



International Commission on Illumination
Commission Internationale de l'Eclairage
Internationale Beleuchtungskommission

Hot Topics

[Registration Open for CIE Tutorial on Visual Appearance Fundamentals and Measurement, September 5, 2016, Prague, Czech Republic](#)

[Registration Open for 4th CIE Expert Symposium on Colour and Visual Appearance, September 2016](#)

[Save the date: CIE 2017 Midterm Meeting, October 24-27, Jeju Island, Republic of Korea](#)

CIE-USNC 2016 Annual Meeting

The CIE-USNC 2016 Annual Meeting will be held on October 31 and November 1, 2016, at San Antonio, Texas, in conjunction with the Fall 2016 meeting of the IES Testing Procedures Committee (IES-TCP), which will be held from November 2 to November 4, 2016.

The meetings will be held at

Omni San Antonio Hotel At The Colonnade
9921 Colonnade Blvd
San Antonio, TX 78230
Phone: 1-800-THE-OMNI

The IES rates will apply for [reservations](#) using the reservation group code "IE Group Meeting". The reservation cutoff date is September 19, 2016. Ground shuttle is provided by the hotel from 6 am to 10 pm.

Airline discount is available through Delta. The Meeting/Event Code is NMMJJ. You can use it on line at www.delta.com (select "Book A Trip", click on "Advanced Search" and enter the "Where applicable" meeting code in the box provided on the Search Flights page). You can also use the code if you make your reservations by phone (800-328-1111). Direct Ticketing Charge will apply for booking by phone.

More information about the Annual Meeting will be available soon.



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Upcoming Events

[CIE Tutorial on Visual Appearance Fundamentals and Measurement, September 5, 2016, Prague, Czech Republic](#)

[4th CIE Expert Symposium on Colour and Visual Appearance, September 6 – 7, 2016, Prague, Czech Republic](#)

[CIE 2017 Midterm Meeting, October 20-27, 2017, Jeju Island, Republic of Korea](#)

CIE-USNC 2016 Annual Meeting, October 31 - November 1, 2016, San Antonio, TX. See details on the first page of this Newsletter.



Message from the Past CIE-USNC President

The Role of CIE-USNC Sponsors

Historically, the United States National Committee of CIE was a relatively small organization that consisted of representatives of constituent societies. Those societies were independent scientific, professional and technical associations that spanned a wide range of lighting- and color-related interests and included such bodies as the *Illuminating Engineering Society*, the *Optical Society of America*, the *Technical Association of Pulp and Paper Industries*, and the *Inter-society Color Council*.

Each constituent society appointed three representatives to the USNC; the remainder of the membership consisted of a maximum of about 35 individual members, most of whom qualified by attending the most recent CIE Quadrennial Session and served until the next quadrennium. The USNC was a purely administrative body that served to represent the United States in CIE matters.

At that time, CIE was a largely volunteer organization with headquarters in Paris and, because it didn't have a central administrative office to support, had minimal dues requirements. CIE Technical Committees were more or less permanent (i.e. they were not task-specific as

New Publications

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[CIE 217:2016, February 2016 – Recommended Method for Evaluating the Performance of Colour-Difference Formulae](#)

[CIE x041:2016, January 2016 – Proceedings of CIE Expert Symposium on the CIE S 025 LED Lamps, LED Luminaires and LED Modules Test Standard](#)

These publications are available at the national Committees of the CIE or via the [CIE Webshop](#).

they now are and did not expire at the conclusion of the task) and often had mirror committees at the national level to provide input to the international TC; these national TC's were generally chaired by member of the international TC. Annual meetings of the USNC consisted of reports from TC members and a social program. Membership tended to be fairly stable and, consequently and with some justification, was viewed by some in the lighting community as an "old boys club".

In the 1980's, the USNC restructured itself in two significant ways:

- It removed the restriction on the number of individual members to encourage participation by a wider range of lighting and color scientists and practitioners and
- It added a technical component to its annual meeting to attract greater attendance.

