



COMMISSION INTERNATIONALE DE L'ECLAIRAGE
INTERNATIONAL COMMISSION ON ILLUMINATION
INTERNATIONALE BELEUCHTUNGSKOMMISSION

CIE/USA
Division 1

The Annual CIE Division 1 Meeting, Taipei



Ellen Carter reporting



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Annual Meeting Overview

- The Division 1 Annual Meeting was held 28 April 2018 in conjunction with the Smart Lighting Conference April 26-27, 2018.
- Fifteen nations were represented at the meeting
- The United States was represented by E. Carter
- 4 TCs and a Research Forum held meetings on the morning of April 28th prior to the D1 Main Meeting.



2018 Changes in Division 1

- At the beginning of 2018 there were 15 TC's (6 in Vision Section and 9 in Colour Section); 6 Joint TCs, 11 Reporterships and 1 Research Forum
- At the end of the D1 meeting there were 12 TC's (4 in Vision Section and 8 in Colour Section); 6 Joint TCs, 6 Reporterships and 1 Research Forum
- Closures include TC1-88 Scene Brightness Estimation ; TC1-63 Validity of the Range of CIEDE2000; TC1-93 publication of CIE 228:2018; and Reporterships 1.53 on gloss completed report; 1.58 and 1.61 closed due to lack of activity.



New JTC 16 The Validity of the Chromatic Adaptation Transforms under White Light

proposed by Minchen (Tommy) Wei

a. Scope: Recent experimental work revealed the incomplete chromatic adaptation under white light, especially those with low CCT and off-Planckian chromaticities, which are important to the performance of chromatic adaptation transforms. This was not considered in existing chromatic adaptation transforms (CATs). The TC will review the existing CATs and propose modifications by including a two-step transform to take the effect of white light chromaticity on degree of chromatic adaptation into consideration.

b. Initial Members (from at least five different countries): Fairchild, Mark (US); Li, Changjun (CN); Liu, Qiang (CN); Luo, Ronnier (GB); Royer, Michael (US); Sekulovski, Dragan (NL); Smet, Kevin (BE); Wei, Minchen (HK) – chair, and Yaguchi, Hirohisa (JP)



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New TC Proposals

1) Revision and Update of CIE 170 – From Jan Henrik Wold
– At the meeting Wold offered 3 options: 1) just revise CIE 170 report to have part 1 be consistent with part 2 and both to be consistent with programmed material; 2) also include extension of data from 360nm to 380 in printed tables, and from 30-830 in accompanying tables; 3) deal with the concavity of the spectral locus. - at the meeting Division members favored doing all 3 tasks during the needed revision.



New TC Proposals - continued

2) Gloss measurement and gloss perception - Definition and standardization of visual cues to gloss. Proposed by Frederick Leloup – as discussed in his reportership report.

Scope: In vision science, Estimation is the process of identifying and differentiating between similar materials. Estimation therefore tends to deal with metric differences between materials along one or more specific continuous parameters. The key questions for visual estimation of material properties are which these cues are that the visual system relies on, and how the visual system computes the material property from these identified cues.

a. With respect to surface gloss, it has been hypothesised that the human brain seems to rely on a set of properties of the proximal stimulus and on how these change for representing the typical appearance, irrespective of the physical basis. Typical examples are the number of highlights, their size, contrast and distinctness, etc.



New TC Proposal 2 - continued

b. From a metrological point of view the new scientific discoveries offer interesting opportunities. While a global description of visual gloss appraisal by aid of just one quantity seems questionable and might even be impossible, separate quantitative scales of established visual cues (such as the brightness of the specular highlight, the distinctness of the highlight, and its contrast) could be derived for dedicated sets of gloss artefacts, as they are psychophysically experienced under typical circumstances. For each scale, inter-observer variations could be evaluated (and minimised) in relation to the used assessment conditions (illumination and viewing conditions, but also assessment protocol). Which are the dedicated sets of specimens and the appropriate assessment conditions (type of illumination, illuminance level, viewing distance, etc.) to be used for the development of such new psychophysical scales, has to be investigated.

c. This TC has the purpose to publish a technical report;



New TC Proposal 2 - continued

This proposal was sent to the other divisions. Two divisions expressed some interest in participating in a joint TC:

1. Division 8 suggested some modifications and the proposer agreed to make a revision of the proposal.
2. Divisions 2 and 8 are currently voting on whether to participate.
3. After that vote is completed, all three divisions will have to vote again on the revised proposal.



