Inter-Society
Color Council
Newsletter



NUMBER 237 July-August 1975

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## REPORT OF NOMINATING COMMITTEE

The 1975 ISCC Nominating Committee met on August 15 in an NL Industries Conference room at Hightstown, New Jersey. From names previously suggested, we made our selections, largely on the basis of our estimates of their abilities to contribute to ISCC and our need to cover the broad range of disciplines within our organization.

We were instructed by the Board to assume adoption of the new By-Laws. These call for nine Directors at large, three to be elected each year. To start the new system, nine Directors must be elected, three each for one, two, and three year terms.

We have a complete set of nominees as follows:

President elect,

Franc Grum: OSA, SPSE

Secretary, Treasurer.

Fred Billmeyer: ACS, SPE S. Leonard Davidson, ACS, FSCT

Directors:

William D. Schaeffer, GATF (1 year)
Alexander F. Styne, ASID, IDSA
Frederick T. Simon, AATCC, CMG
Joyce S. Davenport, FSCT, CMG
Seymour Commanday, ACS
Leroy C. Noyes, MCCA
Calvin S. McCamy, SPSE
Raymond Spilman, IDSA

All those listed have agreed to serve if elected. Mr. Schaeffer, as a carry over from the present board, was offered only a one year term. The lengths of terms of all the others must be established by negotiation or drawing lots. If the new By-Laws are not approved, we will have to meet again to revise this report.

Fergus Clydesdale, IFT

The offices of President, and Past President are, according to both old and new By-Laws, not subject to election:

President, Past President, Charles W. Jerome: IES Roland E. Derby: AATCC, CAUS

> Respectfully submitted, Richard S. Hunter, Chairman William J. Cunningham Robert F. Hoban

# REPORT OF MACBETH AWARD COMMITTEE

As chairman of the Macbeth Award Committee I would like to publish a notice of an invitation, especially to the individual members, to submit nominations for the Macbeth Award. The qualifications for this award are as follows:

A. The Macbeth Award shall be given in recognition of recent important contributions in the field of color, preferably within the 5 to 10 years preceding the Award. The work may concern a specific project, application, service or use of color, or other accomplishment related to color in science, art, industry, education, merchandising, etc.

B. The candidate need not be a member of the ISCC, nor be a citizen of the United States. The Award Qualifi-

cations and nomination letter shall be the basis for the selection of nominees.

Nomination shall be made by letter from the Nominator to Frederick T. Simon, Chairman of the Macbeth Award Committee, containing the name, address, and affiliation of the nominee, and discussion (with exhibits if appropriate) of his particular achievements or activities on which the nomination is based.

We need to have the nominations in hand before the next ISCC Board meeting in January.

Frederick T. Simon
Chairman of the Macbeth Award Committee
College of I. M. & T. S.
Sirrine Hall
Clemson University
Clemson, S. C. 29631.

# INSTRUMENTAL COLORANT FORMULATION CONFERENCE TO BE HELD IN 1976

The Inter-Society Color Council will hold a Special Technical Conference "Instrumental Colorant Formulation — 1976" at Williamsburg, Virginia, January 25-28, 1976.

In 1966 the Inter-Society Color Council organized a conference at Williamsburg, Virginia, on "Instrumental Approaches to Colorant Formulation." The problems and the potential of the application of powerful new techniques based on high-speed digital computers to the age-old problem of colorant formulation were thoroughly explored at this conference.

In addition to the formal technical program, many hours of informal discussion occurred during which the most knowledgeable workers in the field could freely discuss their problems.

With these thoughts in mind, the ISCC Program Planning Committee felt that 1976 would be an appropriate time to review progress toward the solution of the problems defined ten years earlier.

The basic purposes of this conference are essentially those which guided the planners of the 1966 conference:

- to bring together at one time and in one place the best available information on the theory and practice relating to these techniques for review, discussion, and critical evaluation by qualified workers in this field.
- to define areas where further advances in technology are necessary for the complete utilization of existing theory and to examine the limitations of present theory.
- to provide a forum for the dissemination of information on advances in both theory and practice in the most diverse areas of application by bringing together workers in different specific fields related by a common interest in color and colorants.

The program of "Instrumental Colorant Formulation – 1976" will include sessions on the following topics:

- Where are we after ten years?
- How do you make those calculations?

- Is computer color matching working as we would like?
- Any chance of solving those special problems?
- How do we know when we have a good match?

The conference will be limited to one hundred participants: a number selected as the maximum that the facilities can accommodate. Selection of participants, from those who apply, will be based on a judgment of the qualifications of the individual to contribute to the purposes of the conference. Speakers and technical workers active in the field will be given preference by the organizing committee.

To receive an application form for "Instrumental Colorant Formulation - 1976" contact Dr. Fred W. Billmeyer, Jr., Office of the Secretary, Inter-Society Color Council, Department of Chemistry, Rensselaer Polytechnic Institute, Troy, New York 12181. Completed application forms must be received before December 1, 1975. Persons desiring to present a paper should submit a title and abstract before November 1, 1975.

# APPLICATIONS APPROVED FOR INDIVIDUAL **MEMBERSHIP**

27 University Street Salt Lake City, Utah 84102

Mrs. Anna Campbell Bliss ASID. Artist, architect, and interior designer. She is engaged in research on color phenomena and gives seminars on color at various universities. (Was formerly a member of AIA,)

Chicago, Illinois 60613

Mr. Jeffery Stephen Chiu FSCT. Establishing a new color 1833 W. Belle Plaine Ave. matching program and eventual automated shading via computer programs. (DeSoto, Inc.)

