AIC Newsletter

Number 3 August 1986

HURVICH & JAMESON RECEIVE JUDD-AIC AWARD

The 1985 Deane B. Judd-AIC Award has been given jointly to Dr. Leo M. Hurvich and Dr. Dorothea Jameson in recognition of their outstanding contributions to colour science. The photograph (courtesy of H.K. Hammond III) shows the Award being presented by Dr. R.W G. Hunt, President of AIC (on the right) at the 5th AIC Congress - Mondial Couleur 85, on 17 June 1985 in Monte Carlo, Monaco.

MESSAGE FROM THE PRESIDENT

At the beginning of the new quadrennium I would like to thank the past President Dr. R.W.G. Hunt for the excellent work he did for the AIC.

We have now three active Study Groups which organized Interim Symposia in Hungary, Kungälv and Salamanca during the past quadrennium and had meetings at the AIC Congress COLOR 85 in Monte Carlo. The Study Group on Colour Education which was chaired by Dr. J. Schanda at its start now has Dr. O. Estevez as its new Chairman since 1985. The chairmanship of the Study Group on Environmental Colour Design is still with A. Hard. The very important Study Group on Colour Order Systems had its first meeting in September 1981 during the AIC Congress COLOR 81 in Berlin under the chairmanship of the late Dr. G. Wyszecki. From 1983 to 1985 the Group was headed by Dr. F.W. Billmeyer who passed the chairmanship to Dr. J. Bartleson at the AIC Congress COLOR 85 in Monte Carlo. Although the goal of this Study Group was not yet reached, standardizing people of one AIC-Member country already pushed the International Standards Organization (ISO) to establish a Technical Committee TC 187 "Color Order Systems". At the Meeting of the AIC Study Group "Color Order Systems" the establishment of this competing ISO Committee, which was done against AIC and CIE advice, was very much criticized and the Study Group carried a move to advise ISO of their disapproval of its actions.

The new quadrennium starts with an Interim Symposium on Color in Computer Generated Displays which will be organized by the Canadian Society for Color in Toronto, in June 1986. For 1987 a Stiles-Wyszecki Memorial Symposium on Color Vision Models is planned in connection with the CIE Session in Italy. This will be a joint event with CIE TC-1.03 "Models of Heterochromatic Brightness Matching", and the TC Chairman Dr. Peter Kaiser is responsible for the scientific success of this symposium. For 1988 an Interim Symposium on "Environmental Colour Design" is planned to take place in Switzerland. The next AIC Conference, COLOR 89 is scheduled for spring in Buenos Aires, Argentina.

I am looking forward to having a successful AIC-Quadrennium and to meeting many participants at the various AIC venues.

Heinz Terstiege
President

COLOUR 89

The 6th AIC Congress, Colour 89, will be held in Buenos Aires, Argentina from Sunday 12th to Saturday 18th March, 1989.

The Congress will be located in an Exhibition and Conference Center (Teatro Municipal San Martin) which belongs to the City Council of Buenos Aires. It is sited at the intersection of Sarmiento and Uruguay Streets in the center of the city with plenty of facilities for transport (buses are very cheap and run very often, normally) including underground at 100m from the entrance. Many places around the Center serve any kind of food.

The Center has a main auditorium (which can be divided in two) with seating for 800. (We think that half of this will be enough, with seating for 400). Furthermore, three other rooms are available with seating capacity between 150 and 250. All of them have projection facilities and audio systems. There is a place for exhibitions (a closed room, all glassed, of about 120 square metres) and lobbies for poster sessions. Reservations will be made before the end of 1986.

There is no University lodging in Buenos Aires. Nevertheless there are plenty of clean, comfortable and reasonably priced hotels close to the Conference Center. We feel it is unnecessary to look for other accommodations.

We are studying the technical program which in principle will have four working days (Monday, Tuesday, Thursday and Friday). Wednesday will be dedicated to a group excursion in the Rio de la Plata Delta-Tigre. Mainly, paper presentations will be by poster sessions. Oral sessions will be dedicated mostly to invited lectures and discussions on important topics. We intend that in these discussions authors will be able to play a role. The discussions will not be restricted only to experts and/or members of one country. We hope to keep parallel sessions to the minimum possible.

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STUDY GROUP ON COLOUR EDUCATION
Status Report

At the AIC midterm symposium on Colour Education, held in Salamanca, Spain, from the 18th to the 20th of June 1984, agreement was reached to revise the terms of reference of the Study Group as follows:

1. To prepare an annotated bibliography of books and other aids for teaching colour, including comments of the type of people for which each item is suitable, and its availability.

