Past President's Message

Commented [KP1]: Submitted on Alan Lewis on January 10, 2018

One of the few duties of the past president is to serve as chair of the nominating committee for officers and executive committee members. In preparation for our 2018 Annual Meeting, we will need nominations for two new Executive Committee members to serve a three-year term expiring in 2021. These are key positions and are critical to planning for the upcoming CIE Quadrennial Meeting in 2019 in Washington, DC. The primary duty of executive committee members is to participate in periodic meetings, most of which are held electronically, to oversee the operations of the National Committee. We are actively soliciting volunteers or suggestions for others who might enjoy a closer relationship with USNC and who can help us better manage the organization. I can be contacted at: allod@comcast.net or at pastpresident@cie-usnc.org.

USNC sponsor organization, the Illuminating Engineering Society, is looking for qualified persons to serve on some its Technical Committees that develop ANSI Standards. There a particular need for experts who fit the General Interest category (those who are not employed by lighting product producers or who work in the sale, purchase, or commercial use of lighting products such as lighting contractors, engineers, designers, etc.). Committee members do not necessarily need to be IES members. For more information and a list of the committees, you can go to the IES website (www.ies.org) or you can contact me.

USNC is continuing to explore the possibility of affiliation with the Board of International Standards Organizations of the National Academies of Science, Engineering and Medicine. There are a number of issues which need to be clarified before reaching any conclusions on the benefits of such an affiliation, but there are clearly a number of advantages to doing so. Discussions are active and on-going.

Alan L. Lewis, *CIE-USNC Past President*

CIE 2019 Quadrennial Session

Commented [KP2]: Submitted by Ron Gibbons on January 10, 2018

CIE2019 29TH SESSION WASHINGTON DC

June 14 - 22, 2019 Marriott Wardman Park, Washington, DC

This meeting, held every 4 years in different countries, is where CIE members from around the world come together to share technical progress, and to build relationships among Divisions and CIE members. The event will include various meetings and technical sessions over

- **Day 1** - CIE Board Meetings.
- **Day 2** - Sunday, CIE General Assembly and Welcome Cocktail Party.
- **Days 3 through 5** – Technical Conference Sessions.
- **Days 6 through 8** – Division and Technical Committee Meetings.

To make this international meeting successful, we need your help:

1. Put the meeting on your calendar and plan to attend.
2. Tell your colleagues and friends.
3. Plan to submit technical papers.

We also need your help in organizing the event and participating in venues and sponsorships:

1. Volunteer in planning committees on Marketing, Communication, Social Programs and Event Execution.
2. Consider displaying your company products and services in the table-top exhibit area to make contact with your clients as well as attendees from around the world.
3. Consider sponsoring lunches, dinners and coffee breaks to have your company name shown prominently in program literature and around the venue.

If any of these participation and sponsorship opportunities appeal to you, please contact us to get you involved.

Ron Gibbons, *CIE-USNC Treasurer & CIE2019 Chair*

Membership VP News

Commented [KP3]: Submitted by Hy Kaplan on January 10, 2018

The membership of the CIE/USNC has grown in the 2017, though slowly. There are:

1 Government Member

24 Organizational Members (increase of 2)

79 Individual Members (increase of 1)

Our overall active membership has grown by 18 to a total of 157 members. There is still a long way to grow.

I call on all of the active members to participate in the **Be One - Get One** campaign. 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 Value of Membership in CIE-USNC letter, available on the website, and pass it on to someone who is a potential new member encouraging them to join.

Hyman Kaplan, *CIE-USNC Membership Vice President*

Division 1 News – Vision & Color

Commented [KP4]: Submitted by Ellen Carter on March 12, 2018

Division 1 to meet in Taipei, Taiwan in April

Division 1 will hold its 2018 Annual Meeting and several TC meetings in Taipei, Taiwan on April 28th, immediately following the CIE 2018 Topical Conference on Smart Lighting. The Division 1 meetings, the CIE Topical Conference, and the CIE Colour Vision and Healthful Lighting Tutorials are being held in close proximity to and in conjunction with the Taiwan International Lighting Show, which occurs throughout the same week at the Taipei World Trade Center Exhibition. All the CIE activities are being hosted by the CIE Associate National Committee of Chinese Taipei. Attendees are welcome. http://taipei2018.cie.co.at/welcome-cie-2018

Ellen Carter, *CIE-USNC Division 1 member*

CIE 228:2018 Grey-Scale Calculation for Self-Luminous Devices

The subject report is being published by the CIE early in 2018. The report recommends a method to calculate photopic gray scale on self-luminous devices. The report shows how to calculate a threshold (from any background luminance), a match or any number of equal perceptible differences (nEPD) within any given interval of luminance. It suggests how to extend the gray scale calculation into mesopic light levels, if necessary.

The recommended method has several advantages over alternatives. A principal advantage is that it accounts for the background luminance. For instance, it predicts matching grays shown against different background luminances. It correlates well with published thresholds from photopic backgrounds.

