

專題演講

4/14(五) 13:20-15:00

交映樓1F國際會議廳



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講題

**AR/VR Displays:
Perspectives
and Challenges**

2008 國際信息顯示學會拉克曼獎

2008 國際光學與光電學會斯托克斯獎

2010 美國光學學會弗勞恩霍夫獎

2011 SID Slottow-Owaki Prize

2012 美國發明家學院 首屆院士

2014 美國光學學會貝勒獎章

2014 美國佛州發明家名人堂

2022 國際光學與光電學會戈佩特-梅耶獎

2022 光學學會蘭德獎章

Fellow: IEEE, SID, OSA, SPIE

Abstract:

AR and VR displays are key enablers for metaverse and digital twins for smart manufacturing, smart cities, smart transportations, and smart healthcare. Microdisplay and imaging optics play critical roles affecting the performance of AR and VR displays, such as form factor, field-of-view, eye box, image quality, contrast ratio, power consumption, and cost. In immersive VR headsets, AMLCDs and OLED displays are currently the two dominant technologies, while high-efficiency pancake lenses and beam-shaping films help to reduce the form factor and power consumption. However, ghost images should be suppressed. In optical see-through AR displays, high brightness yet ultracompact OLED-on-silicon, micro-LED displays, laser beam scanners, and liquid-crystal-on-silicon are strong contenders to offer a high ambient contrast ratio for outdoor applications. In terms of optical combiners, geometric optics, diffractive waveguide, achromatic waveguide, and metalens visor are promising candidates for expanding the eye box while keeping a compact and lightweight form factor.

15:00-16:30 茶會