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Committee of the CIE

## CIE NEWS – 50 issues and still going strong

The first issue of CIE NEWS came out in March 1986 replacing the CIE Newsletter as one of a number of measures to gain "wider international recognition for our work..." At that time, the new Divisional structure had just been put in place. Our official address was still in France with the Central Bureau temporarily located in Ottawa prior to the establishment of the Vienna office (announced in Issue No. 6). The Publication Office was in Budapest. We were just embarking on negotiations with the ISO that lead to the CIE being accepted as an International Standardising Body, as reported in Issue No. 12. I won't go on, but re-reading Issue No.1, in preparing this article, has certainly reminded me of the progress that the Commission has made over the last 13 years.

Initially, 2000 copies were distributed to the National Committees, at four-monthly intervals, in 1990 it became a quarterly. Now, 3000 copies of each issue are produced. This, however, gives no indication of the actual circulation as both the German and Swiss National Committees take a mastercopy and reproduce the CIE NEWS in their national Newsletters. Since 1995 we have also published in the Internet on the CIE homepage (<http://www.cie.co.at/cie>) with mirror sites in Japan and Hungary. Since we have had a webpage the National Committees of Australia and USA are able to download the text from the web for local distribution.

The CIE NEWS was conceived to disseminate information on the CIE technical programme and administration matters with an up-to-date diary of forthcoming international and national meetings. Further sections such as "From the Lighting Journals" and feature articles from members of the Board have been added and our Editor is always eager to include material from our National Committees. To produce a high quality publication, which comes out regularly, and on time, places a heavy load on our Central Bureau staff and I take this opportunity to record a vote of thanks to János Schanda for his pioneering work and more recently to Christine Hermann, our General Secretary, for carrying on the tradition for accurate and informative comment that we have come to expect from CIE NEWS.

Over the last 50 issues there has been continuous development in its graphic design, format and production methods. From the start, the front cover has incorporated the names of all our National Committees

### IN THIS ISSUE

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as an indication of the international coverage of CIE. Printing started in Budapest, later on it was done in Vienna. In 1993 investment in a modern photocopier that could staple, and handle blue toner, brought production in-house and there it has remained. When we started, having a Fax machine was considered to be the height of technical innovation. Since then, CIE NEWS has taken full advantage of the explosion in Information Technology to distribute reports of our activities throughout the world-wide lighting community as effectively, efficiently and economically as possible.

I would like to recommend this excellent publication to all our National Committees. As I said in the opening article of Issue No. 1, "The CIE NEWS is designed to help you in the task of obtaining increased support for the work of the CIE in your country". I wish you, and CIE NEWS, every success as we move onto Issue No. 100 – in whatever form it takes by then!

Robin Aldworth  
(Past-President of CIE)



## News from the Divisions

The following items have been summarized from full Activity Reports and Meeting Minutes received at the Central Bureau. Readers requiring more information are kindly requested to contact their National Division Representative through their National Committee or to visit the homepage of the respective Division.

### Division 1 – Vision and Colour

<http://nml.csir.co.za/~cie1>

The next meeting of Division 1 will take place on 28 and 29 June in Warsaw (CIE Session).

### Division 2 - Physical Measurement of Light and Radiation

<http://nml.csir.co.za/~cie2>

The next meeting of Division 2 will take place on 30 June in Warsaw (CIE Session).

### Division 3 - Interior Environment and Lighting Design

<http://ciediv3.entpe.fr>

The next meeting of Division 3 will take place on 28 and 29 June in Warsaw (CIE Session).

## Division 4 – Lighting and Signalling for Transport

<http://www.cie.co.at/cie/doc/div4.htm>

*TC 4-18:* Divisional and Board ballot has started for the draft report "*The Conspicuity of Traffic Signs in Complex Backgrounds*". Deadline for ballot is 1 September 1999.

*TC 4-25:* Divisional and Board ballot has started for the draft report "*Road Surface and Road Marking Reflection Characteristics*". Deadline for ballot is 19 June 1999.

*TC 4-34:* The draft report "*Guide to Lighting of Urban Areas*" was approved in Divisional and Board ballots. Editorial comments are now being considered and the report will be published in the next weeks.

The next meeting of Division 4 will take place on 29 and 30 June in Warsaw (CIE Session).

## Division 5 – Exterior and Other Lighting Applications

<http://www.cie.co.at/cie/doc/div5.htm>

The following new TCs have been established:

*TC 5-16: Exterior Security Lighting of Private Properties* (Chair: P. Schwarcz, Hungary)

*Terms of Reference:* To prepare a guide giving recommendations on lighting designed primarily to improve security of homes, industrial and commercial properties and working areas, and serving as an additional guide to existing ones on exterior lighting. The Guide shall exclude security aspects of public lighting (to avoid parallel work with Division 4 covering the same topic) and lighting of high security areas (military, nuclear areas, prisons), which topic is complex enough to have its own guide.