Mr. C. L. Crouch Director of Research Illuminating Engineering Research Institute 345 E. 47th Street New York, New York 10017

IES, OSA. Light and vision; also biological effects of wavelengths of light. Editor of IES Lighting Handbook 1949-1959. (Also a Fellow of American Association for the Advancement of Science.)

145 Mountain Circle S. Newfoundland, N.I. 07435

Mr. Frederick T. Dankert NAPIM, TAGA. Color in printing, color theory (physical), psychophysical aspects (simultaneous contrast), psychological (color harmony).

Mr. Charles Dyker 12500 Ardennes Ave. Rockville, Maryland 20852

Mr. Joachim Hauser Mumehen 19 Leonrodstr. 20 Germany D-8000

GATF, TAGA. Color separations (4 color). (Also a member of PIA/LPS Group.) President, Progressive Color Corp.

All fields of color research, color psychology, coloring in the field of architecture, etc. (Member of IACC, Bunge Deutscher Farbbarater.)

Prof. Dorothea Jameson APA (former delegate). Hurvich Dept. of Psychology Univ. of Pennsylvania

Philadelphia, PA 19104

Mr. Rolf Griesser CIBA-GEIGY AG R-1095.P.13

4002 Basle

Switzerland

Mr. John James Lanczycki, Jr. 168 Lindley Ext. Williamstown, Mass. 01267

Mr. Ronald L. Lanham 965 Danby Drive W. Webster, N.Y. 14580

SPE. Color control thru product comparison standards. Currently responsible for the development and maintenance of Xerox color

Instrumental assessment of

eners, instrumentation.

ACerS. Instrumental color

white samples, whiteness formu-

matching to speed up operations,

color matching time and machine

the American Society for Quality

increase run time and decrease

down time. (Also a member of

las, FWA, excitation of bright-

and appearance specifications and standards. (Also a member of American Society of Metals.)

Control.)

Mr. Stanley C. LaPlant 129 Quidnick Street Coventry, R.I. 02816

Color standards and quality control. (American Hoechst Co.)

Dr. Lawrence R. Lerner Harmon Colors Applied Chemical Corp. P.O. Box 14 Hawthorne, N.J. 07507

AChS. Relationship of chemical structure to color; effects of crystallite size, shape and degree of dispersion in coatings on the color of organic pigments. (Also a member of Sigma Xi, AAAS, Chemical Society (London),)

Mr. W. J. Levene The Israel Electro-Optical Industry Ltd. P O B 1165 Rehovot, Israel 76 110

Instrument design and application. (Member, Institute of Physics, U.K.)

P. O. Box 341 Reading, PA 19603

Dr. Charles E. Matkovich AATCC, AChS. Research on dyes. Crompton & Knowles Corporation.

Mr. Albert C. Muller Brookhaven Natl. Laboratory Upton, L.I. New York 11973

SPE. Human response to color. In particular, the therapeutic effects of color as applied to nerve relaxation, increased blood circulation, and altered healing rates. (Also a member of IEEE,

American Society Psychical Research.)

Miss Adrene G. Phillips 4602 Denfield Street Durham, N.C. 27704

Developing sufficient knowledge and background to better understand color matching that will make her more proficient to her

job. (Color matcher, Beaunit Corp.)

Mr. R. John Simms 2192 Clayton Drive Menlo Park, CA 94025 OSA. The development of tristimulus and abridged colorimeters.

Mr. Jerry F. Sluder Route 3 Kingsport, Tenn. 37664 Color control, color formulation. (He is a member of the American Society for Quality Control and ASME.)

Mrs. N. Anne Sprehe 100 West 57 Street New York, N.Y. 10019 CMG. Fabric design, garment design, home furnishings, carpets, all home fabrics and accessories, fashion accessories such as thread and zippers.

Information only - new delegates

**ASP** 

Mr. A. Norman Brew National Center (Stop 542) Reston, Va. 22092

ASP, SPSE. Exposure and processing of serial color film for use in photo image map products. (Also a member of the American Congress on Surveying and Mapping.)

Mr. Norman L. Fritz Eastman Kodak Co. Research B-82 Rochester, N.Y. 14650 ASP, SPSE. Applications of color photography in remote sensing; improved and new product development; infrared-sensitive color films. (Also a

member of the American Physical Society and Sigma Xi.)

Mr. Lee M. Records Phototechniques, Inc. 2321 4th St., N.E. Washington, D.C. 20002 ASP, SPSE. Sale of equipment for the professional color lab, such as color analyzers, color processors, color enlargers and other related products. (Also a

member of the Association of Professional Color Labs.)

**IFT** 

Dr. Douglas B.
MacDougall
Agricultural Research
Council
Meat Research Institute
Langford, Bristol
England BS18 7DY

IFT. Color measurement techniques, relationship of translucency to appearance; chemistry of meat pigments and biochemistry of color changes; relationship of appearance to acceptance and modification of appearance by display conditions. (Also a

member of the Colour Group (Great Britain) and Society of Chemical Industry (Great Britain).)

**NAPIM** 

Mr. Michael Garin Pantone, Inc. 55 Knickerbocker Rd. Moonachie, N.J. 07074 NAPIM. No other information given.

