

# Inter-Society Color Council *News*

## ISCC 53RD ANNUAL MEETING

The 53rd annual meeting of the ISCC will be held on April 8-10, 1984 at the Michigan Inn, Southfield, Michigan. The theme of the meeting will be Automotive Color. Project Committee meetings and tutorial workshops will be held on April 8-9. There will be a banquet on the night of April 9th at the Henry Ford Museum followed by a museum tour, arranged exclusively for the meeting participants. The museum's collections, among the finest in the world, encompass transportation, communications, agriculture, domestic arts, lighting, and home furnishings.

A symposium entitled "The Dynamics of Automotive Color" will be held on April 10. It will explore all aspects of automotive color including styling, the use of various materials, color matching and refinish. It will include a mini-symposium on Instrumental Control of Automotive Color.

This year's program is being co-sponsored by the Detroit Color Council and the Detroit Society for Coatings Technology. These local societies look forward to welcoming the ISCC to Detroit.

For further information contact: Dr. Allan B. J. Rodrigues, Program Chairman, E. I. DuPont de Nemours & Company, 945 Stephenson Hwy., P.O. Box 2802, Troy, Michigan 48007, Phone (313) 583-8245.

## NEWS OF MEMBERS

### L. F. C. Friele

By an amazing coincidence, I met former ISCC member Ludz F. C. Friele of The Netherlands in the Amsterdam airport on September 8. Waiting in line to check in for my return flight from the CIE Congress, I could not believe my eyes when Friele turned up in the adjacent line, checking in for Calgary, Canada, to take a vacation with his son.

Ludz Friele retired from the Fibre Research Institute TNO in Delft, The Netherlands, in 1979. He recalled that the ISCC Judd Memorial Conference on Color Metrics at Williamsburg in that year was his last major international meeting. There he presented the paper "Color Metrics: Facts and Formulae," published in *Color Research and Application*, Vol. 4, p. 194, 1979.

Friele's retirement was complete in his separation from the world of color. He was surprised to learn that the CIE had just met in Amsterdam, only a few tens of miles from his home. His health appears to be excellent. We had a fine hour reminiscing, and he sends his best to all his old friends in the ISCC.

Fred W. Billmeyer, Jr.

### MacAdam Receives Judd-AIC Award

David L. MacAdam, a long-time friend of the late Deane B.

Number 286

SEPTEMBER-OCTOBER 1983

Judd was awarded the 1983 Judd-AIC Medal by the International Color Association (AIC) at a Symposium on Color Order Systems held at Kungälv, Sweden, August 25-29, 1983, as announced in ISCC News No. 283, March-April 1983, on page one. The award was established by Betty Judd in memory of her husband who died in 1972, a world recognized authority on color, and one of the founders of the AIC.

After receiving the award, Dr. MacAdam presented a paper entitled: "Judd, Hardy: Color Measurement and Systems." MacAdam was also a graduate student of Professor Arthur Hardy at the Massachusetts Institute of Technology. The following condensed summary of MacAdam's remarks was prepared by Harry K. Hammond III.

A most desirable feature of a color system is the quality of differences between successive pairs in various series. As systems evolved the perceived steps have been made more nearly equal, but this requires meticulous judgment about the equality of differences between pairs of colors. The judgments are difficult and not very reproducible, and unless the colors can be reproduced the results will have little future value.

Colors have been recorded by use of (1) names, (2) samples, (3) measurements. Names are imprecise, samples change with time, and only recently have we had high reproducibility of color measurement. Ostwald and Munsell attempted to define their colors in physical terms, but at the time neither had instruments adequate for the purpose. Judd came to NBS in 1927 as a research associate of the Munsell Color Company to measure the colors of the Munsell system on the NBS visual spectrophotometer. Measurement of each color required several hours. Some years later Hardy designed a photoelectric spectrophotometer, and later equipped it with a mechanical integrator that provided results in a few minutes. Now modern electronic microprocessors do the same thing in a few seconds.

Judd suggested that one of the first applications of the Hardy spectrophotometer should be the measurement of the Munsell colors. MacAdam prepared glass plates with vertical lines to speed obtaining data at the prescribed selected ordinate wavelengths. The plotted chromaticity coordinates of the colors revealed irregularities in the Munsell spacing, later confirmed at NBS with a commercial version of Hardy's spectrophotometer. The Committee on Colorimetry of the Optical Society of America (OSA) published the data in 1943 and the uniformity of the Munsell scales has been gradually improved ever since.