2. To prepare a preliminary report for the AIC Congress in 1985 and a final report in 1988.

At the same meeting, I accepted to Chair the Study Group, succeeding Dr. J. Schanda, and agreed to proceed according to the new terms of reference. Furthermore, it was also agreed that the preliminary report should concentrate on material available in English, since it was felt that a large amount of the available literature is published in this language.

In response to a letter sent to most of the attendants of the Salamanca meeting, and a note published by Dr. R.W.G. Hunt in the AIC Newsletter, I received 18 letters from colour scientists all over the world wishing to join the Study Group and help to carry on the proposed terms. Many have actually carried out surveys in their own countries as to the availability of published material suitable for colour education and sent them to me. Not surprisingly, the preliminary results indicated that, by far, most of the material published in English and used elsewhere comes from the United States.

It is very fortunate that, previous to the Salamanca meeting, the United States group, chaired by Prof. Nancy Jo Howard, had already begun working on a bibliography of English books used for teaching colour and also that Nancy Howard agreed to make this bibliography available to the rest of the group. As a result of these developments, the task of preparing a bibliography of English books has been actually carried out by Nancy Howard's group. My task, as well as that of other Study Group members, has mostly been to provide comments and suggestions to change some details of the presentation.

In view of this, I thought it convenient that at the 5th AIC meeting held in Monte-Carlo from the 16th to the 22th of June, 1985, full attention should be paid to the United States Bibliography, giving less priority to other matters.

Although the AIC Monte-Carlo organizing committee had originally planned to provide a room with simultaneous translation for the meeting of the Study Group on Colour Education, this proved, at the last moment, not to be feasible. As a result of this, and the fact that several of the French speaking members attending the Study Group meeting insisted on having an -improvised- translation, the session was severely hampered and indeed proceeded in a rather chaotic way.

Nevertheless, during the meeting it was possible for Nancy Howard to explain to the audience the most important aspects of the United States Bibliography, especially the criteria that they have used to include material, and their choice of rating. This last is an important issue, since it is generally felt that, together with all other relevant information concerning a given publication, some indication ought to be given as to the suitability or quality for its intended audience. The United States group has chosen to include a rating based on a one- to four-stars system (one being 'poor' and four 'excellent'), whenever possible.

Finally, Nancy Howard has directly sent printed copies of this Bibliography to the several AIC National Committees that expressed a wish to have one.

An important issue is the future availability of the collected material and the task of updating it. I believe that, if we are to have a useful and practical reference system, some form of computer-readable format ought to be used. The material collected so far by Nancy Howard has been recorded with an Apple computer. Perhaps we should consider transferring this material to an IBM-compatible format in $5\frac{1}{4}$ inch diskettes. Even if this is decided, we still need to make a choice of the retrieval system to be used; since this would determine the actual format to be chosen in the diskettes. A possible solution could be to transfer all the information to a popular data-base format, and make this available to members at cost and postage price. Those interested in this question, and wishing to advance suggestions or otherwise willing to provide help, should contact me.

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STUDY GROUP ON COLOR ORDER SYSTEMS
Summary of the Minutes of the 1985 Meeting

The 1985 meeting of the AIC Study Group on Color Order Systems was held in Monte Carlo on June 21, 1985. The Chairman, Fred W. Billmeyer, Jr., presided and there were 37 present.

Status reports were given on two projects, then incomplete but essentially completed by the end of 1985. The first of these is an Annotated Bibliography on color order systems, consisting of about 400 entries. It is in the form of computer entries, allowing a variety of options for sorting and excerpting as well as extension in the future.

The second project is an AIC Technical Report (the first of its kind) "Survey of Color Order Systems." An invited paper on the subject was presented by the Chairman at AIC Mondial Couleur 85 just prior to the Study Group meeting, and a long abstract was published in the Congress Proceedings.

Completion of these two projects fulfill the commitments that the Chairman agreed to when he succeeded Gunter Wyszecki in that position in 1983. By prior agreement, C. James Bartleson now succeeds Billmeyer as the Study Group Chairman. Plans for publication and disemination of the Annotated Bibliography and the Technical Report are being made.

