000 conference continues the tradition of providing an umbrella for presentations and discussions of the latest technologies employed in the processing of images with conventional, digital and hybrid systems. The focus of this conference will be on the convergence of conventional and digital technologies for optimizing the quality and variety of images that can be produced in both large centrally-located and decentralized on-site facilities. The preliminary program has been segmented into three general topic groups as follows:

Traditional—Amateur/professional Color/B&W photographic films and papers, sensitizes materials, image permanence, photographic production and finishing systems.

Chemical/Environmental/Photoprocesses—Color/B&W Chemicals, including new processes, replenishment and rejuvenation; Operating regulations, including OSHA, RCRA and silver issues; Recycling/Recovery, including chemical/product packaging, water and energy.

Digital/Hybrid/Electronic—Hybrid imaging systems, including Digital Minilabs and Digital Imaging Kiosks/Copy Stations; Digital imaging processing/printing systems for small and large format production; photofinishing, electronic still, video cameras, electronic imaging systems, professional application, image processing, copy systems and digital prepress as it affects professional laboratories.

CYNTHIA STURKE

Pictured here is the person behind that pleasant voice on the phone when you call the ISCC Office. Meet Cynthia Sturke, our own ISCC Office Manager.



She joined us on staff three years ago. Cynthia came to us from one of our Sustaining Members, Hunter Laboratories. Hunter generously donates office space to the ISCC in Reston, VA and helped us to find Cynthia. We thank them for their ongoing, generous support and contributions. At Hunter, Cynthia provided secretary services for their Service Department before deciding to join the ISCC. We are thankful for her decision to come to us. Cynthia attended Grove City College in Pennsylvania, majoring in foreign languages, a big asset in our society. Approximately 11% of our members live outside of the US! One of her ambitions is to visit France and Sweden. She is married to Phillip, who works as a Professional Development Manager for CSC in Falls Church. They have lived in Sterling, VA for the last 5 years and have three wonderful sons. Andrew, age 27, is on faculty at Virginia Commonwealth University in Richmond, VA, serving as Assistant Program Director, Center for Environmental Studies. He and his lovely wife, Anji, have a son, Noah. Marc, their second son, age 24, is a Senior at Salem State College in Salem, MA studying Elementary Education with a minor in Art. Marc is a student member of ISCC. Their third child, Peter, age 13, is an avid swimmer, aspiring to be a dentist. When she is not in the office, Cynthia spends a lot of time as a swimmer's mom, including being chairperson of her son's summer swim team. Cynthia has dramatically transformed the ISCC. One can call the office and get an answer to almost every question. She has adapted well to our organization, and has, in fact, "organized" our organization. She manages everything that comes through the office. We enjoy the up-to-date membership handbook with current coordinates, which I use daily. Her position allows her to meet many interesting people, some over the telephone and others at conference registrations. She is encouraging, solves problems, works hard, and accepts new responsibilities and challenges cheerfully. A wonderful employee! We are thankful for her and her talents. Her office responsibilities also include Newsletter Layout, in coordination with our Editor, Tek Celikiz; membership dues, paying bills, and mailing our publications. Cynthia also works on credit card issues with our Recording Secretary, Rich Riffle. As you can see, she makes all our lives a little easier. Now that you know Cynthia a little better, stop by and say hello.

Jack Ladson, President-Elect

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CALENDAR

Please send any information on Member-Body and other organization meetings involving color and appearance functions with dates, places, and information source to:

Cynthia Sturke
 ISCC Office
 11491 Sunset Hills Rd.
 Reston, Va 20190

tel: 703-318-0263 email: iscc@compuserve.com
 fax: 703-318-0514 website: <http://www.iscc.org>

1999

ASPRS ANNUAL CONFERENCE, Portland, OR,
 Contact: 301-493-0290, fax: 301-493-0208,
www.asprs-portland99.com.

ASTM COMMITTEE D-1, Paint and Related Coatings, Materials and Applications June 13-16, Omni Rosen Hotel, Orlando, FL; info: T. Brooke, Tel: 610-832-9729; Fax: 610-832-9666; email: tbrooke@astm.org

ASTM COMMITTEE E-12, Color and Appearance, June 7-10, ASTM Headquarters, West Conshohocken, PA. Info: Bode Buckley, Tel: 610-832-9740 Fax: 610-832-1547 email: bbuckley@astm.org

AIC MIDTERM MEETING, 22-23 June 1999, Warsaw, Poland. Applications of Colorimetry in Industry and Design. Info: Organizing Committee:
 Tel: +48 22 620 5971 Fax +48 22 620 83 78.

CIE, 24th SESSION, June 24-30, 1999, Intl Commission on Illumination (CIE), Polish Technical Univ., Warsaw, Poland, Info: Session Secretariat.

Fax: +48 22 660 5616, email: CIE99@ee.pw.edu.pl
<http://www.ee.pw.edu.pl/cie99>

CONFERENCE ON REMOTE SENSING EDUCATION (CORSE) "EDUCATION FOR THE NEXT MILLENNIUM" By Teachers. For Teachers. University of Colorado at Boulder, Conference Center.