At a 1934 meeting of OSA, MacAdam presented a report on the chromaticity limits of object colors based on the 1931 CIE Observer. Hardy introduced him to Judd who gave him refer-

ences to publications of Ostwald on full colors, Schrodinger on Optimal Colors, and Rosch on the color solid defined by Optimal Colors. Judd encouraged him to publish his paper because the results in the prior papers were reported before the adoption of the 1931 CIE Observer. After that, MacAdam always sent drafts of his papers to Judd and usually revised them as he suggested.

From 1947 until his death in 1972, Judd chaired the OSA Committee on Uniform Color Scales that labored long and hard to devise a color system that would have the maximum number of color scales in which all steps would consist of equal color differences and would have equality from scale to scale. Judd admired the Munsell system, but he recognized that no system based on a polar plan could satisfy the requirements of the Committee.

Carl Foss, a member of the Committee, showed that the requirements could be satisfied in euclidian space only by colors located at lattice points of a face-centered cubic crystal. Paired comparison judgments reveal that color space is non-euclidian, and so required a compromise. Judd specified for this space: (1) the origin of coordinants (gray of 30% reflectance), (2) the direction of the yellow axis, and (3) a formula for "crispning," the effect of a background that enhances the perception of differences between colors that are not very different from the background.

Shortly before Judd died in 1972, MacAdam used a computer-controlled method to prepare photographic approximations to the colors and scales. Judd spent several hours examining the scales and stated that there would be many uses for them.

The CIE coordinates of the OSA colors have been published and so can be reproduced at any future time. Repeated judgments by 35 young observers have been obtained by MacAdam over the past five years for 1,000 pairs of colors adjacent in various OSA color scales. The results of different observers are so different that there are no indications of ratios significantly different from those computed from spectrophotometric data. However, 1,000 pairs is a small fraction of the 4¼ million possible pairs; so MacAdam hopes that other investigators will extend the study and report their results. Thus the features of permanence, equality of spacing, extensibility, and subdivisibility desired by Ostwald, Munsell and Judd result from the development of instrumental color-measurement systems. Similar procedures should be used to record the colors of every new color system.

## **REPORT OF PROJECT COMMITTEE 22 MATERIALS FOR INSTRUMENT CALIBRATION, DANNY C. RICH AND CHARLES J. SHERMAN, CO-CHAIRMEN**

The meeting was called to order at 3:30 p.m. April 11, 1983 by co-chairperson Danny Rich. There were eight active members present. The revision of the committee publication, "Guide to Material Standards and Their Use in Color Measurement" was discussed. BCRA tiles have not yet been reissued but soon will be. It was noted that John Verrill of the NPL is

putting together a catalog of calibration materials for CIE Technical Committee 2.3 subcommittee on Standards and Techniques. Jack Hsia will keep us informed. The Japanese opal tiles are available directly from Japan. Initial testing indicates that the material is more uniform and opaque than the Russian opal now in use in this country. A thickness of at least 5 mm was recommended. A black tile is now also being offered. A U.S. distributor should be sought for this new material. Pressed Halon standards should be included in the revised guide.

A suggestion was made that users could press their own Halon tiles. As the material has been shown to be pressure sensitive in the past a round robin experiment was suggested to evaluate the viability of inter-laboratory pressings. There are five committee members who presently make their own pressings. Each will be requested to make two Halon placques (on different days) and mail them to the NBS. Jack Hsia will measure them and report the differences.

F. W. Billmeyer, Jr. volunteered to rewrite the section III C.1 on wavelength calibration. D. C. Rich will update the tables. Jack Hsia suggested rewriting the stray light section as ASTM E13.01 is issuing a new standard practice on stray light determination and Klaus Mielentz has recently published a paper in *Applied Optics* on stray light.

