

Pr. Liam Barry animera un séminaire le 8 octobre prochain.

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Séminaire Enssat / Foton
le mardi 8 octobre 2013, 16h15-17h15 (salle 002H)

Characterization of Optical Frequency Combs for WDM/OFDM based Optical Transmission System

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The excessive growth of Internet traffic is pushing the wavelength division multiplexed (WDM) systems towards closer channel spacing and higher capacity per wavelength. Techniques like Nyquist WDM and all optical orthogonal frequency division multiplexing (OFDM) have stirred a lot of attention as they potentially offer channel spacing equal to the baud rate. Due to the reduced or eliminated inter-channel guard bands, these techniques are best served by optical comb sources which offer constant frequency spacing between the carriers, as opposed to independent lasers that do not. To achieve high capacity on the individual channels requires the employment of high order phase/amplitude coherent optical modulation which results in the need for WDM light sources with superior phase noise properties. Hence, optical comb sources with high stability and low phase noise properties become a crucial component for coherent WDM communication networks. In this talk we will present the generation and detailed characterisation of optical comb sources using different technologies, and present their performance in various coherent systems.