# DEANE B. JUDD — AIC AWARD TO BE ESTABLISHED

To recognize work of international importance in the fields of color perception, color measurement, or color technology, a Deane B. Judd — AIC Award is announced. Funds have been provided by Mrs. Deane B. Judd to establish and administer this award in memory of her late husband. This will be done through the Munsell Color Foundation, of which Dr. Judd was president 1942-1972. The present plan is for the award to take the form of a gold medal to be awarded biennially to a suitable candidate, the presentation to take place at a main quadrennial Congress of the Association Internationale de la Couleur and at a mid-term AIC conference, or, when no mid-term AIC conference is held, at some other suitable mid-term conference agreeable to the AIC Executive Committee.

The award is established to recognize important work in color science, with wide latitude given the selection committee, asking only that its choice be accompanied by a citation that clearly states the merits or achievements of the person named to receive this honor, whether the choice be made for a single outstanding piece of work, for an ongoing program that covers a wide range of co-ordinated studies, for leadership in color science education, or for some other meritorious service in the field of color science. The recipient of the medal may be of any nationality.

The award will be made on the recommendation of a special Awards Committee to consist of, or be appointed by, the AIC Executive Committee. In the event of the AIC's being unable to act for any reason, the trustees of the award fund may approach some other body of high scientific international standing in the color field to act in its place. If funds are available, the trustees are empowered to assist the medallist with his travelling expenses to the Congress or Conference to receive the award.

#### **BOOK REVIEWS**

MODERN CHROMATICS. Students' Text-Book of Color with Applications to Art and Industry. Ogden N. Rood (1831-1902). Including a facsimile of the first American edition of 1879. Preface, introduction and commentary notes by Faber Birren. Van Nostrand Reinhold Company, New York, 1973. Pp. 257. \$14.95.

Once again those of us interested in the history of color and color vision are grateful to Faber Birren, since it is he who is responsible for making this first edition (1879) facsimile of Ogden Rood's *Modern Chromatics* readily available. We are grateful once again because Birren is directly responsible for the publication in recent years of a variety of historically important items: the reproduction of the

first color chart on record, the beautiful reissue in 1967 of the English translation of Chevreul's "De la loi du contraste simultané des couleurs" of 1839, and the triad of small volumes on color systems, Munsell, Ostwald, and Birren's own review of past tradition and modern theories. In the volume reviewed here, Birren's major focus is on the relation between Rood's work and the techniques of painting, particularly those of the French Impressionists and Neo-Impressionists who were Rood's contemporaries.

The volume is divided into three parts. Parts I and II belong to Birren. The first treats Rood's life, his scientific career and interests in painting, presents brief summaries of the art movements known as Impressionism, Post-Impressionism, and Fauvism and concludes with an excellent list of references. This introductory section contains many black-and-white illustrations. There are photographs of Rood and his Columbia University Physics laboratory, reproductions of letters including one from A. H. Munsell about a projected meeting to discuss a "color globe," illustrations of Rood's own watercolors, and photographs of paintings by Constable, Delacroix, Turner, Monet, Van Gogh, Renoir, Pissarro, Gauguin, Seurat, Signac and Matisse. Seven color plates are also included to illustrate the work of this same selection of artists. Parenthetically, it is unfortunate that the economics of color reproduction are such that the illustrations of paintings could not all have been reproduced in color. We are struck by this economic fact of publishing each time we discard yet another unsolicited advertising brochure or catalog in full, and sometimes excellent, color. Our expression of this regret is not to be construed as a criticism of either Faber Birren or Van Nostrand Reinhold, By current American publishing standards, the ratio of color plates to price (\$14.95) is very generous.

The illustrations of paintings are well chosen to document the relation between Rood's laboratory studies of various aspects of color and the application of basic color principles in painting. This is especially true with respect to Seurat and Signac, whose familiarity with the 1881 French translation of Rood's *Modern Chromatics* was documented in the art reviews of the time by the critic Félix Fénéon. Fénéon actually cited Rood's color-mixture equations to explicate to the public the use by Seurat of divisionist optical mixture (rather than palette mixtures of pigments) to obtain greater luminosity in his paintings. Birren also calls attention to the influence on the French colorists of Chevreul's systematic studies, as well as of the aesthetic theories of the trio of scholars, Charles Blanc, David Sutter and Charles Henry.

The meeting of the "two cultures," scientific and humanistic, although exemplified by Rood's own interests, was much less obvious in the American art world of the time than it was in late nineteenth century France. Despite its multiple printings in the United States, Rood's book seems to have had negligible direct impact on artists here. Moreover, although Rood's son was enthusiastic about the paintings that he saw in France, and expected his father to be gratified by the attention his work in color had gained among artists there, the younger Rood recorded his father's disappointment and dismay after viewing an exhibit of French Impressionist paintings. Clearly, an interest in both

cultures does not guarantee that one will be attuned to the avant-garde of both.

Part II of the volume contains chapter-by-chapter notations and comments on Rood's original publication. Here, Birren acknowledges the assistance of Ralph Evans, whose interest in color and color vision as related to photography needs no amplification. For some topics the commentary is clearly needed to update the original. For example, Rood's studies of polarization and polarizing substances came some half-century or more before the development and availability of synthetic Polaroid. In other instances, the commentary seems to be have been included for purposes of emphasis and adds little to Rood's own coverage of the topic. An example here centers on demonstrations of simultaneous contrast and colored shadows. Birren himself needs updating on these issues, for he seems to believe that these matters are still as much in need of explanation as they were at the time of Rood's writing, whereas a brief account of current theoretical models and physiological evidence would put our understanding of contrast on as firm a basis as is our understanding of color mixture, for example. There are other instances in which we would want to amplify or modify Birren's views about the visual processes responsible for particular color phenomena (that foveal tritanopia is responsible for the desaturated appearance of Seurat paintings is one), but these are minor criticisms for a volume of this sort. Another error, also minor, we mention only to avoid continuation of an historical inaccuracy. The "Ernest Rutherford" mentioned in Part I by Birren along with the names of Helmholtz, Brewster, Maxwell, et al., is erroneous. It was not the British Nobel Laureate to whom Rood referred in his text, but Lewis Morris Rutherfurd, American astrophysicist who did pioneer work in astronomical photography and spectroscopy, and whose gratings Rood used in his laboratory.