The remainder of the discussion at the 1985 Study Group meeting dealt with the newly formed ISO/TC187 on Colour Notations, with the Swedish Standards Institute as secretariat. It was known as early as 1983 that Sweden intended to request the formation of an ISO technical committee to select and recommend an international standard color order system. There were a number of objections to this action from colorists in other countries, who are thought to have felt but did not state a fear that the Swedish NCS would be selected to the exclusion of any and all other systems. The objections voiced were based on jurisdiction and suggested that either the CIE or the AIC should be responsible, not ISO.

In 1983, at the AIC midterm meeting and the following CIE Congress, it was clarified that the CIE had no interest in the matter, but that the AIC planned the preparation of the technical report already referred to. The Swedish proponents of the ISO TC were asked to, and it was thought agreed to, delay the formation of the TC until after the completion of the AIC technical report. Instead, the ISO TC was formed even before the AIC Congress in 1985, singularly without publicity in the color community.

There followed extensive discussion, ending with a statement of consensus proposed by R.W.G. Hunt, AIC President: *"The AIC Study Group on Color Order Systems believes that it is premature for ISO to consider issuing an international standard on color order systems at this time."* In a vote of those present directly concerned with the issue, the statement of consensus passed with 18 approving, 3 disapproving.

Shortly thereafter, the meeting was adjourned.

Fred W. Billmeyer, Jr.
Chairman

STUDY GROUP ON ENVIRONMENTAL COLOR DESIGN
Summary of the Minutes of the 1985 Meeting

The meeting was attended by about 30 persons. The organizers of the AIC Congress had, however, planned the sessions so that this meeting coincided with that of the Study Group on Color Order Systems. Many delegates of the conference are members of both or would have been interested in visiting both, which was not possible.

Anders Hård read the report for the period 1982-85. It reads in part as follows:

"The AIC Study Group on Environmental Color Design, ECD, was set up by the AIC Executive Committee at the AIC Interim Meeting on Color Dynamics in Hungary 1982.

At the meeting in 1983 there was a lively discussion regarding what to do in the Group. As a follow-up of this discussion the chairman and the secretary formulated what was called a "step by step activity program". The first step that was agreed on according to this was to collect relevant literature in order to write an annotated bibliography. The idea was that before starting any joint research and development work it would be of interest to check what is really known and what is mere beliefs and opinions - or just uncontrolled doctrines. As was pointed out at the meeting much has been written of a serious nature about the physical and engineering aspects of color and how to produce the colors asked for. But very little of scientific quality is written about how to use colors in our environment, how it may effect people and their behavior, and - based on specific knowledge - how to decide which colors should be chosen for colored materials and products.

The ECD Study Group has now officially 21 members. Four of them have been proposed by the AIC Member Bodies. The rest are those who have declared a personal interest in the subject.

Their interest, however, might not be in line with the working program proposed. As a matter of fact, the response on the "step one", the collecting of literature, is not very impressive. Only four of the members have reacted at all."

A discussion followed about the difficulties of making a bibliography, how it should be done and by whom.

Anna Bliss and Barbara Schirmeister said that similar efforts were being made in the United States. Judith Ruttenburg from Israel said that she is also collecting literature of this kind.

It was proposed that contact should be made with the AIC Study Group on Color Education to see what they have on this matter. Anders Hård replied that he is a member there and that his impression had been that this group so far had not been concerned with "the use of color".

Werner Spillman proposed that this task of collecting environmental design references on color should be done by the Colour Reference Library in London within their more general work with references on color.

This proposal was accepted and we are going to contact them in order to see if there already is, or can be arranged, an easily identifiable category of references dealing with the various aspects of color which are relevant for environmental design.

By this, the question of a bibliography was excluded from the activity program of the ECD Study Group.

Christina Burton, USA, presented her and Mette Terkildsen's proposals for subjects to discuss within the Group. Their letter will be distributed to the members of the Group and the points taken up more thoroughly at the next meeting. Ms Burton also stressed the necessity of activating interior designers to take part in meetings and discussions about color and its practical applications, both regarding the actual design and presentation techniques.

A discussion now followed concerning which other organizations with similar interests should be contacted for collaboration. The "environmental psychology movement" in both Europe and USA was mentioned.

The European organizers of such conferences are known by Hård/Sivik and will be informed about our aims. Christina Burton had experience of EDRA in the USA.

Within the CIE there is a Committee 3.5 with interests bordering ours. Representatives from this will be contacted as well.

The Chairman, Anders Hård, stated the fact that the "activity program" which had been proposed at the previous meeting had not been fulfilled, and he asked the Group to suggest a new chairman and secretary.