*TC 5-17: Standardisation Format for Sports Guide* (Chair: T. Le5mons, USA)

*Terms of Reference:* To prepare a report that establishes a format for sports lighting reports to use to prepare revisions of Publications CIE 42, CIE 45, CIE 57, CIE 58 and CIE 62.

*TC 5-18: Practical Design Guidelines for the Lighting of Exterior Work Areas* (Chair: P. Bandyopadhyay, India)

*Terms of Reference:* To produce an "applications" guide for exterior work areas that compliments Publication CIE 129-1998, by updating where necessary the relevant portions of the withdrawn publication CIE 68.

The next meeting of Division 5 will take place on 28 June in Warsaw (CIE Session).

## Division 6 - Photobiology and Photochemistry

<http://129.6.177.5/cie/>

TC 6-14: Divisional and Board ballot has started for the draft report "*Blue-Light Photochemical Retinal Hazards*" (to be published in the next issue of CIE Collection). Deadline for ballot is 1 June 1999.

TC 6-41: Divisional and Board ballot has started for the draft report "*A Proposed Global UV-Index*" (to be published in the next issue of CIE Collection). Deadline for ballot is 27 July 1999.

The next meeting of Division 6 will take place on 28 June in Warsaw (CIE Session).

## Division 8 - Image Technology

<http://www.colour.org>

The next meeting of Division 8 will take place on 28 June in Warsaw (CIE Session).



## New Publications

New publications available from the Central Bureau:

### Design Methods for Lighting of Roads

**CIE 132-1999** ISBN 3 900 734 92 5

Several recommendations and technical reports have been published over the past years by the CIE to provide calculation methods for designing road lighting installations, which satisfy certain quality criteria. These quality criteria are intended to ensure the safety, comfort and personal security of road users. These documents are often referred to in the national codes and recommendations of industrialised countries. The calculation methods necessitate the use of a computer.

Experience shows that the high degree of accuracy obtained with the recommended methods of calculation is not always necessary, at least during the first stage of design. In some countries simplified methods have been developed which show similarities. They do not require a computer for application by the user.

The aim of this report is to describe these and similar design methods for lighting installations for all categories of roads. The method to be

used depends on the required accuracy and the type of data available to the designer.

This publication is written in English, with a short summary in French and German. It contains 56 pages, with 33 figures and 16 tables. The report is readily available at the CIE National Committees or the CIE Central Bureau in Vienna.

## CIE Collection in Photobiology and Photochemistry, 1999

**CIE 134-1999**

ISBN 3 900 734 94 1

This volume contains short Technical Reports prepared by various Technical Committees within CIE Division 6.

*134/1: TC 6-26 report: Standardization of the Terms UV-A1, UV-A2 and UV-B*

The terms UV-A, UV-B and UV-C were introduced in the 1930's by CIE Committee 41 on Ultraviolet Radiation as a short-hand notation for photobiological spectral bands. It was never intended that the bands were exclusive for different effects. The bands have been in widespread use in different medical fields and scientific research. UV-A and UV-B were divided at 315 nm by the CIE. In recent decades, some photodermatologists and others have used different dividing lines such as 320 nm without recognizing the importance of maintaining an international standardized terminology. Because the terminology is used in many fields, this report recommends that the 315 nm division between UV-A and UV-B be maintained. However, recent research has clearly shown a difference in the photobiological interaction of long and short wavelength UV-A radiation with DNA. This led to a further division of UV-A into UV-A1 and UV-A2 with a dividing line at approximately 340 nm. While this division may be of value, the committee does not recommend officially to split UV-A into these two sub-bands at this time. Further research may justify a dividing line different from 340 nm in the future.

*134/2: TC 6-30 report: UV Protection of the Eye*

This report provides a review on the current methods for UV dosimetry for the human cornea. The contents include a human action spectrum, the dosimeters, the methodology for calibration and the calculation of cumulative exposures. Based on the existing data, the levels of protection for the UV-A band and the UV-B band are recommended. A set of guidelines for ocular protection is proposed to

assist medical practitioners in providing eye protection for patients.

