

Inter-Society Color Council *News*



Number 298

November-December 1985

HELP WANTED

The present editor of the ISCC News is resigning and we are actively looking for a new editor. If anyone is interested in becoming a more active participant in the ISCC and would like to volunteer to help please contact Joyce Davenport. See the last page of this issue for her address and phone number. Washington, D.C. area ISCC members please note.

CONFERENCE ON ART RESTORATION

The Inter-Society Color Council will hold a conference entitled, "Colors of History: Identification, Re-Creation, Preservation," at the Lodge, Colonial Williamsburg, February 9 to 12, 1986. Papers by invited speakers will discuss various specialties. The audience will include experts from the many disciplines that make up ISCC and who can enrich subsequent discussions.

There is a growing interest in the restoration of the interiors and exteriors of historic houses and in the reproduction of the textiles and wallpapers contemporary with them. Custodians strive to restore and maintain the integrity of various types of art. Questions arise concerning the identification of the colors of paints, pigments, and dyes used in times past. The conference will review the latest knowledge and techniques of experts.

The technical program has been organized by Dr. Robert L. Feller of Carnegie-Mellon University, Pittsburgh, where he is Director of the Research Center on the Materials of the Artist and Conservator. He has been consultant for the US National Gallery of Art for many years. His work on varnishes and the effect of light upon colorants has been widely praised. Dr. Danny C. Rich of Applied Color Systems, Princeton, N.J., is assisting. Topics to be covered are interior and exterior architecture, wallpaper and textile sampling and reproduction, transportation including aircraft camouflage, identification of ancient and modern colorants, metamerism, fading, and enhancement.

Among the speakers will be Nathan Stolow, Colonial Williamsburg; Morgan Phillips, New England Antiquities; Andrea Gilmore, Charlestown Navy Yard; Margaret Fikioris,

Wintertur; Max Saltzman; Elizabeth FitzHugh, Freer Gallery; Robert Feller, Mellon; W. A. Thornton, Prime-Color; and John Asmus, USC.

Ample time will be available to visit the restoration of Colonial Williamsburg which is within short walking distance of the lodge. An additional attraction this year is the newly opened DeWitt Wallace Decorator Arts Gallery. This contains many British and American antiques of the 17th and 18th centuries, never before exhibited because they did not relate directly to Williamsburg.

Registration forms may be obtained from Norman W. Burningham, 357 True Hickory Dr., Rochester, N.Y. 14615.

UPCOMING 1986 ANNUAL MEETING

The 1986 Annual ISCC meeting will be held at Ryerson Polytechnical Institute in Toronto, Ontario, Canada from June 15th through 18th. It will be a joint meeting with the Canadian Society for Color. The full-day symposium topic will be Color Reproduction: State-of-the-Art. The intent of this symposium is to present to the audience the latest scientific technology and artistic techniques used in the color reproduction of an original, which may be an existing physical object or a creative idea conceived from an artist's mind. Robin Hopper, an independent craftsman and author, will present a talk on Color in Ceramics. A representative from the Canadian Broadcasting Corporation will discuss Color in High Definition Television. Helen Delp from Dupont will share information on Color Reproduction in the Automotive Industry. Robert Buckley of Xerox will talk on Color Xerography and Non-Impact Printing Technology. Paula J. Alessi from Eastman Kodak will discuss New Developments in Color Reproduction: of Negative/Positive Photographic Systems. Richard Ingalls of Target Color Technology will present a discussion of the Transfer of Color from Video Display to a Hardcopy Medium. A representative from the graphic arts design industry will be named to discuss such techniques as silk screen or lithography.

In addition to the project subcommittee meetings, three workshops will be conducted. The first entitled, Update on OSA Uniform Color Scales, will be directed by Nick Hale of Hale Color Consultants. The second will be given by Ralph Stanziola covering the topic of Using CIELAB for Development of a Universal Color Card. The third will deal with generation of electronic images. Many thanks to Joy Turner Luke for arranging these workshops.

