

Aalto Lighting Unit

The research areas of Aalto Lighting Unit include indoor lighting and energy-efficient lighting systems, outdoor lighting and human factors in lighting, LEDs and plant lighting, electrical building services, and lighting measurements and testing. The lighting research is carried out in several national and international research projects.

Location

The seminar will be held at Aalto University, lecture hall G of the Main Building of the Otaniemi campus (Otakaari 1, Espoo; the old TKK Main Building). Busses 102,102T and 103 from Helsinki Bus station at Kamppi, and Busses 510, 512A or 550 from Leppävaara train station.

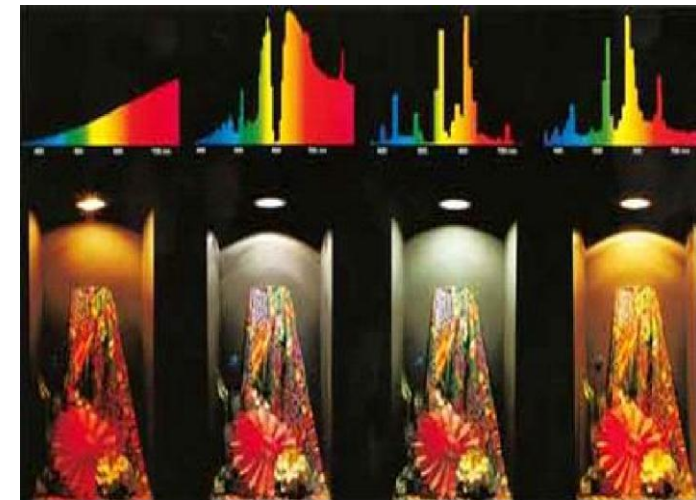
Registration

To register, please contact Mikko Hyvärinen by 30.01.2013. Email: Mikko.Hyvarinen@aalto.fi . Please give your name, organisation, e-mail and phone number. The seminar is free of charge.

Students

The enrolled students who participate in the seminar, prepare the seminar work and pass the exam will be awarded 10 ECTS credits. The course is suitable for both basic degree and post-graduate students. The students coming from universities other than Aalto University should first contact their own university on how to include the course on their studies e.g. via the JOO system.

www.lightinglab.fi



Colorimetry and Colour Quality of LEDs

**S-118.4250 Post-graduate seminar on
Illumination Engineering**

**Aalto University, Lighting Unit
11. - 12.2.2013**

Monday February 11

- 9:15** Opening of the seminar
Prof Liisa Halonen, Aalto Lighting Unit
- 9:20** Introduction to research activities at University of Leeds / Zhejiang University
Prof Ronnier Luo, University of Leeds, UK / Zhejiang University, China
- 9:45** Colour vision
Prof Ronnier Luo
- 10:30 Break
- 10:45** CIE Colorimetry
Prof Ronnier Luo
- 11:45 Lunch
- 12:30** Colour measuring instruments
Prof Ronnier Luo
- 13:10** Instruments for LED colorimetric measurements
Managing Director Wolfgang Dähn, Gigahertz-Optik
- 13:40** Development of colour difference formula - 1
Prof Ronnier Luo
- 14:40 Break
- 14:55** Surface colours and light sources
MSc Irmeli Suikki, Valovuosi Oy
- 15:25** Solid-State Lighting for Europe
Dr Marjukka Puolakka, Aalto Lighting Unit
- 15:45** Closure of the day

Tuesday February 12

- 9:15** Opening of the second day
Prof Liisa Halonen
- 9:20** Development of colour difference formula - 2
Prof Ronnier Luo
- 10:20 Break
- 10:35** Chromatic adaptation and colour appearance models
Prof Ronnier Luo
- 11:30** Colour quality of LED SPDs
- LEDs and secondary optics
- Choosing LEDs
- Secondary optics compatibility with LEDs
- Possibilities with LEDs and secondary optics
Application Engineer Jussi Laakkio, Ledil Oy
- 12:15 Lunch
- 13:00** Application of colour appearance models
Prof Ronnier Luo
- 14:00** Acceptance studies for LED office lighting
Dr Pramod Bhusal, Aalto Lighting Unit
- 14:45 Break
- 15:00** Colour quality metrics and demonstrations
Prof Ronnier Luo
- 15:45** CIE Division 1 activities
Prof Ronnier Luo
- 16:15** Closure of the seminar
Prof Liisa Halonen

Main Speaker

Dr Ming Ronnier Luo is Professor at Zhejiang University (China) and Professor of Colour and Imaging Science at the University of Leeds (UK). He is also Director of Division 1 (Vision and Colour) of the International Commission on Illumination (CIE). He received his PhD in 1986 at the University of Bradford in the field of colour science. He has over 350 publications in the field of colour appearance modelling, colour difference evaluation and colour management of digital imaging products. He is a Fellow of Society of Dyers and Colourist and the Society for Imaging Science and Technology, and the Society of Dyers and Colourists (SDC). He chairs two CIE Technical Committees and has received various research medals from different learned societies.