*134/3: TC 6-38 report: Recommendation on Photobiological Safety of Lamps. A review of standards*

There are well known optical radiation hazards associated with some lamps and lamp systems. However, serious concerns about optical radiation hazards from lamps are rare except with regard to very special applications. Aside from solaria and germicidal lamps the lighting community has seldom had to be concerned with photobiological hazards of lamps. In most general illumination and industrial applications the ultraviolet radiation (UV), visible light and infrared energies emitted by artificial sources are not hazardous. However, in some unusual situations, potentially hazardous levels are accessible, and excessive light and infrared radiation are typically filtered or baffled to reduce discomfort. The natural aversion response of the eye to bright light, as well as thermal discomfort sensed by the skin normally will limit potentially hazardous exposure.

In some applications, questions have been posed as to whether human exposure may be potentially hazardous. For example, heat lamps used for treating plastics; the use of some arc lamps in research laboratories; the use of very high intensity flash lamps in photography; infrared lamps used in surveillance and in heat treating; in some diagnostic medical applications and testing; and even in printing and photocopying.

CIE TC 6-38 investigates in the present Technical Report the potential photobiological hazards, reviews the world wide activity in the field of producing a photobiological lamp safety standard, and recommends that the CIE prepare a lamp safety standard using as the basis, the North American IESNA standards. The philosophy embodied in those standards have addressed the concerns of occupational health and safety professionals and have been worked out and tested over a number of years. Most major lamp companies have participated in the IESNA development effort, and it is in consonance with ICNIRP guidelines. Requirements for lamp types, including labelling would be developed by IEC TC 34.

The publication contains also the abstracts of CIE Publications prepared within Division 6.

These reports are written in English, with short summaries in French and German. The publication contains 55 pages, with 5 figures and 14 tables, and is readily available at the CIE National Committees or the CIE Central Bureau in Vienna.



## **New Publications in the Field of Light and Lighting**

### **Optical Engineering Fundamentals**

**Bruce H. Walker**

SPIE Optical Engineering Press 1998  
ISBN 0-8194-2764-0

This book is intended for interested readers curious to get a clear picture of optical engineering. Reading it will not make anybody an optical engineer but clarifying the basic terms, phenomena and practice will enable the readers to communicate and work closely and effectively with the optical engineer. Since the experiences of the author lays mainly in lens design the book is built mainly on this framework. A great merit of the book is that it explains optical theories and phenomena in a form that can be easily understood. Complex theories of mathematics and physics are out of scope of this work. The skeleton of this work is the design of a telescope, and its components. The wide ranging application of a telescope starting from astronomical use through binocular to riflescope and periscope enables the author to analyze many variables of a system showing different approaches depending on the design criteria.

The first two sections after the introduction are dedicated to historical review and to basic ray and wave concepts of light like refraction etc. The early stages of system design are based on the thin lens theory. Section four provides simple ray trace methods and formulas to analyze the relationship among position of components, aperture stop, entrance and exit pupil. The question of image quality is covered in the next two sections using the thick lens approach. A lens design software, OSLO, is used to show the individual steps and their results in an optimization process. Several lens design examples, even complex ones like the Petzval lens are given. The different lens aberrations and their way of descriptions are detailed. It is somewhat disturbing that for example modulation transfer function and spot diagram are used but defined and explained only in a later chapter, the definition of MTF is inaccurate using brightness instead of irradiance. Sections 7, 8 and 9 describe the different optical components like lenses, mirrors, and many variations of prisms; optical instruments and materials, as well as coatings. The materials section provides the most important optical and mechanical data, but the internal transmission curves are given in linear coordinate system instead of the usual lin/log one. To

characterize the surface reflection the simple form of the Fresnel equation is used without mentioning angle dependancy. The last three chapters cover image formation in the human eye and in high quality systems as well as modern use of optics.

The referee despite of really slight inaccuracies proposes this book to anybody interested in optical instrument design.

## **Introduction to Infrared System Design**

**William L. Wolfe**

SPIE Optical Engineering Press  
ISBN 0-8194-2106-5

This tutorial text provides a brief introduction to the language, process and some of the instrument design techniques that are available to an engineer today. It was compiled from the notes prepared for a university course. The book is dedicated to infrared systems but the radiometry and the optics sections are valid for the visible range, too.

The first sections provide a review of optical fundamentals, the requisite radiometry, and of detector types and properties. Radiometric transfer and detector sensitivity are treated in a rather mathematical form of equations. From the detector section on, the text becomes very infrared specific dealing with terms like minimum detectable temperature, background limited noise, atmospheric transmission, infrared scene, etc.