At its first meeting under the new structure, held in Salem, MA, presentations from photo-biologists were invited and the meeting was wildly successful, attracting an unprecedented number of attendees.

Eventually, membership in USNC grew to over 100 individuals, but at the same time, the role of the constituent societies began to diminish, resulting in a gradual loss over time in that category of membership and support. Simultaneously, the CIE established a central administrative office with full-time staffing that required a significant increase in the dues obligations of the National Committees. Because the CIE dues are based on a United Nations formula which allocates its dues income on the basis of national wealth, the USNC bore (and bears) a large proportion of the CIE budget.

New Sponsors

Thanks to our [Sponsors](#) for their continued support of CIE-USNC

Read about the [Value of CIE-USNC Membership](#), and [become a Sponsor organization member](#)

During the first decade of this century, USNC dues income failed to keep pace with increases in our CIE dues obligations and our reserves eventually were completely depleted. During this same period, changes in the societies and industries which traditionally supported USNC resulted in further membership losses in those categories. The introduction of LEDs as major general light sources meant that many companies and their associations were new to lighting and were unfamiliar with CIE and its structure and function.

The role of sponsors in USNC changed with the adoption of new by-laws last year. Although scientific, professional and technical societies remain an important component of our organization, especially because they provide a diverse and rich reservoir of knowledgeable and experienced persons from a wide range of lighting related disciplines, they also provide a stable and significant contribution to our financial health. Our sponsors recognize that industry and professional communities, all of which directly benefit from the work of CIE, have a responsibility to help support the technical activities, research, and standards that are produced by CIE members.

As we continue to expand our efforts to publicize the role of USNC to ensure that the scientific and technical contributions and interests of the United States are well represented in the development and approval of international standards, we will continue to expand the number and variety of sponsors who understand the value of USNC membership. Each individual member can assist in those efforts by advocating for USNC in their own communities and by encouraging their employers and colleagues to join us. Each member of the

CIE Newsletters

[June 2016 - Prague 2016 #07, 4th CIE Symposium on Colour and Visual Appearance and CIE Tutorial on Visual Appearance Fundamentals and Measurement](#)

[May 2016 - Prague 2016 #07, 4th CIE Symposium on Colour and Visual Appearance and CIE Tutorial on Visual Appearance Fundamentals and Measurement](#)

[April 2016 - Prague 2016 #05, 4th CIE Symposium on Colour and Visual Appearance and CIE Tutorial on Visual Appearance Fundamentals and Measurement](#)

[March 2016 - Prague 2016 #04, 4th CIE Symposium on Colour and Visual Appearance](#)

[March 2016 - Prague 2016 #03, 4th CIE Symposium on Colour and Visual Appearance](#)

[January 2016 - Prague 2016 #02, CIE 4th Symposium on Colour and Visual Appearance](#)

[January 2016 - Prague 2016 #01, CIE 4th Expert Symposium on Colour and Visual Appearance](#)

USNC Executive and Technical Committees is a resource for answering any questions about the benefits of USNC membership that may arise from potential sponsors.

Alan Lewis
CIE-USNC Past President



Message from CIE-USNC VP Communications

The membership of the USNC/CIE has grown in the past few years which has begun to help pay our annual dues to the CIE. Now we really need to build membership in all levels and increase our roster of sponsors allowing USNC to maintain our status at the CIE.

I would like to start a *Be One - Get One* challenge for all members. If each member brought in a new member at their same level of membership, the annual income would increase to the point that the CIE/USNC would be able to pay the annual dues to CIE with excess allowing our organization to grow.

Please take the Advantage of Membership letter available on the website and pass it on to someone who is a potential new member encouraging them to join.

Thanks to all of you for pitching in,

Hyman Kaplan
CIE-USNC VP Membership

Technical Council News

Division I Color & Color Vision



The IES held its third Research Symposium Light+Color during April 3-5, 2016 in Gaithersburg, MD. The objective of the symposium was to take an in-depth look at specific aspects of light and color. The four

focus topics were: *Color Metrics*, *Color Vision*, *Color Perception*, and *Color Preference*.

