CIE DIV. 8 近況說明

CIE-TAIWAN DIV.2 & DIV.8 聯合會議

文化大學大夏館308教室

3. 2. 2017

Div. 8 召集人 徐明景

大綱

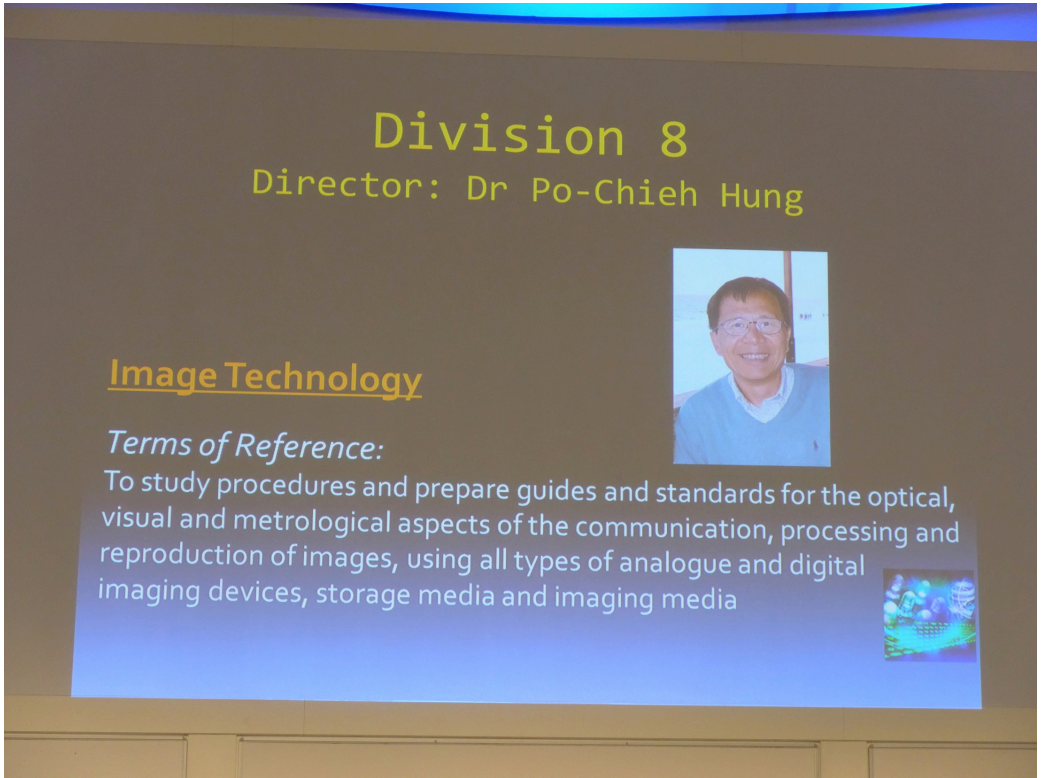
- CIE Div. 8 簡介
- Technical Committees
- Reporterships
- 新議題
- 結語

Scope of Division 8

- To study procedures and prepare guides and standards for the **optical, visual and metrological** aspects of the **communication, processing and reproduction of images**, using all types of analogue and digital imaging devices, storage media and imaging media.

CIE Div. 8 組織架構

- Chair: Po-Chieh Hung (洪博哲 日本)
- Secretary: Christine Fernandez-Maloigne (法國)
- Editor: Danny Rich (美國)



CIE-Taiwan Div. 8

- 召集人
  - 徐明景（中華色彩學會會員）
  - 文化大學資訊傳播系教授
- 副召集人
  - 胡國瑞（中華色彩學會會員）
  - 大業大學產學中心
- 執行秘書
  - 孫沛立（中華色彩學會會員）
  - 台灣科技大學照明與色彩科技研究所助理教授

CIE Div. 8 2016 年會

- 2016 年11月 8日
- 在IS&T CIC24 (美國聖地牙哥)
- 35人出席 (26人現場 9人遠距)
- 8 國家代表

TC Status

- **TC 8-07: Multispectral Imaging, Masahiro Yamaguchi (JP), 2004.**
  - 16 members
  - Technical Report on “Multispectral image format.”
  - 已正式完成即將出版
  - www.multispectral.org

- **TC8-12: Image and Video Compression Assessment,**
  - Chair: Pascal Bourdon (FR)
  - 13 members

TC Status

- **TC 8-13: Colour Gamuts for Output Media,**
  - Chair: Kiran Deshpande (GB)
  - 11 members
  - A format for communicating colour gamuts – GBD XML Schema Definition (gbd.xsd) encoded with the reporting parameters
  - Gamut encoding test procedure (EI 2017 paper)