OSA ANNUAL MEETING, September 26-October 1, 1999, Optical Society of America, Santa Clara, CA, Info: OSA, tel: 202-223-0920, confserv@osa.org.

BULCOLOR '99, October 8-10, Color Group-Bulgaria, Intl Color Conf., Color in All Directions. Varna, Bulgaria Tel: +359 2 88 40 75;

Fax: +359 2 987 93 60 email: ime@mb.bia-bg.com

TAPPI, Oct. 17-22, Technical Association of the Pulp and Paper Industry; Conference, Omni Durham Hotel, Durham, N.C, info: Lisa Archer, Tel: 800-332-8686x225

FSCT ANNUAL MEETING TECHNICAL PROGRAM, October 20-22, Dallas, TX. Contact: Rod Moon, Tel: 610-940-0777; fax: 610-940-0292, email: rodmoon@coatingstech.org

AATCC, INTERNATIONAL CONFERENCE AND EXHIBITION, Oct. 12-15, American Association of Textile Chemists and Colorists, Conv. Center, Charlotte, NC, Information: Hilda McQueen, Tel: 919-549-3549; Fax: 919-549-8933;

email: mcqueenh@aatcc.org <http://www.aatcc.org>

IS&T/SID 7TH COLOR IMAGING CONFERENCE, Nov. 14-17, Color Science, Systems & Applications, The SunBurst Resort Hotel, Scottsdale, Arizona.

Tel: 703-642-9090 Fax: 703-642-9094

email: info@imaging.org; website: www.imaging.org

PECORA 14/LAND SATELLITE INFORMATION III, December 6-10, "Demonstrating the Value of Satellite Imagery" DoubleTree Hotel, Denver, Colorado

2000

ASTM COMMITTEE D-1, Paint, and Related Coatings, Materials and Applications, Jan. 23-26, Hyatt Regency, New Orleans, LA

Info: T. Brooke, Tel: 610-832-9729; Fax: 610-83-9666; email: tbrooke@astm.org

ASTM COMMITTEE E-12 Color and Appearance, Jan 25-28, Hyatt Regency, New Orleans, LA, Info: Bode Buckley: tel: 610-832-9740; fax: 610-832-1547; email: bbuckley@astm.org

ISCC WILLIAMSBURG CONFERENCE, Feb 19-21. 2nd Panchromatic Conference, Color In Its Surround; Savannah, GA. Info: Dr. Cynthia Brewer, Tel: 814-865-5072; Fax: 814-865-7943

ISCC ANNUAL MEETING & CPMA COLOR PIGMENTS CONFERENCE; April 16-18, ISCC and Color Pigments Mfg Assoc., Charlotte, N.C., info: Romesh Kumar, Tel: 410-823-2161

SID 2000, May 14-19, Society for Information Display Long Beach CA, Info: SID, Tel: 714-545-1526; socforinfodisplay@mcimail.com

www home page: <http://www.sid.org>.

ASPRS ANNUAL CONFERENCE, May 22-26, Omni Shoreham Hotel, Washington, DC, information: www.asprs.org.

ASTM COMMITTEE D-1, Paint and Related Coatings, Materials and Applications, June 11-14, Ascagua's Nugget, Reno, NV Info: T. Brooke, Tel: 610-832-9729; Fax: 610-832-9666; email: tbrooke@astm.org

ASTM COMMITTEE E-12 Color and Appearance, June 20-23, Sheraton Hotel, Toronto. Info: Bode Buckley: Tel: 610-832-9740; Fax: 610-832-1547; email: bbuckley@astm.org

AATCC INTERNATIONAL CONFERENCE AND EXHIBITION, Sept. 12-20, American Association of Textile Chemists and Colorists, Benton Convention Center, Winston-Salem, SC, info: Hilda McQueen, Tel: 919-549-3549; Fax: 919-549-8141

email: mcqueenh@aatcc.org <http://www.aatcc.org>

OSA ANNUAL MEETING, October 20-28, Providence, R.I. Information: confserv@osa.org.

IS&T/SID 8TH COLOR IMAGING CONFERENCE Nov. 14-17, Color Science, Systems & Applications, The SunBurst Resort Hotel, Scottsdale, AZ.

Tel: 703-642-9090 Fax: 703-642-9094

email: info@imaging.org; website: www.imaging.org

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ASTM COMMITTEE E-12, Color and Appearance, Jan 23-26, Embassy Suites, Ft. Lauderdale, FL Info: Bode Buckley, Tel: 610-832-9740; Fax: 610-832-1547; email: bbuckley@astm.org

ASTM COMMITTEE D-1, Paint and Related Coatings, Materials and Applications, January 23-26, Info: T. Brooke, Tel: 610-832-9729; Fax: 610-83-9666; email: tbrooke@astm.org

ASPRS ANNUAL CONFERENCE, April 23-27, St. Louis, MO, information: www.asprs.org.

ISCC/AIC MTG, June 24-29, ISCC and Association Internationale de la Couleur, Rochester Riverside Conv. Ctr, Rochester, NY; Info: Paula J. Alessi, Tel: 716-477-7673; Fax: 716-722-1116

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