No such suggestion was raised. The present board was asked to try for a new period to find forms of activity for the FCD Group.

An intense discussion of this possible future activity followed, from which the board concluded that

- the Study Group on Environmental Color Design should meet for seminars and workshops.

- the meetings should be informal and consist of interchanging of experiences, both from practice with color design and from research.

- The meetings can be (but not necessarily) arranged in connection with various other larger conferences and symposia, where color-design-interested people may gather.

Anders Hård expressed some doubt that such seminars would attract people - but most of the audience seemed to think that they would.

One form of activity - which can be performed by any member of the ECD Group - is to use the address list of members and distribute papers, articles or whatever material she/he thinks would be interesting.

The board promised to consider these proposals.

Anders Hård
Chairman

Lars Sivik
Secretary

FRANC GRUM, 1922-1985

The color science community has suffered a significant loss. The life of Franc Grum ended suddenly and senselessly in an automobile accident Friday afternoon December 20, 1985. The driver of the other vehicle which had crossed into Grum's driving lane was charged with driving while intoxicated.

Grum was born May 21, 1922 a native of Yugoslavia. He began his formal education by earning a doctoral degree in classical languages from the University of Ljubljana and later received a bachelor's degree in physics and a master's degree in optics from the University of Rochester.

He has authored and co-authored nearly fifty technical publications and is the principal editor of a five-volume series on "Optical Radiation Measurement" covering Radiometry, Color Measurement, Measurement of Luminescence, Physical Detectors of Radiation and Visual Measurement. He was author of the chapter on Spectroscopy and Spectrometry in the Infrared, Visible and Ultraviolet in "Physical Methods of Chemistry" by Weissberger and Rossiter.

Grum spent his color science career with the Eastman Kodak Company where he rose from technician to director of the photometrology section of the Research laboratories. During this time he concentrated on the instrumental measurement of color and the development of physical standards for such measurements. He was fundamental in developing appropriate methods for the measurement of fluorescent materials, in the promotion of high-purity barium sulfate as a working

white reflectance standard and in the investigation of "Halon" for this same application.

In 1982 he retired after 32 years at Kodak to become the Richard S. Hunter Professor of Color Science, Appearance and Technology at the Rochester Institute of Technology (RIT) and Director of the Munsell Color Science Laboratory at that Institute, positions which he held at his death. He was most recently involved in the development of a program for a master's degree in color science at RIT, the first of its kind. While at RIT he became a respected and dedicated faculty member with a reputation of always being available and willing to help any student at any time.

Grum was a member of and involved with several professional organizations. He has served as President of the Inter-Society Color Council and of the U.S. National Committee of the CIE. He was presently serving as Vice-President of the Council for Optical Radiation Measurement and Director of Division 2 on Physical Measurement of Light and Radiation of the CIE. He held membership in the Optical Society of America, Society of Photographic Scientists and Engineers and the Inter-Society Color Council which in April 1985 awarded him the Godlove Award in recognition of his outstanding contributions to the science of color.

Grum served as a member of the national underground that fought for the liberation of Yugoslavia during World War II. He fled to Austria after the communist take-over of Yugoslavia in 1945 and from there emigrated to the United States in 1950. He lived in Wisconsin and Illinois eventually settling in Rochester, New York taking a position with the Eastman Kodak Company.

Franc had an intense interest in and a deep devotion to, his faith, his family and his work and he filled his life with all three. He is survived by his wife, Albina; three daughters, Iva, Mary Ann and Margaret and three brothers and a sister.

Milton Pearson

DOROTHY NICKERSON, 1900-1985

The science of color has lost one of its major figures. Miss Dorothy Nickerson, 85 died of heart failure in Alexandria, Virginia, a suburb of Washington, D.C., on April 25, 1985.

Only nine days earlier the Inter-Society Color Council (ISCC) had presented her with its Service Award, the last of many national and international awards for her outstanding contributions to the field. This was appropriate since Dorothy Nickerson was a co-founder of the ISCC in 1931, became its first Individual Member, and served as ISCC Secretary for 12 years beginning in 1938 and as President in 1954-1955.

Miss Nickerson's honors for exceptional service came from widely different fields but were related in some way to her interest in color. In 1951 she was awarded the Superior Service Medal of the U.S. Department of Agriculture, in part for the development of the Nickerson-Hunter Cotton Colorimeter. In 1957 she earned the American Horticulture Council Gold Certificate of Recognition for adapting Munsell notation to specification of flower colors. She was elected a Fellow of the Optical Society of America in 1959 and served for many years on that society's Committee on Colorimetry. In 1961 she received the important Godlove Award from the ISCC in acknowledgement of her valuable psychological studies of color spacing, color tolerances and color rendition.

