

## **Workshop**

### **COLOUR RENDERING METRICS**

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#### **Summary**

Colour rendering has been considered to be one of the most important colour quality parameter in the lighting industry. CIE colour rendering index, Ra, has been widely used for four decades. It was based on the concept of 'colour fidelity', i.e. colour difference for a set of test samples viewed between test and reference illuminants. However, Ra includes outdated colorimetric metrics and some other drawbacks such as a small colour gamut of the test sample set used. From 2007, CIE has been extensively studied its performance, especially under LED lighting conditions. This results in a flux of new metrics including not only conventional 'fidelity' metrics but also those bases on 'colour preference', 'colour memory' and 'colour discrimination'. Since 2011, two CIE TCs were formed: TC 1-90 Colour fidelity index and TC 1-91 New methods for evaluating the colour quality of white-light sources. Each TC has made large stride in recent years and is close to complete their technical report.

This workshop is intended to update the development of the new metric(s) proposed in each TC. The workshop will include six speakers including two TC chairs. They will report their progress and analyse the pros and cons of these metrics.

At the end, there will be a discussion on the application of the new metrics in lighting design.