A report from Cindy Ashton of 3M on fluorescent standards was reviewed. The report indicated that DAYGLO type pigments could be placed into stable coatings and kept as standards. Medium term repeatability (30 days) was about 0.3 CIELAB units compared to 0.1 CIELAB units for non-fluorescent materials. F. W. Billmeyer, Jr. indicates that reproducibility was a factor of 10 greater for both fluorescent and non-fluorescent materials. The next step will be to survey manufacturers and users to determine the interest and availability of standard fluorescent materials. If there is sufficient interest then a set of methods for using the standards must be established. A new supplier of fluorescent materials was identified. He is:

Herbert L. Hoff  
Beaver Cloth Cutting Machines, Inc.  
P.O. Box 30, Beaver Park  
Amsterdam, NY 12010  
518-843-0920

It was then noted that DAYGLO has obsoleted their old colorants and the Ciba-Geigy white scale is no longer available.

Finally F. W. Billmeyer, Jr. presented a discussion of the CORM proposal for a national standardization program for spectrophotometry. An interest survey was taken and the results will be presented at the annual CORM meeting May 23 and 24, 1983 at the NBS. The proposal would provide certification of proper usage and accuracy of NBS standard materials, while relieving the NBS of the responsibility of routine calibration services.

The meeting was adjourned by D. C. Rich.

## **DETROIT COLOUR COUNCIL**

The DCC conducted a highly successful panel conference in September on automotive exterior coatings. Gene Leithauser

and John Young who head their respective paint operations at General Motors and Ford, were joined by Ken Kinsler, president of Glasurit America and George Patrick, technical service consultant for duPont Pigments. A wide range of issues related to brilliantly colored painted surfaces was explored.

In the final program of the year November 17, automotive designer Bob Zokas, director of Ford luxury car exterior styling, gave an impressive visual presentation on the intricacies of automotive design.

Work is underway on a very important program in February, 1984 in which General Motors' plans for measured color difference procedures and tolerances will be discussed. The speaker will be James Abell of the Fisher Body Division. For information on the program contact William Longley, 313-323-3826.

## MEETINGS

### ASTM Paint and Appearance Committee Meetings

Concurrent meetings of ASTM Committees D-1 on Paint and E-12 on Appearance are being held the week of December 11, 1983, in Bal Harbour, Florida, and the week of May 20, 1984, in Montreal, Canada. ASTM is a Member Body of ISCC.

The Paint Committee has an Optical Properties Subcommittee chaired by Charles Sherman of The Sherwin-Williams Company, Chicago. This subcommittee has been the source of a number of important ASTM test methods, such as D 523 on Gloss, D 2244 on Instrumental Evaluation of Color Differences, and D 4086 Visual Evaluation of Metamerism.

Committee E-12 on Appearance of Materials is currently chaired by Nick Hale of Hale Color Consultants in Baltimore. This committee has been responsible for a number of Standard Definitions, Test Methods, and Practices, such as E 284 on Definition of Appearance Terms, E 308 on Spectrophotometry and Description of Color in CIE 1931 System, and E 805 on Identification of Instrumental Methods of Color or Color-Difference Measurement.

Interested Persons are invited to meet with these committees at their forthcoming meetings, particularly the May Meetings in Montreal, where Committee E-12 is sponsoring the Seminar "Review and Evaluation of Appearance: Methods and Techniques" on May 23, 1984. Participants at this symposium will include not only E-12 members but guests from as far as China and Great Britain.

For details about the above meetings or other activities, write ASTM, 1916 Race Street, Philadelphia PA 19103, or telephone 215-299-5400.

Harry K. Hammond III

### Color Group of India Meeting

The 1984 international meeting being sponsored by the Color Group of India has been postponed to December 1984 to allow foreign suppliers time for importing exhibits. Details will be published shortly.

## CRP Color Measurement Advisory Committee

On October 3, 1983, a meeting was held in Washington of a small but important committee known by the above title. It deals with the Manufacturers Council on Color and Appearance (MCCA) Collaborative Reference Program (CRP) on Color and Appearance run by Collaborative Testing Services. The program has been in operation for ten years. The Advisory Committee has felt for some time that the program has met the original need of showing participants how far apart they are on measurements of the same colors. The Committee has indicated that in their view the program should now be directed toward providing diagnostic data that would give the user some idea of where to look if he wishes to improve the agreement or lack thereof between his results and those of the Grand Mean or better still those of a recognized standardizing laboratory. Design of an ideal program of this type is not easy, but some progress has been made in the past year by including three specimens that comprise a metamer and a nonmetamer pair.