In recognition of her contribution to the advancement of optical and color instrumentation, the Instrument Society of America presented her with their Distinguished Achievement Award in 1964. In

1956 she became a Fellow of the Illuminating Engineering Society of North America (IES) and was awarded the IES Gold Medal in 1970 to honor her outstanding work leading to proper illuminants for color matching and discrimination, artificial 'day-lighting' studies and Munsell color specifications for different light sources.

As a member of the U.S. National Committee of the Commission Internationale de l'Eclairage (CIE) and as a founding member of the AIC, Miss Nickerson participated actively in the international color scene. The value of her work to the international color community was recognized in 1975 by the great honor of being the first person to receive the AIC Deane B. Judd Award for outstanding achievements.

Miss Nickerson was born August 5, 1900 in Boston and attended Boston University in 1919. She began working for the Munsell Color Company in 1921 continuing her education at Johns Hopkins University in 1923 and later in a variety of summer-school and university extensions at Harvard University, the University of Wisconsin, George Washington University, and finally at the Graduate School of the U.S. Department of Agriculture. In 1927 she joined the U.S. Department of Agriculture where, until her retirement in 1964, she organized and conducted research that laid the foundation for many aspects of modern color technology.

Many of the major developments in color science and technology that have taken place in the twentieth century have included Miss Nickerson as author, organizer or participant. More than 155 of her papers have been published and many are still vital to anyone who hopes to understand the basis for current colorimetry. She carefully recorded the contribution of others through her "History of the Munsell Color System, Company and Foundation" and "History of the OSA Committee on Uniform Color Scales".

From the early 1920's she recognized the practical, industrial uses for the Munsell color order system, which was originally conceived as a tool for artists. When, in 1931, the CIE made its first recommendations for the practice of colorimetry, Miss Nickerson began immediately to apply them to color technology. One principal application was to derive charts converting CIE coordinates to Munsell notation. This led, through the efforts of the OSA Committee on the Spacing of the Munsell Colors, to the classic 1940 and 1943 issues of the Journal of the Optical Society of America that provide the smoothed representation of the Munsell color space in CIE coordinates. Her early color difference formulas developed to evaluate fading, led eventually to the current 1976 CIE L*a*b* color difference equation.

Her interest in color systems was not limited to Munsell. She made a major contribution to the last edition of Color Harmony Manual based on the Ostwald system and she participated from 1947 in

the development of the OSA Uniform Color Scales. She was still working on the Uniform Color Scales and studying the Swedish Natural Color System at the time of her death.

She was unfailingly generous with her time and effort. She is greatly missed by all who knew her intelligence, enthusiasm and cooperative spirit.

Joy Turner Luke

FRANÇOIS PARRA

After some years spent in industry, the scientific career of François Parra started in 1956 when working at the Institut Océanographique de Paris. He undertook research on color vision at the Laboratoire de Physique Appliquée du Museum d'Histoire Naturelle in Paris under Professor Yves Le Grand. Working on color difference thresholds, he presented his work in 1966 to obtain the degree of Docteur des Sciences physiques. This work was experimental requiring sophisticated equipment and great experimental care in order to determine the thresholds accurately. As he said in his thesis (p2) "Les premiers résultats nous ont laissé perplexe.... et notre attention retenue quelque peu par un aspect inattendu des courbes de seuil, nous a suggéré une étude plus poussée de la forme de ces courbes..."

F. Parra presented his results to the international community at the first AIC meeting (Stockholm 1969) and later in 1972 at Soesterberg. As everybody knows, his work was judged highly controversial. But this was an opportunity for a number of discussions with well-known scientists in various countries, leading to a better understanding of why D.L. MacAdam's results are represented by symmetrical curves similar to ellipses, and why Parra, partly due to experimental conditions, obtained asymmetrical curves with hyperbolic branches aligned with the confusion lines of dichromats.

Parra was then appointed Assistant Director of the Laboratoire de Physique Appliquée du Museum and led a research team in the field of color vision, discrimination thresholds and color deficiencies. At the same time he became more and more fascinated by other aspects of color and took the opportunity in 1976 to create the Centre Français de la Couleur to promote all aspects of color. Consequently he spent much of his time teaching color to a very large audience, participating in working groups related to physiological optics, lighting, ergonomics, labour medicine, agrofoods, standardization and so on, and acting as a scientific adviser in many and various industrial and trades companies, as well as in the artistic world. Moreover people who were working every day with him remember how generous and even-minded he was.