If anyone has any questions concerning this meeting, please

direct them to Dr. Peter Kaiser, Department of Psychology, York University, 4700 Keele Street, North York, Ontario M3J1P3, 416-667-6335, or to Paula J. Alessi, Eastman Kodak Company, 1669 Lake Avenue, Rochester, New York 14650, 716-477-7673.

Paula J. Alessi

ISCC STANDING RULES

At its meeting in Toronto September 18, 1985 the Board of Directors approved the following change in the Standing Rules. The object is to extend the scope of the Membership Committee to cover individual members.

From the first sentence of the first paragraph delete the word "only," leaving: The Membership Committee shall be responsible for recommending new Member-Bodies to the Council after investigating the qualifications of the prospective Member-Body as set forth in Section 2(a) of the By-Laws. This activity will promote the aims and purposes of the Council in bringing closer together the artists, designers, scientists, and engineers for the purpose of carrying on the dialog on color applications and problems.

Add a new sentence as a second paragraph: The Committee shall actively solicit new individual memberships in the Council.

The present second paragraph becomes the third, unchanged: Liaison should also be maintained with the chairman of the Individual Member Group to insure the continued strength and participation of this important segment of the Council membership. The Secretary's Office shall be responsible for recommending new individual members to the Board of Directors after investigating their qualifications.

Thomas G. Webber
By-Laws

NEWS OF MEMBER BODIES

In 1985 there were 143 Technical Committees in ASTM. Committee D-1 on Paint and Related Coatings and Materials is one of the oldest, having been organized in 1902. Several of the ISCC delegates belong to the Optical Properties Subcommittee and to Committee E-12 on Appearance of Materials, organized much more recently (1948).

ASTM committees dealing with color and appearance properties endeavor to maintain close liaison with the International Commission on Illumination (CIE) because it is from CIE documents that we obtain information from which to draft new or revised standards in this field. The 48-page revision of E 308 titled "Standard Method for Computing the Colors of Objects by Using the CIE System" was published in April 1985 as a separate document and shortly afterward it appeared in Volume 14.02 of the 1985 Annual Book of ASTM Standards. This document contains basic information for computation of CIE color coordinates from spectrophotometric data approved by CIE Division 1 on Vision and Color for incorporation in Publication CIE No. 15.2 (TC 1.3) Colorimetry, but which has not yet appeared in print.

Method E 308-85 has only five pages of text describing how to use the material contained in the numerous tables. Data are given for the spectral tristimulus values (color-matching functions) for the CIE Standard (2°) Observer and for the CIE 1964 Supplementary Standard (10°) Observer at 5 nm intervals from 380 to 780 nm. Likewise spectral power distributions are given for CIE Standard Illuminants A, C, D₅₀, D₅₅, D₆₅, and D₇₅, and for CIE Fluorescent Illuminants F2, F7, and F11. The peculiar numbering sequence for F illuminants results from the fact that these three distributions were selected for special emphasis by the CIE from a group of twelve. They represent, respectively, a cool-white lamp at 4200 K, a broadband daylight lamp at 6500 K, and a narrow-band white lamp at 4000 K.

Finally Method E 308-85 contains tables of weights for the two observer functions in combination with each of the nine illuminant spectral power distributions for data obtained for either 10 or 20 nanometer spectral intervals, 36 tables in all. These tables have been carefully computed according to the procedures prescribed by the CIE. When different laboratories make computations from the same spectral data and use these tables, they will obtain the same CIE tristimulus values to within 0.02. If larger differences are observed, it must be assumed that the laboratories are using different spectral data. The method also provides a standard procedure for dealing with missing spectral data, that is, cases in which data are not available for the complete wavelength range, 380 to 780 nm.

Method E 308-85 is available from ASTM, 1916 Race Street, Philadelphia, PA 19103, for \$8.00 less 20% to ASTM members. A check with your order will eliminate the postage and handling fee.