The method was proposed by **Paul Whittle** in 1992 to summarize his nEPD data involving various backgrounds. It has been used to predict an optimum background luminance in any range of target luminances, maximizing nEPD in that range. The optimum background luminance can double the apparent gray steps, compared with a zero-luminance background.

Another advantage of the recommended formula is that it has no top luminance beyond which it is not valid; the method fits appearance data up to the luminance range of the sun. A related advantage is that the recommended method is based on absolute luminance, rather than being relative to the maximum luminance of the medium or image at hand.

A third advantage is that the recommended method is adaptable to any spatial scale, accounting for the fact that “smaller is darker, larger is brighter.” An advantage over some alternatives, but not over CIE Lightness L*, is that the recommended method is shown in the

report to be usable in the CIE color difference formulae (i.e., CIELUV, CIELAB, CIEDE2000). That said, the recommended method expresses crispening, whereas L* does not (except for a background having L*=50 in CIEDE2000.)

A fourth advantage is that the recommended method has been shown to express the appearance of high contrasts, whereas L* was developed for the low contrasts of reflective surfaces. Other alternatives only express thresholds, the lowest visible contrasts. The report clarifies the meaning of “neutral” appearance in the self-luminous context. It has a glossary related to self-luminous neutral scale.

The report reviews related technical literature and includes an extensive bibliography of use to practitioners and researchers. The report provides some new data (comparing the DICOM GSDF with the recommendation, in terms of STRESS of fit with gray appearances); it compares the recommendation with classic data; it suggests new data that would advance the field.

The report concludes with a discussion of the limitations of the recommendation e.g., it doesn’t calculate gray scale of three-dimensional objects that produce shadows.

Robert Carter, *Chairman of the CIE Technical Committee for Calculation of Self-luminous Neutral Scale*

Division 3 News - Interior Environment & Lighting Design

Commented [KP5]: Submitted by Terry McGowan on March 19, 2018

Update on Division 3 Temporal Lighting Modulation (TLM) Work

The subject of lighting flicker, more formally known as Temporal Light Modulation or TLM, continues to be at the top of the interest list for CIE Division 3. After the highly-successful CIE Stakeholder Workshop on the subject, held during February of 2017 at the National Research Council of Canada laboratories in Ottawa, a final Workshop Report was published (CIE TN 008:2017) and the resulting work plan, which is part of the final report, is being pursued.

The most recent development and one of the objectives of the Stakeholder Workshop is the organization of a CIE Research Forum for further discussion of TLM. The forum will be conducted on line using the **CIE CollTool** platform. Forum membership is open to anyone with a technical interest in the subject. Those involved in active research on TLM are particularly welcome. There is more information and a membership application at: http://www.cie.co.at/researchforum/rf-02.

For those interested in an update of current TLM research, Dr. Jennifer Veitch, CIE Division 3 Director, has offered a pdf copy of the TLM presentation she gave at the 2017 CIE Mid-Term Meetings in Korea last fall. Send an email to **Terry McGowan**, USNC Div. 3 Member at lighting@ieee.org to receive a copy.

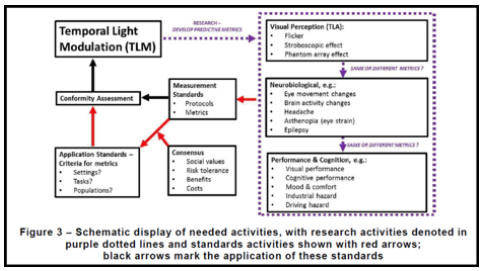

Figure 3 – Schematic display of needed activities, with research activities denoted in purple dotted lines and standards activities shown with red arrows; black arrows mark the application of these standards

Figure 3, from the CIE TLM Stakeholder Workshop Final Report

CIE Lighting of Workplaces Part 1 – Indoor lighting

Work has started on what the CIE calls a "systematic review" of the **ISO 8995:2002(E)/CIE S 008/E-2001**, more commonly known as the **CIE lighting recommendations for interior lighting**. It's a traditional lighting application guide, which includes recommendations for illuminance levels and other values used as design standards. While this document is not widely used in North America because of the availability of the more design-oriented IES Recommended Practices (and standards) directed toward office, industrial, and other specific

interior lighting applications, the CIE document is used globally and was last revised 17 years ago. After the review is complete, the publication will be rewritten as a joint dual-logo standard of the CIE and the ISO. Technically, the document is now under the stewardship and control of the ISO. **Anyone wishing to be involved in the update of this standard should sign on to the CIE CollTool and go to Page "LB D3-1707_Result & Comments"**.

Systematic Review of CIE Daylight Standard

A second document also in the systematic review process is **CIE S011:2003/ ISO 15469:2004 "Spatial Distribution of Daylight - CIE General Sky"**. In **CollTool go to Page "LB D03-1802"** for more information. The **deadline for input is June 4, 2018**.