- **TC8-14 Specification of Spatio-Chromatic Complexity**
  - Chair: Noël Richard (FR)
  - 12 members
  - Terms of references: "*To produce a state-of-the-art report on the existing definitions of the complexity notion related to the aspect of non-uniform surfaces, generally defined as textured. To combine these definitions in order to produce a single definition embedding both spatial and chromatic variations in a generic and vector form.*"
  - Add new mathematical models
  - Prepare a set of reference images

TC Status

- **TC 8-15: Archival Colour Imaging**
  - Chair: Melitte Buchman (US)
  - **Terms of Reference:** To recommend a set of techniques for the accurate capture, encoding and long-term preservation of colour descriptions of digital images that are either born digital or the result of digitizing 2D static physical objects including documents, maps, photographic materials and paintings.
  - recommendations for archival capture of cultural heritage artifacts
  - Ongoing committee work on three areas
    - RAW processing
    - illuminant (with spectral analysis of LED light sources)
    - spectral imaging

Reporterships

- **R 8-11: Colour image reproduction for 3D printing**
  - Reporter: Kaida Xiao (UK)
  - 已完成

- **R 8-13: Common colour appearance**
  - Reporter: Craig Revie (UK) and Yasuki Yamauchi (JP)
  - What people refer to as common colour appearance including for displays, printing systems and brand management.
  - Research project by Fogra, Yamagata University, Norwegian University of Science and Technology (Gjøvik)
  - 即將完成

Reporerships

- **R 8-14: Office lighting for imaging**
  - Reporter: Yasuki Yamauchi (JP)
  - Technical Note on the spectral power distribution and illumination levels used to view images in office lighting conditions
  - 草案撰稿中
- **R8-15, A survey on Quality Metrics on Stereoscopic Imaging**
  - Reporter: Christine Fernandez-Maloigne (FR), Jesus Jaime Moreno (MX) and Alessandro Rizzi (IT)
  - Stereoscopic Image Quality Assessments (SIQA)
  - 草案撰稿中

新議題

- New TC: A Color Appearance Model for Color Management Systems: CIECAM16
  - Chairman: Changjun Li (CN)
  - To recommend a new colour appearance model, CIECAM16, to replace the CIECAM02 model for colour management systems

新議題

- New TC: Consistency of colour reproduction within a single reproduction medium
  - Co-chairs: W Craig Revie (GB), Yasuki Yamauchi (JP)
  - **Scope:** To study and report on sets of reproductions of the same source image that have a consistent colour appearance and are most similar to a reference reproduction, including recommending assessment methods that measure the similarity of reproductions of an image with different colour gamuts, for printed images on substrates with approximately similar characteristics in a fixed viewing environment. Only the effect of colour reproduction on appearance will be considered by this TC and so the assessment will be performed using hard copy or soft copy proofing.

新議題

- New TC: Methods for Evaluating Colour Difference between 3D Colour Objects
  - Chairman: Kaida Xiao (GB)
  - **Scope:** To study and report subjective assessment method and dataset for colour difference evaluation between 3D colour objects by investigating the effect of colour difference caused by difference of 3D shapes, gloss and materials.

新議題

- New Reportership: Material Adjustment Transforms
  - Reporter: Max Derhak (USA)
- **Scope:** To study the topic of adjusting tristimulus values of material (object) colors to predict how they change due to differences in both lighting spectral power distribution and observer functions with the purpose of recommending one or more approaches that can be used in advance color management systems

總結：趨勢發展的重點

- 3D 錄像 多頻譜
- 媒材色域與複製品質
- 色貌與色彩管理

TC#	Title
TC8-07	Multispectral Imaging
TC8-12	Image and Video Compression Assessment
TC8-13	Colour Gamuts for Output Media
TC8-14	Specification of Spatio-Chromatic Complexity
TC 8-15	Archival Colour Imaging

TC #	Proposed Title
JTC-X	A Color Appearance Model for Color Management Systems: CIECAM16
TC8-1a	Consistency of colour reproduction within a single reproduction medium
TC8-1b	Methods for Evaluating Colour Difference between 3D Colour Objects
R8-1x	Material Adjustment Transforms

DR#	Title
R8-11	Colour image reproduction for 3D printing
R8-13	Common colour appearance
R8-14	Office Lighting for Imaging
R8-15	A survey on Quality Metrics on Stereoscopic Imaging

近期會議

- 下次CIE Div. 8 會議
  - Sept 11-15 2017, Norway
  - 在 IS&T CIC25 (Color Imaging Conference)

- 謝謝聆聽
- 敬請指教