Committee E-12 is presently developing a Standard Practice for Obtaining Spectrophotometric Data as a companion to E 308-85 because the latter deals only with computation. In addition, a new subcommittee (E-12.07) has been formed on Color Order Systems, W. N. Hale, Jr., Chairman, that will review and compare the merits of various color order systems supplied with color atlases such as Munsell, NCS (Swedish), and DIN (German). Both the NCS and the DIN systems have texts published in English.

Important activities in the Optical Properties Subcommittee of the Paint Committee are: (1) Revision of D 1535, Standard Method of Specifying Color by the Munsell System. The revision will include equations and a table to relate Munsell Value functions to the CIE standard perfectly reflecting diffuser rather than to magnesium oxide as was done previously. (2) Revision of D 2244, Standard Method for Instrumental Evaluation of Color Differences of Opaque Materials. The title has been changed to "Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates" in order to clearly indicate that the method does not describe how to operate instruments to obtain the data. In addition the optional color-difference calculation equations have been removed, leaving only three widely used equations, including the current CIE recommendations, and instructions for their use by paint interests. The other color-difference equations and the text material on their derivation and usefulness will be incorpo-

rated in a separate method by Committee E-12.

Users of ASTM methods have always been interested in the precision and accuracy of test methods. In recent years, the ASTM Committee on Standards has required that all test methods include a statement on *precision* and *bias*. *Precision* is defined as "the closeness of agreement between randomly selected individual measurements or test results." *Accuracy* is defined as "the closeness of agreement between an observed value and an accepted reference value." *Bias* is defined as "a systematic error that contributes to the difference between a population mean of the measurements or test results and an accepted reference or true value." Since accuracy contains elements of both precision and bias, this term is no longer being used in ASTM methods. A concise discussion of this subject is found in ASTM Standardization News, January 1985, pages 44-46.

The next meetings of Committees D-1 and E-12 will be the week of January 12, 1986, in New Orleans, Louisiana.

Harry K. Hammond III

OSA Symposium on Colorimetry

On October 15, 1985, as part of its Annual Meeting in Washington, the Optical Society of America (OSA) scheduled an all-day session on "Colorimetry: A Symposium in Honor of David L. MacAdam."

The symposium began at 8:30 a.m. with introductory remarks by the President, Robert M. Boynton. He brought out that in 1940 MacAdam became the first recipient of the Adolph Lomb Medal, subsequently awarded 22 times for meritorious publication before the age of 30. In 1964 MacAdam was awarded the Frederic Ives Medal by the Society. MacAdam published many articles while working at Kodak and since retiring has continued to write articles as well as two books.

At Kodak 45 years ago he determined to evaluate how different two colors must be to just be distinguishably different. The result was his famous paper, "Visual sensitivities to color differences in daylight." (*J. Opt. Soc. Am.* 32, 247 (1942).) The MacAdam ellipses were obtained from 1,000 observations for each of 25 points in color space by Perley G. Nutting, Jr. He was invited to be present but sent a note of congratulations instead. He is the son of the founder and first president of OSA.

W. R. J. Brown, who served as observer for more experiments on color difference, was present. He is President of the Daedalon Corporation, Salem, Massachusetts, makers of physics teaching aids.

The morning program consisted of three invited papers by MacAdam, Robertson, and Wandell (see abstracts below) and eight contributed papers. In the afternoon there were eight contributed papers on color and vision related research as well as four on cone interactions.

The titles of the papers, authors names and affiliations together with brief abstracts were published in the September issue of *Optics News*. Somewhat longer abstracts were printed in the program for the meeting, and these will be published in the November issue of *Optics News*.

The Society is to be commended for planning this Symposium to honor David MacAdam while he is still able to enjoy the receipt of such an honor.

Harry K. Hammond III

Evaluation of color differences

David L. MacAdam, U. Rochester, Institute of Optics, Rochester, NY 14627.

