

Pr. Liam Barry animera un séminaire le 9 octobre prochain.
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cette conférence.

Séminaire Enssat / Foton
le mercredi 9 octobre 2013, 16h15-17h15 (salle 004H)

Phase Noise Characterisation of Tuneable Lasers and their Performance in Coherent Systems

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To address the capacity crunch in optical networks, high spectral efficiency transmission schemes employing high order quadrature amplitude modulation (QAM) formats with coherent detection, are being explored. In addition, rapid reconfiguration of the optical network with optical packet/burst switching technology, employing fast tuneable lasers, allows the amplification bandwidth of the fiber to be used more efficiently. Combining coherent transmission techniques with optical packet/burst switching can enable optical networks which are highly efficient both temporally and spectrally. One of the key elements in these systems will be the tuneable laser transmitter, and the phase noise of laser sources has been identified as a crucial characteristic that affects the performance of the coherent detection schemes. This presentation will outline a number of techniques to accurately characterise the phase noise of wavelength tuneable laser diodes, and demonstrate how this phase noise effects the performance of these lasers in coherent systems. We will also present a number of techniques to overcome phase noise issues in burst/packet switched optical networks that employ fast tuneable laser transmitters.