In the last five sections the author returns to more general topics. The characteristics of optical materials are detailed, both the optical and mechanical ones. Mirror systems used generally in telescopes are shortly discussed, then mechanical scanner systems and their aberrations are described. The book finishes with the description of real time images and with design examples. This book is maybe useful as a background text book at a university course. The author is well known in infrared circles but this opus is not his best one. Disturbing inaccuracies can be found in the text: symbols listed and explained in the symbol list are used for other quantities without note; scale of graph is in reverse order, even the values are wrong; some jumps are in the derivation of mathematical expressions without giving the physical reason. Therefore, this book can be proposed only to those readers who are familiar with and experienced in optics and radiometry.

## **Introduction to Optical Engineering**

**Yu FTS, Yang X**

Cambridge University Press, Cambridge UK, 1997  
ISBN 0 521 57366 1 and 0 521 57493 5

The book is written as an undergraduate course book for electrical engineering students. It covers selected areas of modern optical engineering, needed to understand the functioning of electronic equipment starting with the entertainment CD and ending with the supermarket optical scanners and bar-code readers.

The first four chapters of the book discuss the principles of reflection and refraction, the operation of lenses and the aberrations found in them, the principles of optical instruments, and the functioning of the optical radiation detectors used in them.

The next two sections deal with the questions of spatial light modulation, among these also devices used in modern displays and different types of lasers.

The next five chapters are devoted to the fundamentals of optical data processing: Fourier transformation, diffraction and interference, holography, and end with optical signal processing.

The last part of the book deals with fibre optics, both for communication and fibre optic sensors.

The book is intended as a one-semester introduction, thus it does not go into details with any of the subjects, but provides a good first overview. In this respect it can also be recommended to others than electronics minors, who would like to obtain some insight into the functioning principles of the instruments they are using daily.

## **The Perception of Visual Information, 2<sup>nd</sup> ed.**

**Hendee WR, Wells PNT (editors)**

Springer - New York, 1997  
ISBN 0 387 94910 0

The subjects dealt with in CIE circles increased considerably with including problems related to Imaging Technologies into its activities. This increase of interest does not only include items

related to Division 8 activities, but influences also problems discussed in other Divisions.

The book edited by Hendee and Wells discusses many questions becoming part of CIE interest. The book examines what is known about human vision processes and how images can be presented to the human observer. The book discusses items related to visual information perception in 13 Sections.

Part 1 deals with physiological optics and covers items like the anatomy of the eye, the visual pathway, colour vision and physical performance of the visual system. Part 2 provides an overview of visual information detection, in this respect discusses also adaptation problems. Part 3 quantifies visual capability and mentions items like visual acuity and contrast sensitivity. The following sections provide an overview of multiscale geometric models of human vision, human response to visual stimuli and the cognitive interpretation of visual signals. The following parts deal with image processing and manipulation techniques, followed by hard-ware and soft-ware related issues of imaging. The last two chapters of the book discuss virtual reality and augmented reality questions in medicine and provide an outlook to possible further manipulations of image information.

Contributors to the single chapters are outstanding scholars of the subject, who have considerable experience in presenting their subject. Thus the book is also readable for the non-expert and can be recommended for CIE readership who would like to broaden their knowledge in visual information perception and processing.

## **Fundamentals of Electronic Image Processing**

**Hendee WR, Wells PNT (editors)**

SPIE Optical Engineering Press - IEEE Press, 1996,  
ISBN 0 8194 2149 9 and ISBN 0 78 3 3410 8

The author claims in the preface of the book that his goal was "to provide the fundamentals of image processing to practising engineers or scientists who need to understand these fundamentals to perform their technical tasks". The results of different image processing algorithms are shown by a large variety of example images.

Main chapters of the book are an introduction to electronic image processing, and this chapter deals also with an (a little bit

sketchy) description of visual perception. The next four chapters deal with image transformations, different techniques of image enhancement and filtering.

Chapter 6 is devoted to colour image processing. It is a pity that here the author relied only on other image processing texts and did not go back to original colour tutorials or ask for the help of experts. If he would have done so, he could have avoided such mistakes as stating that luminance (brightness) is the sum of the tristimulus values (equ. 6.7 on p. 235). The chapter shows that the author is not at home in basic colorimetry, but approaches the subject only from the point of the NTSC system description. This is a typical problem in books written by computer experts. Your reviewer, who on the other hand is not an expert of image processing, can only hope that the other chapters are more correct, and do not contain similar errors.

Despite of the shortcomings of the book, the discussion of the different image manipulation techniques and the illustrations accompanying these are worth reading and looking at.