Light+Color was developed with overall goals that matched the previous IES symposia dealing with *Light+Behavior* and *Light+Seniors*. Those goals were to:

- Identify and present key research on the subject
- Provide a format for exchanging ideas and connecting individuals and organizations involved in and interested in the research
- Link research and application by experiential demonstrations
- Incorporate research findings into IES committee work and other recommended practice

The 168 attendees at Light+Color were diverse both professionally and geographically. They represented a wide variety of organizations and professions, including lighting research, engineering, manufacturing, architecture, retail, textile chemistry, lighting design, interior design, standards, instrumentation, and academia (both students and faculty). Poster paper authors

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presented color research conducted in Europe, Asia, Canada, Australia and the U.S.

The symposium employed a unique format for the symposium speaker sessions, with two speakers presenting on each of the four focused topics – one speaker covering current research and the other covering design and applications in the real world. The purpose of such a format was to make a robust connection between research that is known and research that is needed relative to color, and then relating that research to lighting application and practice. Two additional special keynote speakers, along with poster papers, lab tours to the nearby National Institute of Standards and Technology (NIST), networking and hands-on demonstrations further enriched the attendee experience. As expected, since Light+Color occurred soon after the release of the *IES TM-30-15, IES Method for Evaluating Light Source Color Rendition*, there were numerous discussions about that work and the future of lighting color metrics.

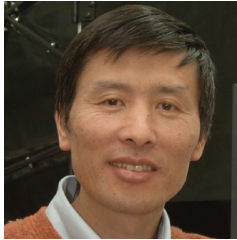
The Light+Color program agenda, speaker and topic list, sponsors, and other information are posted now on the IES website at: www.ies.org/symposium. A Final Report is being prepared and will also be posted. It will include a summary of the program, speaker presentations and the poster papers.

Terry McGowan
CIE-USNC Division 3 Member

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Division 2 Physical Measurement of Light & Radiation



Division 2 held a three-day meeting from Monday, March 7 to Wednesday, March 9, 2016 in Melbourne, Australia, following the CIE 2016 Lighting Quality & Energy Efficiency Conference, March 3-5, 2016. This first day was the D2 annual meeting. D2 director **Dr. Peter Blattner** chaired the meeting. D2 secretary **Tony Bergen**, D2 editor **Dr. Jim Gardner**, and three D2 associate directors **Dr. Joanne Zwinkels**, **Dr. Armin Sperling**, and **Dr. Hiroshi Shitomi** attended the annual meeting. Three D2 members from Brazil, Germany, and USA participated in the meeting through the WebEx. The details of the annual meeting can be found in the final meeting minutes that can be [downloaded from the CIE website](#).

The second and third days were TC meetings. Total 18 TCs held a face to face meeting. The information of the TC meetings [can be found on the Conference website](#).

New TC proposals

Two new TCs were proposed and discussed during the CIE D2 meeting. However, no decisions were made on creating these new TCs during this meeting. The decision will be made later after ballots by email.

1. Standard Reference Solar Spectra (for replacement of TC 2-17). (**Shigeo Suga**, Japan)
2. LED Calibration Sources. (**Tuomas Poikonen**, Finland)

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New reportership proposals

Two new reporterships were proposed. Both of them were approved during the CIE D2 meeting.

1. Investigation of the need for documentary guidance relating to $d(0^\circ)$ reflectance instruments (**Annette Koo**, New Zealand).

2. Measurement of total transmittance, diffuse transmittance, and transmittance haze. (**Hsueh-Ling Yu**, Taiwan)

Upcoming meetings

- September 5-7, 2016, CIE Tutorial on Visual Appearance Fundamentals and Measurement and 4th [CIE Expert Symposium on Colour and Visual Appearance, Prague, Czech Republic](#).

