

PhLAM RESEARCH SEMINAR SERIES

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Pierre GLORIEUX Amphitheater, CERLA Building

TeraHertz technologies for materials, atmospheric and biologic investigations

by

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The TeraHertz spectral range (100 GHz – 10 THz) is one of the last frontiers in photonics and offers a host of opportunities and applications (telecommunications, security, biology ...). After an overview of THz advantages and challenges, we will briefly present the most commonly used instrumentation (sources, detectors, ...) in this spectral range. Then we will focus on two main THz applications developed at IEMN: the investigation of gas-phase molecules and aerosols of atmospheric interest by TeraHertz Time-domain Spectroscopy (THz-TDS) and the scanning near-field optical microscopy (SNOM) for the characterisation of split-ring micro-resonators, a tool of interest for biophotonics.