The Color and Appearance CRP has been well received. In the paint, color and color-difference program a total of 149 instruments are currently involved. These include instruments of different manufacture and different geometries.

Three problems are encountered in data analysis for a program of this type: (1) some participants do not follow the instructions supplied with the test specimens, (2) some participants fail to keep their working standards clean and to report the basis for the calibration data on the white standard used with the instrument and (3) some participants fail to appreciate that their results would be improved by periodic cleaning of the instrument, by careful instrument calibration, and by following the specimen presentation instructions. Most subscribers to the program appear to be satisfied with the results, but the Committee is of the opinion that better agreement among participants can be obtained; so the Committee will direct its effort toward improvement. The Committee would also like to see more data from each type of instrument. Many ISCC members making instrumental color measurements are currently enrolled in the MCCA CRP on Color and Appearance, but if you are not, you may wish to request information about this and other programs from Mr. Charles Leete, Collaborative Testing Services, 8343A Greensboro Drive, McLean, Virginia 22102.

Harry K. Hammond III

## 20th CIE Congress

### OPENING

The 20th Congress of the International Commission on Illumination (CIE) was held 31 August to 8 September 1983, the 70th anniversary of the founding of the CIE, in one small corner of the huge International Congress Center known as the RAI on the southern outskirts of Amsterdam. Most U.S. delegates stayed at the Apollo Hotel, a pleasant 15-minute walk from the RAI along a canal and through public gardens.

At the opening ceremony President de Boer noted that there were over 500 delegates from 35 countries, 15 outside Europe.

There were over 50 delegates and 30 accompanying persons from the U.S. There were 40 delegates from Japan. Mr. de Boer's welcoming remarks were followed with an address by the Netherlands Minister of Economic Affairs commenting on world economics as a role of the Netherlands. W. R. Stevens (GB), CIE President (1971-1975), reminisced on the 40 years since the founding of CIE. The Amsterdam Police band suddenly marched in and gave a delightful and lively concert. Professor H.B.G. Casimir of Philips, Eindhoven, delivered an interesting introductory lecture on "A Physicist Looks at Light and Lighting." This was followed by the showing of an exciting film "Sky over Holland."

Officers' reports were presented in the afternoon. Perhaps the most important report was that of the Treasurer who stated that thanks to the strong dollar and high interest rates, he expected to close his books for the quadrennium with income and expenses in balance, and that the dues of member countries will not have to be increased. (The U.S. dues amount to nearly \$10,000 per year.)

## PAPERS

Two days of the Congress were allotted to formal presentation of invited and contributed papers, and the third day to poster papers, an innovation at this CIE Congress. Robert Boynton (U.S.A.) presented an invited paper on "A System of Photometry and Colorimetry Based on Cone Excitations." This was an exciting paper for those of us in the color field. Briefly summarized, it stated that we now know enough about color vision to place along side the 1931 CIE XYZ system a parallel system based on the behavior of cone color receptors in the human eye.

Other invited and contributed papers were presented in three simultaneous sessions. The quality was as varied as the content. The poster papers also ranged widely in quality. Some were very well done, presenting information beyond that provided in the preprint, in novel and colorful ways. Others were simply an enlarged photocopy of the preprint and without the author present to discuss the paper.

## TECHNICAL COMMITTEE MEETINGS

The three days following the "Papers" part of the Congress were utilized for Technical Committee meetings. Unfortunately there were as many as five simultaneous meetings. Most of the time was given to progress reports on accomplishments in the subcommittees and the main committee. No detailed plans for future work could be outlined because of the forthcoming CIE reorganization into a divisional structure. Everyone knew the work would go on, probably with the same people, but some technical committee chairmen closed their meeting by formally dissolving their committee while others being short of time, closed their meetings without doing so.

## NEW DIVISIONAL ORGANIZATION

The seven new divisions and their chairmen are as follows:  
 Division 1, Vision and Colour, H. W. Bodmann (F.R.G.)  
 Division 2, Physical Measurement of Light and Radiation,

Franc Grum (U.S.A.)

Division 3, Interior Environment and Lighting Design, E. Barthes (France)

Division 4, Lighting and Signalling for Transport, H. H. Bjorset (Norway)

Division 5, Exterior and Other Lighting Applications, R. C. Aldworth (G.B.)