Part III of the volume is the reproduction of the first (1879) edition of Rood's book, Modern Chromatics, which ran into eleven printings over a period of thirty-seven years. The German translation appeared in 1880, and the influential French one in 1881. In the present oblong (29 x 23 cm.) format, each page reproduces two of the original in facsimile. Plate VIII is a full-color rendering of the original frontispiece using current engraving and printing processes. It includes color samples with their descriptive names, samples obtained by specified pigment mixtures, three sixsectored color wheels intended to show mixture complementaries that yield neutrals of three degrees of luminosity, and a triangular mixture chart to illustrate the effects of additive light mixtures. This frontispiece illustration serves as a visual summary of much of the content of the book. In a Preface, Rood gives a quick overview of his intentions: "to present, in a clear, logical, and if possible attractive form, the fundamental facts connected with our perception of colour, so far as they are at present known, or concern the general or artistic reader." He also urges "those persons ... who are really interested in this subject ... to repeat for themselves the various experiments indicated in the text."

In these days of computerized laboratories and costly and complicated apparatus, it is a joy and also sobering to read Rood's descriptions of his experiments, many of them simple enough in procedure and equipment so that they could be carried out by any one "really interested in the subject." In addition to its historical interest, a major current value to Rood's book is the reminder of how much can be learned about color by attentive and analytical observation, whether in the laboratory, the everyday environment, or the art galleries and museums.

On the other hand, aesthetic systems and principles of color harmony, to which Rood devoted serious study and analysis, are not absolutes but change with the cultural milieu. Rood, to whom the "object of painting is the production, by the use of colour, of more or less perfect representations of natural objects," would probably find himself even more dismayed in a contemporary art gallery than he was in that first unhappy confrontation with the work of the French Impressionists.

Moreover, many of Rood's explanations of "the fundamental facts connected with our perception of colour" now strike us as quaint. This should not surprise us when we read in a note that the author appended to the end of his volume, that Boll has discovered that the "retina contained a red or purple substance that quickly disappeared on exposure to light." This first discovery that light acts on the eye by means of a photochemical reaction was reported only three years before Rood first published Modern Chromatics. Our current understanding of visual processes was in its infancy. Since Rood himself was neither a physiologist nor an original visual theorist, he could hardly have been expected to outstrip the conventional thinking of his own time. His special contribution was that he combined the rigor of an experimental scientist with an informed interest in the technical problems of the artist and professional colorist.

This volume is a valuable addition to every color reference library.

Leo M. Hurvich Dorothea Jameson

# LA VISION PARAPSYCHOLOGIQUE DES COULEURS. Yvonne Duplessis. EPI sa Editeurs, Paris, 1974. 160 pp.

Beginning with an attempt to justify parapsychology as science and the "triumph of the statistical method and its propagation around the world," the author then reviews the now-classical work of J. B. Rhine at Duke University on parapsychology and summarizes the state of parapsycho-

logical research in the U.S. and other parts of the world.

The next section concerns an approach to the "paranormal" perception of colors and reviews "colored audition" and synesthesia. It also embraces memory, imagina-

tion, sentiment, and dreams as they are involved in color.

Telepathic provocation of colors is the heart of the book. A variety of studies is summarized, including the appearance of color by clairvoyance. There is also a section on such things as ectoplasmic light.

A visual scientist would view the book with some skepticism, but there are many in the ISCC who would find it provocative and interesting.

R. W. Burnham

# **BIOLOGICAL EFFECTS FOR COLOR**

There are none so blind . . . There are none so deaf . . .

Many of my conferees are skeptical as to physiological effects for color. Some apparently do not want color to have effects. Facts can be presented both to prove and disprove effects for color. Depending on individual prejudices, one side or the other can be taken and plausibly defended.

However, in case the ISCC reader is not well acquainted with recent studies, let me offer a few points.

One reason why physiological color effects can be proved and disproved is that the factor of time is often disregarded. Using an instrument such as a polygraph, which will react to palmar conductance (skin), blood pressure, heart rate, and respiration rate, exposure to color (perhaps on a large illuminated screen) will produce an immediate response — and a different response to different colors. The effects, however, are not unlike those that follow the taking of alcohol, coffee, or tobacco. Immediate response may be above normal, then it will level off and later may fall below normal. So the answer might well be "yes" immediately, and "no" later on.

As a member of the American Society for Photobiology I have attended two out of three annual meetings (and have spoken both times). I have sat in on dozens of highly technical and authoritative reports on the biological action of light and color. How anyone can be so naive as to doubt effects is bewildering to me.

-Visible light is far more penetrating in humans (birds, animals) than ultraviolet, which merely hits the surface of the skin. Visible light has been found to penetrate through the skulls of ducks and sheep.

-Visible light is used to repair the skin damage of UV light

-Colored dyes, mostly red or yellow-orange, applied to the skin and then exposed to light will help to cure herpetic infections (cold sores).