Some years later he believed it was time for the Centre Français de la Couleur to organize the 5th AIC Meeting and after AIC took the decision, he spent all of his time preparing for this outstanding opportunity. But Parra died on 8 June, 1985, after a severe illness, one week before the beginning of the AIC Meeting in Monte Carlo that he was so eager to see. He was considered in France as "l'homme de la couleur" and certainly was the most eclectic one.

Everybody will remember how François Parra was enthusiastic, open-minded, able to transfer his dynamism to others and was working without rest to make the idea of color more present in our activity, in our thoughts, and in our world.

Robert Sève
Françoise Since
Françoise Viénot

W.S. STILES, 1901-1985

Dr. Walter Stanley Stiles, who died on December 15, 1985, at the age of 84, was one of the most distinguished colour scientists of our century. After reading physics at University College, London, and mathematics at St. John's College, Cambridge, he joined the National Physical Laboratory in 1925. He remained there until his retirement in 1961. He was created OBE in 1946 for his wartime work on military aspects of visibility and glare. He was elected to the Royal Society in 1957 and was awarded the Tillyer Medal of the Optical Society of America in 1965.

Above all, Stiles was a great psychophysicist. G. Brindley, when introducing in his textbook the distinction between Class A and Class B observations, took Stiles as the prototype of those who admit only Class A observations in psychophysical argument. Stiles showed us how powerful could be the conclusions drawn from a structured set of threshold measurements. The increment-threshold technique, novel when he introduced it in 1929, developed into the two-colour method, in which a brief monochromatic increment is delivered on a monochromatic field. This method has been widely used to test the presence and sensitivity of individual classes of receptor in normal and abnormal vision. And many minor anomalies and inflexions in Stiles' data - always scrupulously plotted - have subsequently turned out to be important phenomena in their own right.

But the most important of Stiles' contributions to visual psychophysics was the model that lay behind his use of the two-colour method. His concept of a 'mechanism' has subsequently been extended to

many sensory dimensions and it is now commonplace to test for the existence of 'channels' that are independent in adaptation and in detection.

Among the other scientific achievements for which Stiles will be remembered are his discovery (with B.H. Crawford) of the directional selectivity of the cones; his measurements (with J.M. Burch) of the large-field colour matches of 50 observers, measurements that served as the basis for a CIE standard adopted in 1964; his discovery (with M. Aguilar) that the rods saturate at photopic levels; and his line-element analyses of colour discrimination. His massive trichromator is still in use at NPL.

One of Stiles' closest friends and collaborators was the late Gunter Wyszecki. Their "Color Science" (1967, 1982) will long remain a definitive handbook in our field.

From 1928 to 1931 Stiles served as General Secretary of the Commission International de l'Eclairage. He was Chairman of the Colour Group of Great Britain from 1949 to 1951 and President of the Illuminating Engineering Society from 1960 to 1961. A permanent tribute to his administrative skills are the proceedings of the international conference on colour vision that he organised at the NPL in 1957.

Though he notoriously eschewed subjective description in his scientific work on colour, Stiles was an accomplished amateur painter, and he privately delighted in the richness of our internal palette. In personality, he was modest and kind. On public occasions, he enjoyed the rare talent of being able to express exactly the right sentiment with exactly the right words.

Dr. Stiles is survived by his wife, Pauline, with whom he shared 57 years of marriage.

J.D. Mollon

GUNTER WYSZECKI. 1925-1985

Dr. Gunter Wyszecki died on 22 June 1985, robbing the world of colour science of one of its greatest figures. A longtime employee of the National Research Council of Canada, Wyszecki was acknowledged internationally as a leading expert on colorimetry and color vision.

Born in Tilsit, Germany, Gunter Wyszecki received his university training in mathematics at the Technical University of Berlin and was awarded a Dr.-Ing. degree for a study on normal and anomalous trichromacy. In 1953, he won a Fulbright scholarship and joined Dr. Deane B. Judd in the colorimetry and photometry section of the U.S. National Bureau of Standards. Here he began a close association with Judd which lasted until the latter's death in 1972 and included co-authorship of the second and third editions of the well-known text-book "Color in Business, Science and Industry."