Terry McGowan, *CIE-USNC Division 3 Member*

Division 6 News – Photobiology & Photochemistry

Commented [KP6]: Submitted by George Brainard on March 4, 2018

2017 international meetings

Lightfair International, Philadelphia PA, May 7-11, 2017

Dr. Sliney organized and presented in a panel session titled: "Blue Light – Is There an Issue?" **Drs. Brainard and Hanifin** also presented in this panel which was very well attended. Additionally, there were a number of other contributions related to the effect of light and lighting on health and well-being.

https://www.lightfair.com/

DIN-Expert-Panel "Effect of light on human beings", Berlin, Germany, June 21, 2017

This was an invitation only meeting hosted by **DIN**. Presentations were given from **Drs. Brainard**, **Lucas**, **Lockley**, **Wright**, **Cajochen, Schernhammer**, **Wulf**, **Schlangen**, **Roenneberg**, **Bisegna** and **Kunz**.

https://www.din.de/en/din-and-our-partners/press/press-releases/9th-din-expert-panel-effect-of-light-on-human-beings-on-22-june-2017-245262

Annual Meeting of the Society of Light Therapy and Biological Rhythms, Berlin, Germany, June 22-25, 2017.

The program included a full program of presentations on light therapy for treating winter depression, ADHD, fatigue related to chemotherapy in cancer patients and numerous other topics of interest to Division 6 members. Specifically, there were two Continuing Education Sessions, three Symposia, two Oral Presentation Sessions, and a Poster Session.

sltbr.org/event/sltbr-meeting-2017

Upcoming meetings

IES Research Symposium, Light + Human Health, Atlanta, Georgia, April 8-10, 2018

This meeting will address how light exposure during the day and night affect our circadian, biological, and behavioral responses. The meeting will bring together researchers and design professionals for an open exchange of ideas that will influence future priorities for developing and adopting metrics, standards, and recommended practices.

https://www.ies.org/research/research-symposia-workshops/light-human-health-symposium/

The 2018 meeting of the Society for Research on Biological Rhythms, Amelia Island, Florida, May 12-16, 2018.

This conference is a biennial event gathering hundreds of established researchers, postdoctoral fellows and students interested in various aspects of biological rhythms.

https://srbr.org/meetings/upcoming-meeting/

American Society for Photobiology (ASP) 2018 Biennial Meeting, Tampa, Florida, 12-15 May 2018.

Among many other cutting edge scientific sessions, this meeting will feature a “Celebratory symposium: '55 Years Photochemistry and Photobiology” and a ASP-European Society for Photobiology joint symposium: “Cutaneous DNA damage: new insights and approaches from translational human studies”.

http://photobiology.org/2018minisite/

SLTBR will host its 30th Annual Meeting and Anniversary Event in Groningen, Netherlands from June 21 – 24, 2018.

This program will address a wide variety of presentations on light therapy as well as basic science related to biological rhythms. There will be three symposia, three sessions of oral presentations, a poster session and a 30th Anniversary Symposium.

http://sltbr.org/event/sltbr-meeting-2017/

Many thanks to **John Hanifin**, Ph.D., who helped develop this report.

George C. Brainard, *CIE-USNC Division 6 Member*

Division 6 Report

Commented [KP7]: Submitted by David Sliney on April 11, 2018

Members of CIE Division 6 met in Jesu, South Korea in October 26, and reviewed their current projects. There were 16 participants from 8 countries, including **Dr. David Sliney** from the USA. Most past projects had been closed; however, there remained a few projects that were open and in final approval stages.

TC 6-52 - Proper Measurement of Passive UV Air Disinfection Sources; **Richard Vincent** (US) is chair. This has been an important project for those using germicidal UV-C.

The most significant and major project of Division 6 working with IECTC76 as JTC5 has been the work on revising CIE standard S009/IEC6247 on the photobiological safety of lamps and lamp systems. When finished this will be the second edition of the document that was first issued in 2002.

TC6-52 “Proper Measurement of Passive UV Air Disinfection Sources” (**Richard Vincent**, Chair) was completed last and a revised document was to be voted upon, moving towards publication.

TC6-64 Optical Safety of Infrared Eye Trackers Applied for Extended-Durations (**David Sliney**) has been held up waiting for a minor amendment following an approval vote. This TC will close automatically when the report is published.

A reportership (R6-44) on “Photobiological Measurements in the Workplace” had been reviewed by the Division editor and final edits and updates were incorporated by **Robert Angelo** and **David Sliney**.

R6-43, Illuminators for Treatment of Infant Hyperbilirubinemia (**Graham Hart**, **Michael Lynn**) was nearing final approval.

Regarding proposals for future work, **Dr. Anne Webb** (GB) offered to be TC Chair for a review of the Vitamin D action spectrum. She agreed to draft a proposal for circulation and to seek TC members. **John O’Hagan** (DD6) pointed out that the Blue Light Hazard (BLH) action spectrum needed a CIE standard, however, there was no clear decision to move forward because of some controversy on whether some revision could evolve from this.

A reportership from CN was proposed to review of a wide ranging program over several years, and already underway, evaluating eye health (particularly myopia) and the role of optical exposures as a potential cause of increasing childhood myopia.

The next meeting of Division 6 will be held as a Webex, sometime in June 2018.


David Sliney, *Senior Vice-President & Technical Council Chairman*