In 1886, Arthur König suggested that some perspective view of the chromaticity diagram might represent equally noticeably different pairs of colors by equally spaced points. Judd published the first diagram on which that was attempted. A diagram based on Judd's was recommended in 1960 by the International Commission on Illumination (CIE). The ratio of maximum-to-minimum radii of ellipses of equal noticeability was reduced on it from $\sim 30:1$ to $\sim 7:1$. In its 1976 recommendation, the CIE increased the vertical dimension by 50%. The ratio of maximum-to-minimum radii is still $\sim 7:1$. To do much better, it would be necessary to use a diagram that is not flat. Such a diagram is unusable. We can only hope to find a formula that will express every color difference in terms of differences of locations of points in the chromaticity diagram. Chickering published a formula (FMC1) that closely approximates the ellipses. The greatest ratio of corresponding radii is $\sim 1.4:1$. A formula to replace all previous formulas should be similarly derived from color-difference ellipsoids that represent observations by at least three observers who have normal color vision. Those ellipsoids should be obtained around at least twenty-five well-distributed chromaticities. At least ten should be obtained at three or more luminance-factor levels.

Predictive formulas for color differences

A. R. Robertson, National Research Council of Canada, Division of Physics, Ottawa K1A 0R6, Canada.

Both vision scientists and industrial colorimetrists have proposed mathematical formulas that will predict the perceptibility of the difference between two color stimuli when each stimulus is defined by its CIE color coordinates. In 1976, in an attempt to unify practice, the International Commission on Illumination (CIE) recommended the use of two such color-difference formulas, known as CIELAB and CIELUV. Since then several new formulas have been proposed, some based on color-vision theories and some on industrial color-matching data. With enough free parameters, any set of data can be described fairly accurately, but it is becoming increasingly clear that the various published sets of data on color discrimination are incompatible with each other for reasons that are not yet understood.

Color constancy and color discrimination

Brian A. Wandell, Stanford U., Psychology Department, Stanford, CA 94305.

I have been studying the implications of the hypothesis that the mechanisms of light adaptation compute an internal representation of the retinal image that discounts the spectral power

distribution of the ambient light in order to estimate the surface spectral reflectances of objects in the image. I review two consequences of this hypothesis for color discrimination. First, I describe the formulas for estimating surface spectral reflectances from the photoreceptor quantum absorptions. From these formulas, I derive predictions for color discrimination based on the estimated surface spectral reflectances. The structure of the color discrimination equations based on surface spectral reflectance estimates is essentially the same as MacAdam and Silberstein's line-element equations. The interpretation of the equations with respect to empirical measures—such as wavelength discrimination and the MacAdam ellipses—is somewhat different. The most important difference arises because the observer's estimate of the local ambient light spectral power distribution, rather than a central measure of the local quantum catch, is assumed to govern the state of light adaptation. Second, I describe how we are attempting to use the color difference measurement based on estimated surface reflectance to predict color differences in spatially complex displays.

MEETINGS

NBS Alumni Association

As a result of the successful Memorial Symposium held at the National Bureau of Standards (NBS) one year after the death of NBS Director Emeritus, Dr. Allen Astin, a group of Alumni planned with the blessing of the present Director, Dr. Ernest Ambler, to form an Alumni Association.

The first general meeting was successfully held at NBS on that lucky day, Friday, September 13. Dr. Ambler addressed the group and reviewed that progress made at NBS in a number of areas within the past ten years. After lunch, the group toured the "Factory of the Future," the NBS Automated Manufacturing Facility.

The second meeting will be held on Friday, December 13!