## **Future Meetings**

### **CIE SYMPOSIUM '99 75 Years of CIE Photometry**

**Photometry of the past and what is expected  
for the next millennium**

**30 September - 2 October 1999  
Hungarian Academy of Sciences, Budapest**

The CIE Symposium '99 "75 Years of CIE Photometry" will take place in Budapest, between 30 September and 2 October 1999. Nine Invited Papers and 17 Contributed Papers will be read by outstanding experts in the field. Main subject areas will be

- Visual fundamentals
- Applied photometry
- Metrology
- Colorimetric aspects of photometry

Four Round-Table Discussion Meetings will provide further opportunity for attendees to participate in the meeting.

The main subject of the symposium is to direct attention onto the still open questions of photometry.

For further details and registration visit the home page of the symposium at <http://cie.kee.hu/symp99> from where the detailed programme can be downloaded, or send an e-mail to the Chairman of the Organizing Committee Dr. J Schanda: [schanda@ella.hu](mailto:schanda@ella.hu) or a fax or letter to the CIE Central Bureau (+44 1 713 0838 18), Kegelgasse 27, A-1030 Vienna, Austria.

## **27<sup>th</sup> Colouristic Symposium**

**23-29 September 1999, Tata, Hungary**

The Colouristic Department of the Hungarian Chemical Society, in conjunction with the Hungarian National Committees of the CIE and the AIC organizes its 27th Colouristic Symposium in Tata, near to Budapest between 27 and 29 September, 1999.

Main items of the meeting are:

- Colour perception, colour appearance, colour order systems
- Colorimetry, colour differences, standardisation
- Colour measurement and colour recipe computation, its use in different industries
- The role of colour in different areas of the economy, colour in the human environment
- Chemical, technological investigations related to coloration in the different industrial areas.

Papers will be read in English or Hungarian with simultaneous translation.

For further details, please contact:

Dr. Agnes Kovacs-Stahl  
1044 Budapest  
Dunator 11.  
tel.: +36 1 369-59-09  
fax: +36 1369-75-33  
e-mail: [FKI@elender.hu](mailto:FKI@elender.hu)

## **BULCOLOR'99**

**8-10 October 1999, Varna, Bulgaria**

following the Balkan Light '99 conference 6-8 October (see CIE NEWS No. 48, December 1998).

The conference will include plenary and poster papers, seminars and workshops.

Topics covered:

- colour and art/design/architecture
- colour and psychology/influence of colours/colour therapy
- colour and industry/textiles/plastics/paints

- colour and communications
- colour and advertisement/fashion
- colour and computer/internet

An exhibition on colour instruments will be held.

For further information, please contact

Color Group Bulgaria  
(Mrs. Dipl.Engl. M. Zdravkova, Secretary)  
108 Rakovski street, Rm. 103  
P.O.Box 431  
BG-1000 Sofia  
tel.: +359 2 88 40 75  
fax: +359 2 987 93 60  
e-mail: [ime@mb.bia-bg.com](mailto:ime@mb.bia-bg.com)

You may consult the webpage for Balkan Light (<http://acstre-ma.vmei.acad.bg/balkanlight/>) for information on accomodation, transport, etc.

## **Prakash 1999**

**International Conference on Lighting Technology**

**29-31 October 1999, New Delhi, India**

The Indian Society of Lighting Engineers (ISLE) is happy to announce the forthcoming Prakash '99 conference. This will coincide with the Prakash '99 International Exhibition on Light & Lighting Technology (29 October - 3 November).

Prakash '99 will present the latest developments in light and lighting technology with special emphasis on their application in the developing countries. The focus of attention in Prakash '99 will be on the positive contributions that lighting makes to our society and its welfare. National and international experts will present papers, join panel discussions and participate in workshops in an effort to create a truly interactive conference. Prakash '99 will be application-oriented with an emphasis on problem solutions.

The Prakash '99 Exhibition will showcase the latest in lighting technology developed and available in India and also that available in the developed countries. India has become an attractive market for international lighting giants who are expected to be present at the exhibition with their latest innovations.

For further information, please contact:

Indian Society of Lighting Engineers  
c/o Osram India Ltd.  
1/95, Market Road  
Bhai Veer Singh Lane  
New Delhi 110 001, India  
tel.: +91 11 3340249  
fax: +91 11 3340251

The South African National Committee on Illumination has informed us on the

#### **46th AGM and Congress**

### **Light for Life**

**1-2 November 1999, Kimberley, South Africa**

Preliminary papers will be read on:

- Lighting for the retail market (J.T. Grundy, R. Yates)
- Acceptance and preference of illumination in offices (B. Rowell)
- Discomfort glare from small and large light sources (H.D. Einhorn)
- A cryogenic radiometer as national standard for optical radiation measurement (B. Theron)
- Intelligent lighting systems for the next millenium (M. Raissen)
- The efficient lighting initiative: financing the lighting revolution (B. Bredenkamp)
- Roadlighting
- Testing and quality of lamps
- Environmentally sound low cost housing

For registration, please contact:

South African Nat. Committee on Illumination  
37 Wenning Street  
0181 Groenkloof  
tel.: 012 46 3719  
fax: 012 46 4264

### **The City of Tomorrow: Electricity for Sustainable Development**

**9-10 December 1999, Strasbourg, France**

This European meeting will be organized by the Centre Français de l'Électricité, the International Union for Applications of Electricity, and the Association des Maires de France.