-Where certain photosensitizing chemicals are taken orally and the skin then exposed to visible and long UV light, psoriasis can be relieved. Indeed, visible light in this type of therapy is being used to treat some forms of superficial tumors and cancer.

-Visible blue light is today treating thousands of cases of neonatal jaundice in newborn infants, which left unattended can lead to cerebral palsy or worse.

-Green fluorescent light has accelerated damage to the visual receptors of rats when body temperature is simultaneously raised. Blue and white fluorescent lights have caused blindness in newborn piglets. The rodents will be more active in a red environment than in a yellow, green, or blue one.

Back to humans, Dr. Thomas R. C. Sisson of the Temple University School of Medicine remarks, "The physiological effects of light, particularly of colored light, are well known but not well understood. These effects may bear a causal relationship to purely biologic processes in the brain induced by light which in turn will affect psychic behavior."

The assumption is now being confirmed. In a remarkable book, New Mind, New Body (1974), by Barbara B. Brown, Chief of Experimental Physiology at a Veterans Hospital in

California, and lecturer in the Department of Psychiatry at the UCLA Medical Center, studies are presented on skin and brain wave response to color. "The skin sees in Technicolor." According to Dr. Brown the skin can discriminate among colors. It is a good detector "and seems to reflect the way in which brain neurons process color information." Induced emotional states are specific for different hues.

With brain waves, using an electroencephalograph (called EEG), red has an alerting effect and blue a relaxing one. Her conclusion, "I tend to favor the concept that the brain cell, neuronal, response to color came first, since in my studies and those of others the brain electrical response to red is one of alerting or arousal, whereas the brain electrical response to blue is one of relaxation. This happens in animals as well as men."

In my opinion, physiological effects for color can be taken for granted. Let's go on now to more vital and inquiries — behavioral responses. How do people *act* under the influence of color?

Faber Birren

## COLOR SCIENCE ASSOCIATION OF JAPAN

Dr. Genro Kawakami, secretary of the Color Science Association of Japan, has announced that offers for nine contributions to the 1976 edition of *Acta Chromatica* have been accepted. Dr. Kawakami expected the manuscripts to arrive at his office by the end of August and expects the next issue to be published by the end of next March.

The 1974/1975 issue has been published, and the table of contents appears below.

On the Measurement of Dichromatic Neutral Points — L. M. Hurvich and D. Jameson

Separation of Carriers of Color Vision Defect with Flicker Photometry — M. Ikeda, K. Hukami and M. Urakubo Anomalous Appearances of Boundaries between Adjacent Colors of Similar Lightness — S. Nakamura

Measurement of Fluorescent Colors (II) — Effects of the Difference Between Standard Illuminants and Actual Light Sources — G. Baba, M. Sengoku and H. Minegishi

Optical Properties of Natural Dyes — S. Minato The Current Trend of Colour Preference Studies in Japan — H. Chijiiwa

### **NEWS FROM MEMBER-BODIES**

Federation Awards Offered for Society Achievements and for Paper on Use of Color in Coatings

Two new annual awards are being offered for competition by the Federation. Materials Marketing Associates will provide three \$350 cash awards for notable achievements by Constituent Societies, and the Dry Color Manufacturers Association in presenting a \$200 cash award for a paper on the theory, use, or effect of color in coatings.

#### **MMA** Awards

MMA is a national marketing group of manufacturers' representatives composed of: Kennesaw-Wilcox, Atlanta; Lukens Chemical Co., Boston; Gary Co., Chicago; A. Mueller Co., Cleveland; Ribelin Distributors, Dallas; Matteson-Ridolfi, Detroit; George C. Brandt, Inc., Kansas City, Kan. and St. Paul; E.T. Horn Co., Los Angeles and San Francisco; C. Withington Co., New York; Van Horn, Metz & Co., Philadelphia; Walsh & Associates, St. Louis; Apco Industries Co., Toronto; and Shanahan's Ltd., Vancouver, B.C.

The MMA Awards are for outstanding Society contributions (other than for Society papers presented at the Federation's Annual Meeting) in the field of education, manufacturing and training procedures, technology, public service, etc.

There will be three categories of awards, based on the membership size of the 25 Constituent Societies.

Winner in each category will receive \$350 in cash plus an appropriate certificate. The awards will be presented at the Federation's Annual Meeting, but it is not mandatory that an award be presented to any or all categories each year.

Chairman of the MMA Awards Committee is Ben Chatzinoff, of the Philadelphia Society. He has indicated a favorable response to the initial competition this year.

# **DCMA** Awards

The DCMA Award will be presented to the author of the best paper on the theory, use, or effect of color in coatings. The winner will receive a \$200 cash prize and a certificate. The competition is being administered by the Federation's Inter-Society Color Council Committee chaired by Ruth Johnston-Feller, of the Pittsburgh Society.

Editor's note: The preceding item is reprinted from the newsletter of the Federation of Societies for Coatings Technologies.

Color and Appearance Division Society of Plastics Engineers

COLOR SEMINAR COMING. The final date and location have not been set, but we are planning another seminar of the type that proved so successful previously in Cleveland, Boston and Chicago. This one will be in Philadelphia sometime in November. It will be a 2-day session, aimed primarily to help the color matcher on the job.

For more information, write to Boris Gutbezahl, Rohm & Hass Co., P. O. Box 219, Bristol, PA 19007.

TWO CONFERENCE PAPERS RECEIVE AWARDS. The Color and Appearance Division Awards Committee, which consists of three members and the Chairman, decided that in addition to the DCMA Award of \$200.00, it will this time give an award and \$50.00 to the second-best paper.

