GRK 2905
Ultrafast
Nanoscopy

Colloquium

Friday, Nov. 20, 2026
14:00 h
RUN Auditorium



Dr. Oleg Mitrofanov

Electronic and Electric Engineering,
University College London

Unveiling terahertz generation in nanoscale metasurfaces: from carrier dynamics and nonlinearity to structuring wavefronts

Metasurfaces have opened transformative opportunities for generation, detection, and structuring of terahertz (THz) pulses. At their heart lies a nanoscale nonlinear meta-atom, capable of generating broadband THz pulses, and in this talk, I will discuss the underlying physics of THz generation, and how the electronic band structure offers access to multiple THz generation mechanisms while the photonic design and nanostructuring holds potential for controlling these mechanisms at a deeply subwavelength scale.

Coffee & Discussion