In addition to up-date meetings at NBS, the Association publishes a quarterly Newsletter. If, at one time in your career, you worked at NBS, you are eligible to join the Association. If you wish to do so, write to them c/o SEBA, NBS, Gaithersburg, MD 20899. Likewise if you know NBS Alumni, tell them about the formation of the Association, or better still send their names and addresses to the Association so that we can send them an application blank. To date more than 270 Alumni have become members, including a number who worked in the former Photometry, Colorimetry, and Radiometry Sections. Many of us received our on-the-job training from old Pros like the late Drs. Gibson, Judd, and Coblenz. Others will remember that indefatigable Lou Barbrow, who at 80 years of age is still at NBS every day. He retired from NBS and photometry in 1969 after 41 years of service. He was immediately re-employed and for the next three years was engaged in the study of the impact of the International Metric System on the United States. At the conclusion of this study, the activity was absorbed by the NBS Office of Weights and

Measures, where he is still employed as a consultant to the National Conference on Weights and Measures.

Note that membership in the Association is not limited to scientists. It already includes technicians, administrators, librarians, and clerks. The Association also encourages the widows and widowers of Alumni to become members as well.

Harry K. Hammond III (NBS 1939-1977)

Call for Papers

An International Conference and Exhibition on Process and Materials Quality Evaluation is planned for September 21-24, 1986, at the Waverly Hotel, Atlanta, Georgia. The conference will be co-sponsored by the Process and Product Quality Division of the Technical Association of the Pulp and Paper Industry, the Canadian Pulp and Paper Association Technical Section, and SPCI. The program chairman is James C. Abbott of Procter and Gamble, and the conference chairman is Roger H. Van Eperen of the Institute of Paper Chemistry.

This conference will provide an international forum for dissemination of information relating to methods, techniques, and instrumentation useful in quality evaluation of materials, processes, and products of the pulp, paper, and related industries. Keynote state-of-the-art papers will combine with more focused papers for presentation in sessions on a variety of key technology areas including quality control, optical instrumentation and methods, paper physics, and chemical instrumentation and methods. Special emphasis will be placed on developments in quality evaluation in nontraditional areas, the use of new instrumentation, or the use of existing instrumentation in new and unique ways.

Presentations for the conference will be selected by a program committee on the basis of submitted abstracts. In addition to formal oral papers, a poster/demonstration session will be scheduled for those papers better lending themselves to this form of presentation.

Prospective authors are requested to submit a title and a typed 500-word abstract by January 1, 1986, to Program Chairman James C. Abbott, The Procter & Gamble Company, 6100 Center Hill Road, Cincinnati, Ohio 45224.

Symposium on Automotive Color Control Scheduled for June 1986

A Symposium on Automotive Color Control (SACC) will be held June 3-6, 1986 at the Michigan Inn, Southfield, MI, to acquaint participants with the new SAE Recommended Practice J1545 for determining color match acceptability of automotive components.

The event is being sponsored by the Detroit Colour Council, Detroit Society for Coatings Technology, Federation of Societies for Coatings Technology, and Manufacturers Council on Color and Appearance.

The meeting format will combine general sessions with workshops and "hands-on" equipment demonstrations. Programming will be focused specifically on coatings, plastics, and soft trim, with each of the three topics addressed in two-day overlapping segments.

SAE Recommended Practice J1545, recently announced by the Society of Automotive Engineers, is the result of work carried out by an industry-wide committee formed by the Detroit Colour Council to develop the best test method for color difference measurement. It is expected that "J1545" will be widely adapted and will be useful for Statistical Process Control.

Symposium General Chairman is James E. Grady, Pigments Dept., CIBA-GEIGY Corp., Birmingham, MI. General program sessions are under the direction of William V. Longley, Design Center, Ford Motor Co., Dearborn, MI. Arrangements for the workshops and instrument displays are being handled by the Manufacturers Council on Color and Appearance.

Complete details will be available shortly. Meanwhile, further information may be obtained by contacting the Federation of Societies for Coatings Technology, 1315 Walnut St., Philadelphia, PA 19107; Telephone: (215) 545-1506.

UCLA Short Courses

The UCLA is offering three short courses in Los Angeles this fall and winter of potential interest to ISCC members. The first, Photometry and Colorimetry for Information Displays, will be held November 11-15. The course is designed for engineers and scientists who are or will be concerned with one or more aspects of research, design, development, specification and evaluation of information displays, command and control consoles, and color and lighting in general.