Division 6, Photobiology and Photochemistry, L. R. Ronchi (Italy)

Division 7, General Aspects of Lighting, K. Narisada (Japan)

## DIVISION MEETINGS

The seven newly formed divisions held their first meetings at the end of the Congress, two on the last day of technical committee meetings, the remaining five in simultaneous sessions on the final day of the Congress. The half-day allotted to each was far too little. Each division meeting was opened with an introduction by a CIE officer who announced the appointment of the director and then let him chair the meeting.

At the Division 2 meeting, 21 delegates, alternates and observers were present together with about 55 participants. Division Director Franc Grum (U.S.A.) was introduced by CIE Vice-President A. J. Fisher (Australia). The work of the division involves three major areas: light sources, measurement systems, and materials. Under the new divisional organization each item of work is to be carried on by a technical committee that will be discharged upon completion of the item. New technical committees were therefore proposed for 16 items, and nominations were made for chairmen. Each item was voted on separately by the national delegates present. Six other items were considered but discussion of each was tabled for reasons such as, no nominee for chairman, other work should be completed first, or task was of interest to several divisions and so a CIE Council decision would be required to determine which division should be responsible. Grum appointed Klaus Mielenz (U.S.A.) as Division Secretary and Fred Billmeyer (U.S.A.) as Editor. Five of the seven divisions are reported to have appointed editors. Four divisions appointed technical consultants.

At the inaugural meeting of Division 1, Vision and Color, Division Chairman Bodmann appointed three technical advisors to follow the work of groups of technical committees. Jim Bartleson is one of the advisors. Bodmann presented the working program of the Division, comprising 17 technical committees, as accomplished rather than asking for approval of the national delegates. Objections to this procedure were voiced.

## CLOSING SESSION

In the closing session of the Congress, the new CIE officers were formally identified:

President	Gunter Wyszecski	Canada
V.P. Technical	A. J. Fisher	Australia
V.P. Publications	A. M. Marsden	Hong Kong
V.P. Liaison	A. Willemin	Switzerland
V.P. Sessions	P. Soardo	Italy
V.P.	J. Kossakowski	Poland
V.P.	J. Schanda	Hungary

Secretary	Heinz Terstiege	F.R.G.
Ex. Secretary	Wolfgang Budde	Canada
Treasurer	James Jewell	U.S.A.

It was announced that the 21st Congress will be held in Florence, Italy, at the end of June, 1987.

#### ACKNOWLEDGMENT

Portions of this report are taken with permission from USNC-CIE Newsletter No. 11, October, 1983, edited by Fred W. Billmeyer, Jr.

Harry K. Hammond III

#### Summary Report on the Amsterdam Meeting of the CIE Color Rendering Committee (TC 3.2)

Chairman Margaret Halstead (UK) reported that the Committee has been active in two major areas: (1) Assessment of illumination for color reproduction including photography, television, printing and combined techniques, and (2) Revision of CIE Publication 13.2 (1974), "Method of Measuring and Specifying Color Rendering Properties of Light Sources."

The Subcommittee on Illumination for Color Reproduction has made progress in specifying and testing a Color Consistency Index (CCI) assessing the suitability of a light source for use in photography, printing, or television. The work has been carried out by three working parties.

*Television Working Party (TWP).* — A computer model of an electronic color television camera channel has been developed. The colorimetric performance is calculated for the test lamp as the "seen" illuminant and then with a reference illuminant for each of a number of test colors. The color differences obtained when using test and reference illuminants yields a Consistency Index. The work has concentrated on obtaining color camera analysis characteristics that are representative of the range of available cameras. Computations were made using spectral powered distributions for theoretical sources and for real lamps. Different sets of test colors have been used.

*Printing Working Party (PWP).* — The illuminant used to view the final result of color printing is important. The present color rendering index has been satisfactory for assessing the source used in making color separation negatives.

*Photographic Working Party (PWP).* — Computer models have been developed that enable a Photographic Consistency Index (PCI) to be calculated for a given set of film sensitivities and dyes. The procedure is similar to that for the Television Consistency Index. Practical tests are being carried out in various laboratories in which observers are asked to judge a set of transparencies that have been made by photographing a scene under different light sources.

The next quadrennium the main task will be the preparation of a technical report "Illuminations for Color Reproduction."