In 1954, Wyszecki went back to Berlin to work for a short time in Dr. Manfred Richter's colorimetry laboratory at the Bundesanstalt für Materielprufung.

In 1955, he returned to North America to join the National Research Council of Canada (NRC) in Ottawa, where he worked until his death. Under his leadership from 1960 the Optics Section of the Council became one of the world's leading groups in colorimetry, colour vision, photometry, radiometry and related fields. Wyszecki was appointed Assistant Director of the Division of Physics of NRC in 1982.

Internationally, Wyszecki was best known for his scientific contributions to and leadership in the International Commission on Illumination (CIE). He was Chairman of the CIE Colorimetry Committee from 1963 to 1975. During this time the Committee developed many important recommendations in colorimetry, including 1 nm tables of the colour-matching functions of the 1931 and 1964 Standard Observers, 1 nm tables of Standard Illuminants A and D65, the addition of integrating-sphere geometries to the recommended geometries for colour measurement, the change from smoked magnesium oxide to the perfect diffuser as the primary standard for reflectance factor measurements, the 1964 (U*V*W) uniform colour space and colour difference formula, the 1976 CIELUV and CIELAB uniform colour spaces and colour-difference formulae, and the special metamerism index for changes in the relative spectral composition of illuminants. The Committee also conducted important studies of standard daylight sources, chromatic adaptation, whiteness evaluation and colour terminology.

After serving from 1975 to 1979 as Chairman of the Action Committee, Wyszecki was Vice-President of the CIE from 1979 to 1983 and President from 1983 until his death.

He was the author or co-author of eighty-six scientific papers which ranged from highly theoretical mathematical treatises such as his 1968 paper (with W.S. Stiles) on "Intersections of the spectral reflectance curves of metameric object colors" to reports of extensive and elaborate experimental studies such as his 1971 papers (with G.H. Fielder) on "New color-matching ellipses" and on "Color-difference matches". As well as the book "Color in Business, Science, and Industry" mentioned above, Wyszecki was the author of a book "Farbsysteme" published in German in 1960 and co-author, with W.S. Stiles, of "Color Science: Concepts and Methods, Quantitative Data and Formulas" which has become the "bible" of countless colour scientists throughout the world. He also served on the editorial boards of Color Research and Application, Die Farbe, Metrologia, and Vision Research.

Honors that Wyszecki received during his career included the Deane B. Judd Award of the AIC, the Godlove Award of the Inter-Society Color Council, the Merit Award of the Canadian Society for Color, and the Bruning Award of the Federation of Societies for Coatings Technology. He was a Fellow of the Royal Society of Canada, the Optical Society of America, and the Illuminating Engineering Society of North America, the founding President of the Canadian Society for Color, and a member of the Inter-Society Color Council and the Canadian Association of Physicists.

In addition to his activities in International and National Committees and Societies and his numerous publications, many of us knew Gunter Wyszecki for his incisive questioning and commentary at conferences and colloquia on color and in informal discussions. He had an uncanny ability to get to the heart of a matter by penetrating

through the often confused and irrelevant words of others so that the prime and central issue was exposed and clearly expressed. He will be sorely missed.

Gunter Wyszecki leaves a wife, Ingeborg, a daughter, Joana, a son, Wolfgang, and a host of friends throughout the world.

A.R. Robertson

YVES LE GRAND, 1900-1985

The year 1985 was a sad one for colour science with the deaths of a number of leading figures. Tributes to several of these colleagues are included in this Newsletter. As the Newsletter is being prepared I have heard the further sad news that Professor Yves Le Grand, President of the AIC from 1970 to 1973, passed away on 20 January 1986 at the age of 85. A tribute to Professor Le Grand will appear in the next Newsletter.

A.R. Robertson

FROM THE FAMILY OF FRANC GRUM

The family of Franc Grum would like to thank all the members of the scientific community who have expressed their condolences to us. It is gratifying to know how much you respected Franc and we are most appreciative of the many kind words you have about him. He was certainly special to us and obviously to many others as well, both on a professional and on a personal level. Your expressions of sympathy have been a great comfort to us during this very difficult time. He will certainly be missed by all of us. Please forgive the impersonal manner of this acknowledgement. So many of you have written from so many different parts of the world that it would indeed be difficult to reach each of you individually. Thank you again.

NEWS FROM MEMBER COUNTRIES

Argentina

Color in Foods

The 3rd Symposium on "Color in Foods" will be held in La Plata, Province of Buenos Aires, Argentina on 21 August 1986. For further details, contact Dr. A. Claves, CIDCA, 47 y 116, 1900 La Plata (BA), Argentina.

