

Award Ceremony

**2020 ICO/ICTP
Gallieno Denardo
Award**

18 February 2020, 16:30

Budinich Lecture Hall

Programme

LECTURE BY AWARD WINNER

KOK SING LIM

Few-mode fibre components for mode conversion in spatial division multiplexing

Spatial division multiplexing (SDM) is deemed as one of the promising solutions to expand the transmission capacity beyond the limit of 100 Tb/s while reducing the cost and energy consumption per bit of information. The orthogonality of various LP modes in the few-mode fibre (FMF) is the enabling factor for SDM to be used as an alternative or combine with time division multiplexing (TDM) and wavelength division multiplexing (WDM) for high-speed optical communication. To ensure the compatibility with the FMF-based system, a new set of optical components that serve similar purposes to their single-mode fibre (SMF) counterparts have also been developed such as optical couplers, optical circulators, optical isolators and few-mode fibre Bragg grating. Moreover, new optical components that play vital roles in SDM systems such as binary phaseplates, mode converters, and mode field diameter adaptors have also been introduced.

In this lecture, we will discuss some of the development of FMF-based components for mode excitation and conversion in FMF, an effort to enrich the optical component inventory for a complete and better SDM network.

CEREMONY PROGRAMME

2020 ICO/ICTP Gallieno Denardo Award

Welcome remarks by Prof. Sandro Scandolo
(on behalf of ICTP Director Atish Dabholkar)

Guide to the event and introduction to SPIE
Representative for poster prizes by Joe Niemela

Introduction to the OSA Representative for oral
presentation prizes by Joe Niemela

Introduction to ICO Representative and Officer in Charge
for ICO-ICTP Gallieno Denardo Prize

ICO-ICTP Gallieno Denardo Prize Lecture

Discussion



ABOUT THE ICO/ICTP GALLIENO DENARDO AWARD

The ICO/ICTP Gallieno Denardo Award is given annually to researchers younger than 40 years of age from a developing country who have made significant contributions to the field of optics or photonics. The recipient receives a certificate, US \$1,000, and an invitation to participate in and deliver a lecture at an ICTP activity relevant to optics.

The recipient of the 2020 ICO/ICTP Gallieno Denardo Award is Kok Sing Lim from the Photonics Research Centre, University of Malaya, Malaysia, for his achievements in the field of optical fibre sensing and optical communications, and his substantial contributions to sustainable development in Malaysia through promoting the use of optics-based technologies in the industrial sector.