CIE Publication 13.2, issued ten years ago, needs to be updated. The Committee proposes to use a radical new approach to the calculation of color rendering indices.

Under the restructuring of CIE committees, three technical committees have been established in Division 1 to work in the area of color rendering.

1. Illuminants for Color Reproduction, W. N. Sproson, UK, Chairman.

2. Relative Color Rendering, M. B. Halstead, UK, Chairperson. This committee will be responsible for the major portion of the revision of Publication 13.2. Method for Measuring and Specifying Color Rendering Properties of Light Sources.

3. Appearance Analysis, Michael Pointer, UK, Chairman. This Committee will be addressing the problem of "absolute" rendering.

Harry K. Hammond III

#### US National Committee, CIE

The USNC-CIE met at Lawrence, Kansas, October 23-25, 1983, at the invitation of Professor Ronald Helms, Department of Architecture and Engineering, University of Kansas. Thanks to his efforts an excellent meeting was held at the well appointed yet inexpensive Holiday Inn and Holidome. About 50 members and 5 accompanying persons attended.

A 2-day meeting of the USNC is held in October each year to conduct committee business and to discuss results of activities of the International Body and its technical committees as well as the input provided by the US contingent. Administrative reports are given by the President, Secretary, and Treasurer of the USNC. The Vice-President is in charge of the technical program.

At the 1983 meeting the following officers of the USNC were elected to 4-year terms:

President	Charles Amick, Day-Brite Lighting Consultant
Vice President	John Kaufman, Illuminating Engineering Society of N. America
Secretary	Klaus Mielenz, National Bureau of Standards
Treasurer	Hyman Kaplan, K-S Engineering Company

Brief reports were presented that covered the activities of the technical committees that preceded the CIE's new 7-division organizational structure. Activities of particular interest to me and to many other ISCC members are those that have been carried on until now in three technical committees dealing with colorimetry, color rendering, and materials.

Dr. Franc Grum, recently retired from Kodak and now professor at Rochester Institute of Technology, our energetic USNC President for the past four years, and President of the ISCC 1978-1980, headed the International Committee on Materials until he became a member of the CIE Action Committee a year ago. This coming quadrennium he will direct the work of the newly formed Division 2 on Physical Measurement of Light and Radiation.

If you wish more information about the CIE, its publications, or the possibility of membership in the USNC, write to Dr. Klaus D. Mielenz, USNC Secretary, Room B306, Metrology Building, National Bureau of Standards, Washington, D.C. 20234, or telephone 301-921-3864.

Harry K. Hammond III

## COLOR SYMPOSIUM INAUGURATES RIT MUNSELL COLOR LAB

Frontiers in Color Science, a two-day symposium on color science, will inaugurate the Munsell Color Science Laboratory at Rochester (N.Y.) Institute of Technology (RIT) February 16 and 17, 1984.

Organized by Dr. Franc Grum, RIT's Richard S. Hunter Professor in Color Science, Appearance and Technology, the program will include presentations by 11 internationally-known authorities in color science.

The Richard S. Hunter Professorship in Color Science, Appearance and Technology, at RIT was established in October 1982 through an endowment by Mr. and Mrs. Richard S. Hunter of Reston, Va. The endowment honors Hunter, founder and chairman of the Board of Hunter Associates Laboratory, Inc., manufacturers of instruments for the measurement of color, gloss and other attributes of color.

W. David Wright, Great Britain, will speak on the history of color measurement; Gunter Wyszecki, Ottawa, on the development of CIE standards and their limitations; Robert M. Boyton, San Diego, on a system of photometry and colorimetry based on cone excitations, and Peter K. Kaiser, York, Canada, on photometry and the human observer.

Also, Fred W. Billmeyer Jr., Rensselaer, N.Y., will talk on industrial applications of color sciences; Grum, on fluorescence and its measurement; David MacAdam, Rochester, on color order systems; Milton Pearson, RIT, on color reproduction; Gunnar Tonnquist, Stockholm, Sweden, on applications of color order systems, and Robert W. G. Hunt, Great Britain, on color appearance in color reproductions.