Among the subjects selected, the following ones are concerned with lighting:

- urban lighting and safety
- the rational use of energy in buildings
- illumination and valorization of architectural and cultural heritage

For further information, please contact:

Dan Bialod  
tel.: +33 1 41 26 56 10  
e-mail: dan.bialod@espace-elec.fr  
www.espace-elec.com/cfe

## **□ Liaison Matters**

### **New Dark-Sky E-Mail List Server**

Any individual interested in promoting effective outdoor lighting is welcome to join this mailing list. For additional information about this list, please contact bgreer@fpi-protostar.com or consult the www.fpi-protostar.com/drksky/ web page for details. For subscribing, send an e-mail message to listserver@fpi-protostar.com. In the body of the message, put only the words *subscribe drksky-list*. To unsubscribe from the list, send a message to the same address with the words *unsubscribe drksky-list* as the only

IEC has sent us the following documents:

#### **IEC/31/287/CDV:**

IEC 62013-2: Caplights for use in mines susceptible to firedamp - Part 2: Performance and other related matters

Deadline for comments and vote: 1999-08-31.

#### **IEC/34/53/NP:**

Proposal of the USNC: Entertainment Technology - USITT DMX512 - Asynchronous serial digital data transmission standard for controlling lighting equipment and accessories

Deadline for comments and vote: 1999-08-02.

#### **IEC/34A/873/FDIS:**

Draft IEC 60432-1, Ed.2: Incandescent lamps - Safety specifications - Part 1: Tungsten filament lamps for domestic and similar general lighting purposes

(parallel voting IEC-CENELEC)

Deadline for vote: 1999-06-30.

#### **IEC/34A/874/FDIS:**

Draft amendment 2 to IEC 60968, Ed.1: Self-ballasted lamps for general lighting services - Safety requirements

(parallel voting IEC-CENELEC)

Deadline for vote: 1999-06-30.

#### **IEC/76/196/CDV:**

Amendment 2 to IEC 60825-1, Ed.1: Safety of laser products - Part 1: Equipment classification requirements and user's guide

(parallel IEC CDV/CENELEC enquiry)

Deadline for vote: 1999-09-30.

### IEC/76/198/CDV:

IEC 60825-7, Ed.1: Safety of laser products - Part 7: Safety of products emitting "infrared" optical radiation, exclusively used for wireless "free air" data transmission and surveillance

Deadline for comments and vote: 1999-09-30.

Persons interested in any of the above items are requested to contact their IEC National Committee for further details.

## From the Lighting Journals

### Color Research and Application (www.interscience.wiley.com)

Volume 24, Number 2, April 1999

Geometric relations between scales of small colour differences

K. Witt

Dependence between apparent color and extractable color in paprika

J. M. Nieto-Sandoval, J. A. Fernández-López, L. Almela, J. A. Muñoz

Spectral-based illumination estimation and color correction

R. Lenz, P. Meer, M. Hauta-Kasari

Application of a color-appearance model to vision through atmospheric haze

S. Mahadev, R. C. Henry

Color-appearance reproduction: Visual data and predictive modeling

M. D. Fairchild, G. M. Johnson

An algorithm for the selection of high-contrast color sets

P. Campadelli, R. Posenato, R. Schettini

Spectral sensitivities of the normal human visual system, color-matching functions and their principles, and how and why the two sets should coincide

W. A. Thornton

Volume 24, Number 3, June 1999

Visual determination of hue suprathreshold color-difference tolerances using CRT-generated stimuli

E.D. Montag, R.S. Berns

Inter-observer comparison of color-matching functions

C. Oleari

A new method for colour measurements in graphic arts

A. Verikas, K. Malmqvist, L. Malmqvist, L. Bergman

Color rendering, a reassessment

C. van Trigt

Optimization of color reproduction on CRT-color monitors

J.R. Jiménez, J.F. Reche, J.A. Díaz, L. Jiménez del Barco, E. Hita.