The CAD papers presented at the 33rd ANTEC in Atlanta, Georgia, can be categorized in two groups. One was concerned about normal coloration of plastics and the

second group was concerned with pigment application in fiber.

The criteria for awarding a paper by CAD is based on total of points, where technical validity, originality, effectiveness, composition and applicability are rated. The cumulative highest average point usually takes first place.

This time, the DCMA award went to the paper by R. J. Kennedy and J. F. Murray, entitled "Internal Pigmentation of Low Shrink Polyester Molding Composition with Flushed Pigments,"

The committee felt very strongly that "A New Era for Nylon Fiber Mass Coloration with Pigment" paper written by R. W. Neuls, which had gotten only 0.2 points lower rating than the award-winning DCMA paper, deserved an award too.

The paper had very good technical quality; the originality warranted publication; the effectiveness and composition were excellent and the applicability of the paper opened a new avenue in the fiber coloring industry.

I would like to point out that all four members of the committee felt equally strongly about this paper.

O. J. Gombar, Past Chairman CAD Award Committee

Editor's note: The preceding two items are reprinted, with permission, from the newsletter of the SPE Color and Appearance Division.

# DCMA Supports Color Research at Rensselaer

The Dry Color Manufacturers Association has made a grant of \$1,000 to The Rensselaer Color Measurement Laboratory, in support of research in color science and technology at Rensselaer Polytechnic Institute, it was announced today. The grant is in memory of Mr. C.K. Egeler, President of DCMA 1959-61.

### **BOOKS NOTED**

Color in Hooked Rugs and The Lore and Lure of Hooked Rugs, both written by Pearl K. McGown, are available at \$6.80 and \$10.30, respectively, a copy from Pearl K. McGown, Inc., Rose Cottage, West Boylston, Massachusetts 01583.

The Third Edition of the *Technical Guide* for the Gravure Industry is now available. For further information, write to: The Gravure Technical Association, Inc., 60 East 42nd Street, New York, NY 10017.

Electrophotography, Second International Conference. For further information, write to: Society of Photographic Scientists and Engineers, 1330 Massachusetts Avenue, NW, Washington, DC 20005.

Color in Our Daily Lives by Deane B. Judd should be appearing soon as a booklet in the Department of Commerce's Consumer Information Series. More information will appear in the Newsletter when it is available.

#### **MEETINGS**

IEEE/OSA Conference on Laser and Electro-optical Systems, May 25-27, 1976, San Diego, California

The first Conference on Laser and Electro-Optical Systems (CLEOS) will be held at the Town and Country Hotel, May 25-27, 1976, in San Diego, California, under the joint sponsorship of the Quantum Electronics Council of the Institute of Electrical and Electronics Engineers (IEEE) and the Technical Council of the Optical Society of America (OSA).

The field of lasers and electro-optics has matured extensively during the past decade. Many of the early technical concepts have progressed beyond the research stage and have become useful and commercially valuable devices and systems. Nevertheless, the engineering community, which has so successfully converted these novel concepts into technological reality, has not had an appropriate professional forum for technical exchanges. Recognizing this, the Quantum Electronics Council of IEEE and the Technical Council of OSA have decided to provide such a forum by initiating the CLEOS.

The objective of CLEOS is to provide a professional technical forum for the presentation of the engineering and manufacturing developments in the fields of lasers, laser applications, electro-optic devices, electro-optic systems, and the manufacturing and design techniques that have made these systems possible.

The CLEOS will address the electro-optical systems and component technology in the following areas: Consumer, Industrial, Medical, Environmental and Aerospace.

All questions and inquiries for further information regarding this conference should be directed to:

Ms. Leslie Hill Hughes Aircraft Company Electron Dynamics Division 3100 West Lomita Boulevard Torrance, California 90509.

# Hungarian Conference on Color Studies Announced for June 1976

The Hungarian National Color Committee has announced an international "Conference on Colour Studies" with the topic "Theoretical and Practical Problems of Coloured Surroundings" to be held in Budapest, Hungary, 8-11 June, 1976. The following themes will be discussed in concise reports, lectures, and consultations:

"THEORETICAL COLOUR STUDIES: The construction of Colour Studies as a science, its methodological questions, and aesthetics of the surroundings; Research on the correlations of man and colour and its results (colour-physiology, colour-physiology, colour-physiol

"PRACTICAL COLOUR STUDIES: Methodological questions of practical colour design, systems of colour design, experiences of the practical adaptation, documentation of the colour designs; Connections between colour design and surroundings with mixed functions, colour planning of the objects (surrounds of the city, dwelling area, industry, community buildings: objects with the function of use or decoration); Colour standards, norms for colour studies, connections between practical colour design and colour systems; Experiences and problems of the realization of colour designs, colours of materials, pigments, dyes, paints; Registration methods and experiences of the effects of actually realized colour designs.

"COLOUR STUDIES AND THE ASSOCIATED SPECIAL TECHNIQUES: Connection between colour studies, architectural illumination, and lighting techniques, respectively; Connections between colour studies, precautionary measures, ergonomy, and/or environmental protection; Measurement and identification of colours."

A copy of the First Circular and Call for Papers for this Conference may be obtained from Dr. Fred W. Billmeyer, Jr. (Department of Chemistry, Rensselaer Polytechnic Institute, Troy, New York 12181) or Dr. Antol Nemcsics, Chairman, Hungarian National Colour Committee, Magyar Electrotechnikai Egyesulet, MAGYAR SZÍNBIZOTTSAG, 1055, Budapest, Kossuth Lajos tér 608, Hungary.