C. James Bartleson of Eastman Kodak Company and Richard S. Hunter of Hunter Associates Laboratory will speak during inauguration ceremonies for the Munsell Color Science Laboratory. The Munsell Color Science Laboratory at RIT was established when the Board of Directors of the Munsell Foundation voted to dissolve the foundation and to turn its assets to the creation and maintenance of such a laboratory at RIT. This transfer of assets is the first time a foundation has voted to dissolve itself and to donate assets to an institution of higher education.

Ceremonies will be followed by a reception and tour of the newly created facility.

All presentations will take place in the second floor auditorium of RIT's George Eastman Memorial Building. Dedication ceremonies for the Munsell Color Science Laboratory will take place in the Frank E. Gannett Memorial Building at RIT.

Registration fee for the symposium is \$100 and attendance will be limited to 100 participants. Accommodations will be arranged at the Rochester Hilton on the RIT campus.

There will be no written proceedings published of the symposium.

For further information, please contact: Dr. Franc Grum, School of Photographic Arts and Sciences, Rochester Institute of Technology, Post Office Box 9887, Rochester, NY 14623, (716) 475-2230.

## JOB OPENING

Position: Chairman of the Department of Imaging and Photographic Sciences of the Rochester Institute of Technology.

Responsibility is to provide leadership within the department and to initiate and coordinate the department's activities outside of the department. The department's activities include optics, photographic chemistry, color science and spectrometry, digital imaging and remote sensing, image evaluation and micro-structure, and electro-optical imaging. The successful candidate should have management and research experience in at least one of these fields and hold a Ph.D. or equivalent from an accredited university.

The current Imaging and Photographic Science Department has eight full time faculty, two full time staff and numerous adjunct faculty from local industry. At least two new faculty positions will be added under the new chairman.

The successful candidate will have responsibilities in five major areas as follows:

1. *Internal Administration* in the role of faculty chairman. This includes consideration of teaching responsibilities, faculty direction and development, departmental budgets, etc. (approximately 25% of responsibility).

2. *Liaison within the School*. Serve as a department focal point for interactions with alumni, other departments, and other Schools within RIT (approximately 15% of responsibility).

3. *External Exposure and Development*. A major part of the chairman's role will be to improve the department's exposure to and interaction with industry, government and professional societies (approximately 25% of responsibility).

4. *Research*. In addition to the general development activities of item #3, the chairman will seek funding for and pursue research in his/her own area of expertise along with those of his/her co-workers (approximately 20% of responsibility).

5. *Teaching* in area of expertise (approximately 15% of responsibility).

Overall, the major thrust of the chairman's position is to meld the department into a preeminent teaching and research center for image science.

Type of Contract: 12 month, tenure track appointment.

Information Required: professional resume, three references and academic transcripts, if available. Please send information to Ms. Martha Jane Pshirrer, Imaging and Photographic Science Department, Rochester Institute of Technology, One Lomb Memorial Drive, Rochester, New York 14623.

Reprinted by request



*“The menu for the week is going to the printers—would you mind telling me how to spell your name?”*

(Courtesy GAM)

## CALENDAR

### ASTM

Symposium on Review and Evaluation of Appearance, May 23, 1984 – Montreal, Canada

### ISCC 1984 ANNUAL MEETING

April 8-10 – Michigan Inn, Southfield, Michigan

### WILLIAMSBURG CONFERENCE

Color and Imaging, February 12-15, 1984

### SOCIETY FOR INFORMATION DISPLAY

International Symposium, June 5-7, 1984 – San Francisco, CA

### SOCIETY OF PHOTOGRAPHIC SCIENTISTS AND ENGINEERS

Annual Conference, May 20-24, 1984 – Boston, MA

### TAPPI

Annual Meeting, February 19-22, 1984 – Washington, D.C.

### PANTONE, INC. COLORS NEWSLETTER

A very generous donation of paper and color printing from Pantone, Inc. has restored the color spectrum to the front page of the Newsletter. The ISCC Board of Directors wishes to express its thanks to Pantone, Inc. for this tangible expression of support and help.

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 reaffirms its community of interest and cooperation with the Munsell Color Foundation, an independent private foundation devoted solely to the advancement of color knowledge in science, art, and industry. It serves as Foundation Associate of the Inter-Society Color Council. The Council recommends and encourages contributions for the advancement of these purposes of the Munsell Color Foundation. For information, write to S. L. Davidson, 42 Kemp Avenue, Fair Haven, NJ 07701.
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 10028.

*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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