Hungary

The 20th Symposium of Coloristics was organized by the Section for Coloristics of the Hungarian Association of Chemists in September 1985. Sixty lectures were delivered in the fields of colorimetry, colour environment design (colour dynamics), and colour prescription.

The Subcommittee for Chromatics of the Hungarian Academy of Sciences (which is also the Hungarian National Committee of AIC), will organize an International Colour Design Studio in Budapest, August 11 to 17, 1986, for young specialists, architects and artists concerned with colour design. This will be an event to let participants become acquainted with colour design methods of different countries. Professors comprise British, French, Italian, German, Canadian, Norwegian, Japanese, Soviet and Hungarian specialists, who will deliver theoretical lessons and guide practical exercises. The language of communication will be English, with interpretation in French or German by assistants to the professors as needed. On request, the Organizing Committee of the Studio will send fully detailed information. Please write to:

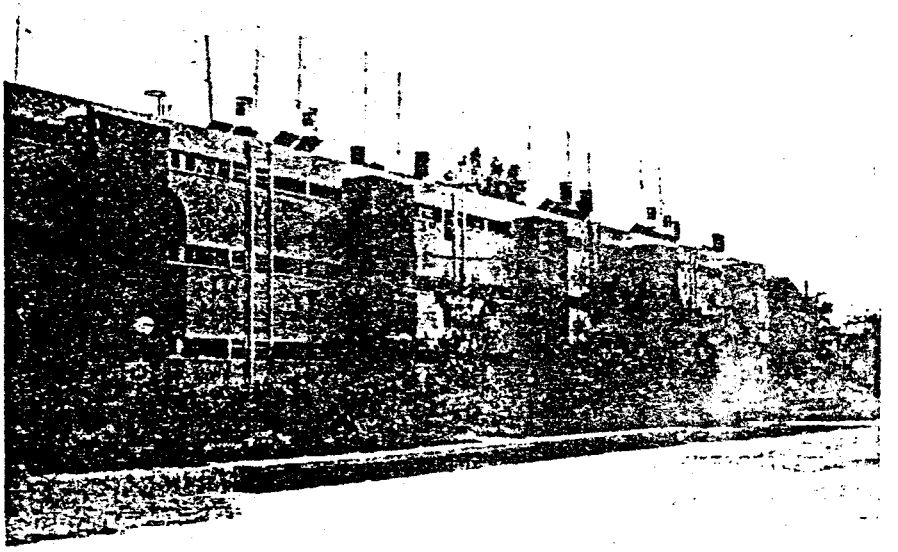
Hungarian National Committee of AIC
c/o Hungarian Society for Urbanism
7, Rakoczi Street
Budapest, Hungary
H-1088

The 3rd International Conference on Colour Design, labelled Colour Dynamics '86, will be organized on August 18, 19 and 20, 1986, for specialists concerned with colour design.

A. Nemcsics

Israel

Rehabilitation of Neighbourhoods



A wide national project of neighbourhood rehabilitation is going on in Israel.

These neighbourhoods were built in masses by the government in the fifties providing homes for the newcomers. The socio-economic profile of the tenants in these quarters today is low and the flats are rented from the government. One of the elements of the project is the colour design of the facades of the buildings. The main aim of the colour design is to create a new and different environment which gives each neighbourhood its own identity although the same types of buildings appear in the different neighbourhoods. It has a social importance to break the monotony and anonymity of the buildings and give a unique character to each neighbourhood. Creating the feeling of "place" enables a positive attitude and involvement between man and environment. By the colour design we succeeded in changing the status of the neighbourhoods, making people want to buy their flats.

The neighbourhood illustrated in the photograph is in Ashdod (a city located about 50 km south to Tel-Aviv). It is built of one type of rectangular blocks in a crosswise grid layout: One row with the long facades of the blocks parallel to the main road and the inner row turned at 90 degrees to them. The entrances of the two rows of buildings differ in colour, dividing the neighbourhood into identifiable zones. The strong colour accents in the entrances draw attention from the long monotonous facade and "shorten" the long block visually.

In another neighbourhood in Ashdod we had two types of blocks: One is the same rectangular block as mentioned before and the other is a square type. To express the quiet character of this neighbourhood we used a quiet monochromatic colour scheme. The graphic design softens the heavy character of the masses and ties the different types of buildings visually.

J. Ruttenberg

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