

Séminaire

Lundi 04 juin

14 heures 30

Salle Mezzanine Bat D2 du C2N site Marcoussis

Vikas Anant

Photon Spot, Inc.

“High efficiency nanowire detectors & sub-Kelvin cryogenics”



Abstract:

Superconducting nanowire single-photon detectors (SNSPDs) with very high efficiencies (80-90+%) near 1550nm have been recently used for many record-setting experiments in quantum optics, and high data-rate long-range optical communications. Much of the improvement in efficiency is due to the use of tungsten-silicide (WSi) as the superconducting material, which exhibits a higher device yield when fabricated in multi-layer stacks than traditional NbN or NbTiN-based detectors. In this talk, I will introduce SNSPDs and will describe the latest development of these devices at Photon Spot. The talk will also describe the closed-cycle cryogenic system that is used to cool down and operate these detectors.

Bio:

Dr. Anant received his Ph.D. in Electrical Engineering from the Massachusetts Institute of Technology. He founded Photon Spot, Inc. in 2009 to commercialize high-efficiency SNSPDs and provide easy-to-use cryogenics technology to the quantum optics community. Photon Spot is located in the greater Los Angeles area, near Caltech and the Jet Propulsion Laboratory.

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