

## Séminaire Labex NanoSaclay

Le **13/07** à 11h au C2N, **bâtiment 220** du  
site d'Orsay de l'université Paris Sud, en **salle 44**.

### Onchip wireless optical communication through plasmonic nanoantennas



**Giovanna Calò, PhD**

*Dipartimento di Ingegneria Elettrica e dell'Informazione -  
Politecnico di Bari, Italy*

#### **Abstract:**

On-chip wireless optical communications among distant cores in chip multiprocessors can lead to a completely new approach to the limits of current on-chip communication. In fact, using wireless connections mitigates the problems related to the design and the fabrication of hugely complex switching fabrics, where long paths suffer of crosstalk and loss issues. Implementing wireless communication at optical frequencies allows simplifications in network fabrication and management. In this presentation, an overview of our recent research on plasmonic nanoantennas for wireless optical networks-on-chip will be proposed. In particular, the design and optimization of plasmonic antennas integrated with silicon waveguides will be presented. Moreover, the on-chip wireless propagation characteristics and the point-to-point link performances will be proposed.

Contact: [beatrice.dagens@u-psud.fr](mailto:beatrice.dagens@u-psud.fr)