Some comments on using the CIECAM97s colour-appearance model

R. W. G. Hunt

Some additional comments on CIECAM97

J. J. McCann

Demystifying CIECAM97s: A reply to Hunt

M. H. Brill

### Journal of Light & Visual Environment

Volume 22, Number 2, December 1998

The generation of powerful rainbow-color laser emission by four-wave raman mixing for display and illumination

T. Tomooka, Y. Hirakawa, T. Imasaka

Analysis of a modified half-bridge type inverter for improvement of power factor and harmonic distortion

H. Matsuo, F. Kurokawa, T. Kitajima, L. Tu

Borderline between comfort and discomfort of blinking light

T. Irikura, Y. Toyofuko, Y. Aoki

Thermodynamic considerations of chemical reaction phenomena in HID lamps

T. Ishigami

Two classes of color constancy: Perfect color constancy and partial color constancy

I. Kuriki, K. Uchikawa

Evaluation of luminous intensity characteristics for luminaire of fluorescent lamp with louver by Monte Carlo simulation

L. Chen, M. Suzuki, N. Yoshimura, O. Kimura

### Lighting Design + Application

March 1999: *Transportation Lighting*

April 1999: *Lighting Design Internationally*

May 1999: *Outdoor Lighting*

## **LUCE (in Italian)**

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Illuminare la Cascata delle Marmore

A. Grassia, A. Bussè

Palazzo Te, Mantova: Uno studio professionale

M. L. Guerrini Gonzaga

Treviso: un "itinerario" animato

G.P. Bellomo

Pandova, Palazzo della Ragione: Un'analisi della luce naturale

G. Traverso, P. Vighy, M. Strada, M. Vio

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## **The Lighting Journal**

*Volume 64, Number 3, May/June 1999*

Higher standards sought by church floodlighting trust

Task and building light - a design approach

D. Loe

Putting Albert back in the limelight

G. Phoenix

75 years of light sources development

T. Glenn

## **✚ In Memoriam**

### **Mrs. Ilse Ungvári ✚**

Mrs. Ilse Ungvári passed away on 8th April 1999, after a long illness.

On behalf of the CIE Central Bureau I invited some time ago Mrs. Ungvári to write a contribution celebrating the appearance of the 50<sup>th</sup> issue of CIE NEWS, where she was the first Technical Editor and headed the CIE Publishing Office. Unfortunately she declined to write this commemorating article due to her then poor health. Nobody thought, however, that this will be our last contact.

In those early days, when Mrs. Ungvári worked for the CIE, both CIE JOURNAL and the CIE NEWS manuscripts were typed, with

figures pasted, and were subsequently photo off-set printed. Mrs. Ungvári did most of the typing, cut-and-paste editing work, carefully overseeing all activities of the Publishing Office.

Later, when the Central Bureau was moved from Ottawa to Vienna, she helped to organise the work of the new Central Bureau as well, helping the first permanent Executive Secretary in setting up the CIE archives and transferring the publications activities to Vienna. The arrangement of the CIE archives are still based on the system elaborated by her. She will be remembered by everybody who was lucky to work with her.



This photo shows Mrs. Ungvári at the inauguration of the Central Bureau in Vienna, together with Robin Aldworth, former President of the CIE.

J. Schanda

### **Ing. Konrad Höfler ✚**

We have just been informed that the former President of the Austrian National Committee and receiver of CIE Award, Ing. Konrad Höfler, died on 3 June 1999. An obituary will be published in the September issue of CIE News.