The deadline for submitting papers and indicating intention to participate was Sept. 30, 1975; hence those interested are urged to contact Dr. Nemcsics as soon as possible. Both the Hungarian Colour Committee and the ISCC are member societies of the International Colour Association (AIC), under whose auspices the Conference is organized.

Coloring and Decorating of Plastics – IX Stouffer's Inn, Cincinnati, Ohio September 23-24, 1975

This one is a 1½ day meeting co-sponsored with the Miami Valley Section, featuring multi-paper sessions on color measurement and the finishing and decorating of plastics. There will also be demonstration exhibits including working equipment on which you can have your own samples tested to determine suitability of equipment that may interest you.

The conference will be held at the Stouffer's Inn, Cincinnati. Retec registration chairman is Tony Jackson, c/o Madison Plastics, 220 Colonial Center Building, 5725 Dragon Way, Cincinnati, Ohio, 45227 (telephone 513-272-2444).

Registration and exhibits open at 9:00 a.m., on the 23rd, and the technical sessions begin at 1:00 p.m. Following are very abbreviated descriptions of papers to be presented:

#### COLORIMETRY - TUESDAY P.M., SEPTEMBER 23

 Measurement of Fluorescent Colors Using a Spectrophotometer with Reversible Optics — L.C. Noyes, Diarro Corp., and F.C. Cole, Foster Grant Co.
 Use of the new "Hardy II" Recording Spectrophotometer for obtaining complete spectral characterization of fluorescent colors in plastics.

 Guide to Appearance Measurement Practices — T. Keane, Gardner Laboratory, Inc.

A system concept that will aid in appearance qualification of products without wrestling with a myriad of problems involved in their measurement.

 Recent Advances in the Measurement of Gloss – J.S. Christie & R.S. Hunter, Hunter Associates Laboratory Inc.

An update on measuring the gloss of metallics, reflection directionality from extrusion marks, distinctness of image, reflection haze, etc.

A New Instrument at NBS for Measuring Diffuse Reflectance and Transmittance — W. H. Venable, NBS.

A new means of studying the optical properties of materials which diffuse light.

# FINISHING AND DECORATING OF PLASTICS – WEDNESDAY, SEPTEMBER 24

- Woodgrain Finishing of Polystyrene and Polyurethane Foams — P. Leary, Reliance Universal
- Contour Foil Equipment P. Carnes, Automatic Industrial Labs.
- Decorating Foams Substrates G. Nixon, Red Spot Paint & Varnish Co.

How to cope with problems associated with the substrate, coating formulation and finishing techniques.

 Decorative Coating of Plastics by Vapor Deposition — J. Richman, Stokes, Div. of Pennwalt.

Techniques for applying highly adherent and specular stainless steel coatings on plastics.

• The Role of Color in Creating Weather Resistant Plastics – G. Grossman, Q-Panel Co.

Apparatus to simulate and predict weathering of colored plastics.

 Painting and Decorating of Elastomeric Plastics – R.F. Hruby, Bee Chemical Co.

Production requirements for painting elastomeric surfaces, including TPO, TPR, urethane, vinyl and rubber.

- The Hidden Cost of Becoming a Quality House Plastic Plater L. Beeman, Dare Pafco Inc.
- Woodgrain Decorating of Plastic Extrusions V. H. Rampelberg, Thermark.

Processes that allow complex shapes of foam polystyrene, vinyl and polypropylene to be foiled at high speed.

 Modular Spray Mask Finishing – C. E. Schwaiger, Jr., Sepanski, Inc. New Concept in modular spray mask finishing equipment that overcomes formerly inherent problems in cost, early obsolescence, etc.

Application of Optical Instrumentation in Medicine IV

SPIE/SPSE SEMINAR — Atlanta Marriott Motor Hotel — September 25-27, 1975.

For further information, write to: SPIE/SPSE Registration Committee P. O. Box 1146 Palos Verdes Estates, California 90274 USA Telephone 213/378-1216

#### 1976 Asilomar Conference - Asilomar, California

Three simultaneous topical meetings on image processing, optical interference coatings, and speckle phenomena will be held February 24-26 at the Asilomar Conference Center in Pacific Grove, California. These meetings are sponsored by the Optical Society of America with the cooperation of the American Vacuum Society, the Society of Photo-Optical Instrumentation Engineers, and the Society of Vacuum Coaters.

For further information, write to: Optical Society of America Asilomar Conference, Suite 620 2000 L Street, N.W., Washington, D.C. 20036

#### **ANNOUNCEMENTS**

Hunter Associates Laboratory, Inc., of Fairfax, Virginia has announced the appointment of Applied Instruments Corporation as their West Coast Representative.

Applied Instruments Corporation was founded by Mr. Frank Kelley in 1961 and represents several other companies in the field of high technology instrumentation, serving the States of Washington, Oregon, California, Arizona, and Nevada from offices at Anaheim and Los Altos, California.

Applied Instruments Corporation may be reached at: 1681 West Broadway, Anaheim, California 92802, telephone 714-535-6551 and 199 First Street, Los Altos, California 94022, Telephone 415-941-5928.

Hunterlab is located at 9529 Lee Highway, Fairfax, Virginia 22030, telephone 703-591-5310.

Dr. Robert W. Burnham, formerly with the Research Laboratories of the Eastman Kodak Company, has announced that he is available as a color consultant. His address is 4 Beacon Hill, Fairport, New York 14450, and his telephone number is 716-223-8468.