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US Participation in Division 1 Activities

TC 1.76 – Renzo Shamey (co-chair), Michael Webster, Rolf Kuehni

TC 1.85 – Ellen Carter (chair), Michael Brill, Yoshi Ohno, Mark Rea, Dan Rich

TC 1.89 – Po-Chieh Hung (chair), Gaurav Shama

TC 1.91 – Yoshi Ohno, J Zawada

TC 1.92 – Paula Alessi, Francisco Imai

TC 1.93 – Rob Carter (chair) – Elizabeth Krupinski, Dan Rich, (closed this year)

TC 1.95 - Michael H Brill, Ellen Carter, Roland Connelly, Todd Popson, Art Springsteen

TC 1.96 – Mark Fairchild

TC 1.97 – Michael Brill, Mark Fairchild, Hugh Fairman

JTC 10 – Erik Walowit, Michael Brill

JTC 12 – Larry Steenhoek

JTC 16 – Mark Fairchild, Michael Royer

R 1.61 – Aurien David – (this reportership was just closed this year).

R 1.68 – Yoshi Oho

No participants in TCs 1.63, 1.81, 1.83, 1.84, 1.86, and 1.88

Associates (on D1 mailing list) Carl Anderson, John Bullough, Mark Duffy, Kevin Houser, Jim Leland, Karl Tylman



2018 Ballots Relating to Division 1

1. BA and Div Ballot on the Enquiry Draft of R1.68 A Colour Gamut Measure and Colour Shift Information based on CIE 13.3:1995 (Technical Note)
2. BA and DIV Ballot on the Approval Draft of TC 1.93 Grey Scale Calculation for Self Luminous Displays
3. BA and JTC9 Ballot and commenting on CIE System for Metrology of Optical Radiation for Light Responses Influenced by Intrinsically-Photosensitive Retinal Ganglion Cells
4. BA and DIV Ballot on the Approval Draft of TC1.85 Update of CIE 15: Colorimetry
5. Enquiry Draft of TC 1.81 Validity of Formulae for Predicting Small Colour Differences – comments
6. Commenting on 1/2359/CDV (IEC 60050-845 ED2) (International Electrotechnical Vocabulary – Part 845: Lighting (JTC 8))



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CIE Publications – relating to Division 1

- CIE 224:2018 Grey Scale Calculation for Self Luminous Displays
- CIE x044:2017 Proceedings of the Conference at the CIE Midterm Meeting 2017, Jeju, Republic of Korea
- CIE x045:2018 Proceedings of the CIE 2018 Topical Conference on Smart Lighting 26-27 April, 2018, Taipei, Taiwan
- CIE 15:2018 Colorimetry - coming VERY SOON



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Call for Nominations for Division Director

- CIE Division 1 Vision and Colour seeks nominations for qualified individuals to serve in the volunteer role of Division Director (DD1) for the term 2019-2023. The BA wants a list of 3 nominations.. Division Members, please submit nominations to the Division 1 Secretary, Dr. Li-Chen Ou, lichenou@mail.ntust.edu.tw by 19th October 2018.



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Upcoming Meetings

- 2019 - at the CIE Quadrennial in Washington, DC
- 2020 CIE Hong Kong has proposed to host CIE Division 1 Meeting as part of the CIE Expert Symposium on Colour and Visual Appearance in 2020, likely in April. This is currently being balloted by Division Members.



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Thank you!
Ellen