 **For your Diary**

Date	Title of Meeting	Organizer	Place of Meeting
<b>1999</b>			
June 22-23	AIC 1999 Midterm Meeting	Central Office of Measures fax: +4822 620 83 78	Warsawa, Poland
June 24-30	CIE Session 1999	Session Secretariat: fax: +4822 660 5616 CIE99@ee.pw.edu.pl	Warszawa, Poland
June 28	CIE Division 5 Meeting	CIE Division 5	Warszawa, Poland
June 28	CIE Division 6 Meeting	CIE Division 6	Warszawa, Poland
June 28	CIE Division 8 Meeting	CIE Division 8	Warszawa, Poland
June 28-29	CIE Division 1 Meeting	CIE Division 1	Warszawa, Poland
June 28-29	CIE Division 3 Meeting	CIE Division 3	Warszawa, Poland
June 29-30	CIE Division 4 Meeting	CIE Division 4	Warszawa, Poland
June 30	CIE Division 2 Meeting	CIE Division 2	Warszawa, Poland
July 12-16	IAU Symposium No.196: Preserving the Astronomical Sky	IAU, IDA Inc., 3225 N First Avenue, Tucson, AZ 85719, ida@darksky.org	Vienna, Austria
July 18-23	Int. Symp. on Optical Science, Engineering and Instrumentation	SPIE www.spie.org/info spie@spie.org	Colorado, Denver, USA
July 27-30	Education and Training in Optics and Photonics	H. Cerecedo Nuñez fax: (52 73) 297084, etop@uaem.mx	Cancún, Mexico
Aug. 2 to 6	ICO XVIII – Optics for the next millenium	ICO, SPIE, POB 10, Bellingham WA 98227-0010, USA	San Francisco, CA, USA
Aug. 9-11	IESNA Annual Conference 1999	IESNA, 120 Wall Str., 17th fl., New York NY 10005-4001, USA	New Orleans, LA, USA
Aug. 23-25	Diffractive Optics (22nd EOSTM)	EOS, Prof.F.Wyrowski wyrowsi@uni-jena.de	Jena, Germany
Sep. 22-25	Physiological Optics (24th EOSTM)	EOS, Dr.H.Kasprzak henkas@rainbow.if.pwr.wroc.pl	Wroclaw, Poland
Sep. 23-25	Colour Interaction	Colour Soc. of Australia powell.bryan@a2.abc.net.au http://orlab.optom.unsw.edu.au	Australia
Sep. 27-29	27 <sup>th</sup> Colouristic Symposium	A. Kovacs-Stahl fax: +36 1 369-75-33 E-mail: FKI@elender.hu	Tata, Hungary
Sep. 30-Oct. 2	CIE Symposium '99 75 Years of CIE Photometry	CIE <a href="http://cie.kee.hu/symp99">http://cie.kee.hu/symp99</a>	Budapest, Hungary
Oct. 3-9	XXIst World Road Congress	PIARC, fax: +33 1 4900 0202, piarc@wanadoo.fr	Kuala Lumpur, Malaysia
Oct. 4-7	Optical Materials for High Power Lasers	LID Conference, Inc. fax: +1 505 856 0938	Boulder, CO, USA
Oct. 6-8	Balkan Light-99 1st Balkan Lighting Conference & Exhibition	Balkan Light 99, fax: +3592 654883, e-mail: denima@omega.bg	Varna, Bulgaria

Date	Title of Meeting	Organizer	Place of Meeting
Oct. 8-10	BULCOLOR'99	Colour Group Bulgaria fax: +359 2 987 93 60  ime@mb.bia-bg.com	Varna, Bulgaria
Oct. 18-20	Intern. Workshop on UV Exposure, Measurement and Protection	NRPB, WHO, ICNIRP <a href="http://www.nrpb.org.uk/WHO-uv.htm">http://www.nrpb.org.uk/WHO-uv.htm</a>	Oxford, Great Britain
Oct. 18-21	Métrieologie 99	MFQ, fax:+33 4 6791 3343, sandrine.gazal@wanadoo.fr	Bordeaux, France
Oct. 25-27	Newrad 99, Int.Conf.on new developments in optical radiometry	A.Corrans, fax:+34 91 4117651, corrans@fresno.csic.es	Madrid, Spain
Oct. 28-29	II Jornada Electrónica del CEC	CEC, fax: 537 271574 btur@tesla.ispjae.edu.cu	La Habana, Cuba
Oct.29 – Nov.3	PRAKASH'99 3 <sup>rd</sup> Int.Exhibition on Light and Lighting Technology	India Trade Promotion Org., fax:+91 11 3318142/7896	New Delhi, India
Nov. 1-2	Annual Congress: Light for Life	South African NC of CIE fax . +27 12 46 4264	Kimberley, South Africa
Nov. 16-19	7 <sup>th</sup> Colour Imaging Conference Colour Science, Colour Eng.	IS&T, 7003 Kilworth Lane, Springfield VA 22151, info@imaging.org	Scottsdale, Arizona, USA
Nov.29 – Dec.3	Int.Symp.on Photonics and Applications (ISPA'99)	SPIE <a href="http://www.spie.org/info">www.spie.org/info</a> spie@spie.org	Singapore
Dec. 9-10	The city of tomorrow: electricity at the service of sustainable development	dan.bialod@espace-elec.fr	Strasbourg, France
Dec. 13-16	Interlight '99 5th Intern.Trade Fair for Light & Light Technology	OWP, POB 2127, D-92611 Weiden, fax:+49 961 32035	Moscow, Russia
<b>2000</b>			
Feb. 20-22	ISCC 2nd Panchromatic Conference - Colour in its Surround	ISCC, iscc@compuserve.com	Hilton Head, S. Carolina, USA
Sep. 20–22	Licht 2000	LiTG, Germany fax +49 30 26011231	Goslar, Germany

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