Optical Interference Coating Technology (December 2-6) is intended for infrared systems engineers, optical systems designers, laser systems engineers, and coating manufacturers.

Flat-Panel and CRT Display Technologies (February 24-28) is intended for engineers, scientists, inventors and entrepreneurs working in electronics who require a knowledge of the state of the art of flat-panel displays and CRTs.

For registration information concerning any of these courses call the UCLA Short Course Program Office at 213-825-1295 or 825-3344.

PUBLICATIONS

Standard Fence Colors

ASTM Committee F-14 on Fences has recently published F 934, Specification for Standard Colors for Poly(Vinyl Chloride) (PVC) Coated Chain Link Fence Materials. The document includes Munsell designations of hue, value and chroma for green, olive green, brown, and black. These PVC colors are used on chain link fence fabric, tension wire, posts, rails, gate frames, and fittings. Single copies of F 934 can be obtained for \$8.00 (less 20% to ASTM members) from ASTM Customer Service, 1916 Race Street, Philadelphia, PA 19103. Send check with order and eliminate postage and handling charge.

Harry K. Hammond III

World Book Supplement on Color

Gunter Wyszecki, the late President of the International Commission on Illumination (CIE), before he died, authored a 12-page article on COLOR, illustrated in color, for the 1986 World Book Science Annual, a review of science and technology during the 1985 school year. He pointed out that color fills our world with beauty, that we delight in the colors of a magnificent sunset, in the bright red and golden-yellow leaves of autumn, that color plays an important part in nature. He goes on to explain that to understand how we see color, we must first know something about light. To explain how we see color, he described briefly the complicated workings of the eyes and the brain.

Wyszecki introduces what he called surprising color-vision effects: chromatic adaptation, afterimages, successive contrast, simultaneous contrast, and phantom colors. He touches on color vision in animals and then goes on to methods of color production, mixing or colorants, additive and subtractive color mixture, mixing of colored lights, and the production of color harmony.

Under the topic "characteristics of color," he presents the three basic characteristics hue, lightness, and chroma. He introduces the Munsell color system and the CIE system of color specification. The article concludes with a brief history of color studies, first the early theories of color vision, then those of Newton and Goethe, the three-component theory, the opponent color theory, and finally a short paragraph on recent theories.

Although English was not Wyszecki's native language, he writes as though it were. His style is both informative and interesting. I am not selling books for World Book, but if you know of a youngster, or oldster, who desires a very concise yet interesting introduction to color, you may wish to suggest that he look up this article by Gunter Wyszecki.

Harry K. Hammond III

Road Surfaces and Lighting

This is the subject of a joint technical report of the International Commission on Illumination (CIE) and the Permanent International Association of Road Congresses (PIARC).

The report contains basic information on road surface as a guide to road constructors and lighting designers. It deals particularly with road reflection, which depends on the nature of the pavement and the type of illumination (streetlight, headlight, daylight).

First dealt with are the civil engineering properties of roads such as skid resistance, evenness and surface draining, rolling noise level, and contrast between the road and its surround. The report discusses the effect of composition of road pavements (concrete or asphalt) and the influence of the macro and micro texture of the upper layer on these properties. A classification of road surfaces is presented based on macrotexture.

The reflection properties of road surfaces for streetlights, for a driver's own headlights, and for daylight illumination are discussed in detail for both wet and dry surface conditions. The

requirements for measurement of the reflection properties are presented, taking into account streetlight, daylight or headlight as illuminator. Included are laboratory equipment as well as portable setups for simplified measurements. Special attention is paid to sampling, the optical system of the measuring device, the measuring field and illuminated field, the angles of illumination and observation, the apertures, and the calibration procedure.

Based on lighting considerations, road surfaces should provide uniformly high values of luminance for all types of illuminators. The top layer should be concrete or if asphalt it should contain at least 30 percent white stone chips.

