

OIST Seminar

Date/Time: Wednesday, March 11th, 16:00-17:00

Venue: C016, Floor C, Lab1

Speaker: Prof. Sami Tantawi (Stanford University/ SLAC National Accelerator Laboratory)

Title: Advanced RF Acceleration

Abstract: For decades conventional RF accelerators have been built and operated with ever increasing capability thru a few tens of gigahertz in frequency. More recent research takes advantage of the continuing development of high peak power short pulse lasers to drive accelerator structures at optical frequencies. This jump from RF to optical frequencies skips four orders of magnitude in wavelength. With recent experiments that demonstrate high gradients in metallic structures at millimeter wavelengths one is compelled to consider the viability of new approaches for acceleration in the millimeter-wave to terahertz regime. This talk will review recent developments in RF acceleration gradient limits, novel RF sources and then explore some of the possibilities for mm-wave/THz accelerator systems.