#### **NEWS OF MEMBERS**

Alexander F. Styne, Chairman of sub-committee on Human Response to Color, delegate to the Council from the Illuminating Engineering Society and the Industrial Designers Society of America was awarded the Distinguished Service Award of the Illuminating Engineering Society at the Annual Technical Conference in San Francisco in July. After attending the Quadrannual Meeting of the International Commission on Illumination in London in September, he will present two invited lectures at an Institute on "Designing the Color, Light and Visual Environment for Human Performance" at the University of Wisconsin. He has also been commissioned to address a Conference for Architects and Consulting Engineers at the General Electric Lighting Institute in Cleveland in October. His subject will be "The Integration of Color into Spatial Design Within Realistic Energy Requirements." In November he will speak before the American Society of Interior Designers in Fort Lauderdale on "Light Sources and Surface Colors."

George W. Ingle, an ASTM delegate, was recently appointed assistant technical director, solid wastes, of the Manufacturing Chemists Association.

Dr. Fred W. Billmeyer will be teaching a course on Principles of Color Technology in Tokyo at the Japan Color Research Institute on October 15-17.

#### INSTRUCTION

GRAPHIC ARTS RESEARCH, ROCHESTER INSTITUTE OF TECHNOLOGY

College of Graphic Arts and Photography Announces A Seminar on Quality Control for Photographic Processing, October 6-10, 1975

Color Seminar for Pressmen, October 14-17, 1975

Seminar on Color Reproduction for Engineers, October 22-24, 1975

For more information, write to William Siegfried, Director of Training, Graphic Arts Research Center, Rochester Institute of Technology, One Lomb Memorial Drive, Rochester, NY 14623. Phone: (716) 464-2758.

#### THE GEORGE WASHINGTON UNIVERSITY

Electronic Display, Technologies and Applications, October 7-9, 1975

For more information, write to: Director, Continuing Engineering Education Program, George Washington University, Washington, D.C. 20052.

#### UNIVERSITY OF WISCONSIN

Designing the Color, Light, and Visual Environment for Human Performance, September 29-30, 1975

The University of Wisconsin-Extension will conduct a two day institute on DESIGNING THE COLOR, LIGHT AND VISUAL ENVIRONMENT FOR HUMAN PERFORM-ANCE. This program is scheduled for September 29-30, 1975

on the Madison Campus of the University of Wisconsin.

Research has shown that human productivity can be altered by changing the environment in which people perform their daily work tasks. The sessions of this institute will provide the architect and interior designer with an opportunity to study the latest design requirements based on human performance requirements. Consultants and specialists dealing with faculty design will discuss the effects of the color and light environment on human performance, research implications for structuring architectural interiors, effect of color and light on critical task performance, systematic methods of selecting color and light in work and living environments, color design for habitability, and facility case studies of interior environments.

Fee for the institute is \$110.00. Requests for additional information should be directed to Philip M. Bennett, Program Director, Department of Engineering, University of Wisconsin-Extension, 432 North Lake Street, Madison, Wisconsin. Telephone (608) 262-2061.

#### **EXHIBITS**

### Library of Congress

THE FLOWERING OF LYONS. An exhibition of 20 water-color patterns for brocaded silks from the 18th century. The elaborate floral patterns, both for dress and furnishing silks, were so highly prized that the artists' drawings were copyrighted. Accompanying prints, documents, and maps illustrate the economic and social importance of the silk industry to Lyons and to France. In the northeast and southeast corridors, Ground Floor, Main Building, through October 27.

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# LIBRARY OF CONGRESS

# **New Exhibits**

The exhibits listed below are on display in the east corridor, First Floor, and in the exhibit area, Second Floor, Main Building. In order to preserve the originals some of the manuscripts shown are photocopies of the originals.

#### Treasures of Early Printing

GUTENBERG BIBLE. The first great book printed in the western world at Mainz, Germany, between 1450 and 1455. It is estimated that about 200 copies of the Bible were printed, of which 47 in various degrees of completeness are known to exist. The Library's copy is bound in three volumes and is one of the three remaining vellum copies to be perfect in all respects.

GIANT BIBLE OF MAINZ. The work of a single caligrapher, the Bible was begun in April 1452 and completed in July 1453. The text was copied onto perfect sheets of vellum which were handsomely illuminated and bound in two volumes.

INCUNABULA. Distinctive early examples of the art of printing with moveable type from presses of famous printers in England, France, Germany, and Italy. Notable works included are an illustrated edition of Aesop's Fables, 1480; the first illustrated edition of Dante's The Divine Comedy, 1481; Ptolemy's geography Cosmographia, 1486; and the 1493 edition of The Nuremberg Chronicle.

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### **NOTES**

- 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 III, Section 2). Application forms for individual membership may be obtained from the Secretary (address given above).
- 2. The Council re-affirms its community of interest and cooperation with the Munsell Color Foundation, a tax exempt organization set up to acquire and use its funds to further aims and purposes very similar to those of the ISCC: to further the scientific and practical advancement of color knowledge relating to standardization, nomenclature and specification of color, and to promote the practical application of these results to color problems arising in science, art and industry. The Council recommends and encourages contributions for the advancement of these purposes to the Munsell Color Foundation. For information, write S.L. Davidson, NL Industries, P.O. Box 700, Hightstown, N.I. 08520.
- 3. 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 Christian Rohlfing, Cooper-Hewitt Museum, 9 East 90th Street, New York, New York 10028.