The report concludes with a discussion of road surface markings, white or yellow, and their improvement under headlight illumination by the addition of glass beads. An extensive list of references, organized by chapter, is given at the end of the re-

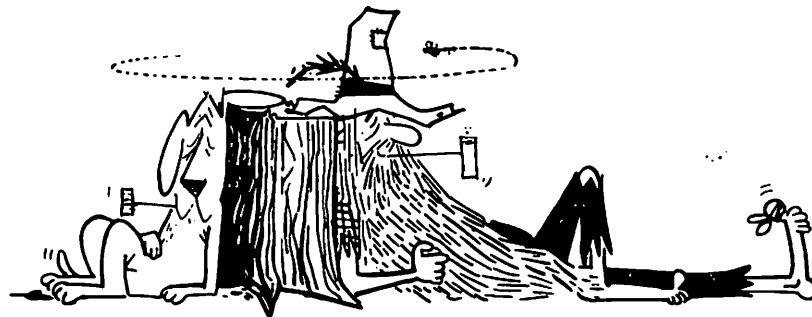
port for each of the six chapters of text. Appended are definitions of terms and three general references.

The report comprises seventy pages of text, tables, and illustrations. It was drafted during the period 1980-1983 and was printed in France in December 1984.

Copies of the report, designated CIE Pub. No. 66 (1984), can be obtained from Dr. Klaus D. Mielenz, Secretary, U.S. National Committee, CIE, Room B306, Metrology Building, National Bureau of Standards, Gaithersburg, MD 20899.

The list price is US \$27.00 each (\$22 to USNC members). Payment should accompany order and be made payable to "U.S. National Committee, CIE."

Canadians may obtain copies by sending a check payable to "The Receiver General of Canada, Credit National Research Council of Canada, Ottawa, Ontario, K1A 0R6."



The ISCC News is dependent upon contributions from the Member-Bodies and individual members to make this publication worthy of the high esteem in which the ISCC is held. Please make the effort to provide NEWS, happenings, breakthroughs, etc., so that present and future editors can be satisfied that their efforts are producing a worthwhile newsletter.

The ISCC wishes all a very merry Christmas and a happy New Year!

CALANDAR

AIC

Interim Meeting, June 19-20, 1986, Ryerson Polytechnic Institute, June 19-20, 1986

FEDERATION OF SOCIETIES FOR COATINGS TECHNOLOGY

Annual Meeting, November 5-7, 1986, Atlanta, GA

ISCC-CSC 1986 ANNUAL MEETING

June 16-18, 1986, Ryerson Polytechnic Institute, Toronto

ISCC 1986 WILLIAMSBURG CONFERENCE

February 9-12, 1986, Williamsburg, VA

SOCIETY FOR INFORMATION DISPLAY

1986 International Symposium, May 6-8, 1986, San Diego, CA

SOCIETY OF PHOTOGRAPHIC SCIENTISTS AND ENGINEERS

Annual Conference, May 18-22, 1986, Minneapolis, MN

TAPPI

Annual Meeting, March 2-5, 1986, Atlanta, GA

Deadlines for submitting items to be included in the Newsletter are: February 15, April 15, June 15, August 15, October 15, and December 15; in other words, the fifteenth of the even-numbered months.

Send newsletter items to:

Ms. Mary Ellen Zuyus
Hunter Associates Laboratory, Inc.
11495 Sunset Hills Road
Reston, VA 22090

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1. Any person interested in color and desirous of participating in the activities of the Council for the furtherance of its aims and purposes . . . shall be eligible for individual membership (By-Laws, Article I, Section 2). Application forms for individual membership may be obtained from the Secretary (address given above).
2. The Council promotes color education by its association with the Cooper-Hewitt Museum. It recommends that intended gifts of historical significance, past or present, related to the artistic or scientific usage of color be brought to the attention of Cooper-Hewitt Museum, 9 East 90th Street, New York 10028.