- May 8-11, 2017, [CIE Tutorial and Practical Workshop on LED Lamp and Luminaire Testing](#) to CIE S 025, METAS, Bern-Wabern, Switzerland. (newly announced).

- October 20-27, 2017, [D2 meeting in conjunction with CIE 2017 Midterm Meeting](#), Jeju Island, Republic of Korea.

- May/June/July 2018, D2 annual meeting (and possibly in conjunction with a D2 workshop or symposium), Eindhoven, Netherlands.

Yuqin Zong

CIE-USNC Division 2 Member

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Division 3 Environment & Lighting Design



Division 3 Director, **Dr. Jennifer Veitch** (Canada) welcomed two new Associate Division Directors this year. They are **Prof. John Mardaljevic** from the UK (Daylighting) and **Prof. Nozomu Yoshizawa** from Japan (Electric Lighting).

Both have been familiarizing themselves with the TCs in their respective topic areas and laying the groundwork for the development of new items for the expanding D3 work agenda.

A major project for all CIE divisions is the writing of a comprehensive, integrated Research Strategy for CIE. Attendees at the CIE Lighting Quality and Energy Efficiency conference in Melbourne were treated to an advance look at it. The high-priority topics include, of course, input from D3 that came from the division strategy survey in the summer of 2015. Research to support recommendations for healthful lighting is in the top 10 – which is no surprise. The final document is near completion and announcements about its availability are expected in July.

The next Division 3 meeting is set for September 20, 2016 and will be held via Webex as is the practice for even-numbered years. Planning is a key effort this year and members expect discussion about how to approach and manage high-priority efforts including proposed TCs.

The CIE has published a Division 3 report, Research Roadmap for Healthful Interior Lighting Applications. It's listed as Report 218:2016. Written by TC 3-46, the next step is to spread the word about the research work that has been identified and to make sure that the information gets into the hands of lighting researchers or

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Thank you!

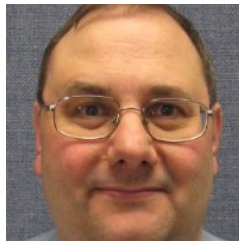
those who coordinate lighting research.

Terry McGowan

CIE-USNC Division 3 Member

Division 8

Image Technology



In the past year many reporterships were completed and closed and some new Technical Committees established.

Reporterships

R8-09 Output Linearization

Methods for Displays and Printing.

An internal report was issued and the Reporter felt that it should be converted into to an external report or standard. Current CIE rules do not allow for reportership documents to be converted into reports after completion of the report.

R8-11 Colour Image Reproduction in 3D Printing.

An internal report was issued and the recommendation was to create a new TC to document the issues. There are many methods for controlling the colour of flat artwork but they do not work well when the artwork has a third dimension added. This topic is then a key item in the Division 8 contribution to the CIE Research plan.

R8-13 Common Colour Appearance

– the reportership is just ramping up and collecting information. Much of image reproduction is aimed at producing the same or similar appearance from original to various reproductions. This reporter will look at what is required and whether a TC could draft a recommendation or technical report on method to accomplish common reproduction goals.

R8-15 Quality Metrics in Stereoscopic Imaging.

This is a new reportership formed in 2015 and is just beginning to develop the resources for its report.

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Technical Committees

TC 8-07 Multispectral Formats. This TC has released several drafts of its final recommendations. The report documents several ways in which images with more than 3 image planes can be stored and communicated.

TC 8-12 Survey of Image and Video Quality Evaluation. This TC is looking at ways to quantify the impact of compression on the quality of still images and video images. It has begun to draft its final report.

TC 8-13 Colour Gamuts for Output Media. This TC is in its second year and is drafting a method or methods for computing the gamut of colours available to any set of process primaries and substrate.

TC 8-14 Specification of Spatio Chromatic Complexity. This is a very ambitious TC that is just getting started. Its TOR is to document the interaction between chromatic properties and structural properties of images. It is a first step in the path to understanding the colour appearance of 3D reproductions.

Danny Rich

Division 8 Editor

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