

La section étudiante de l'OSA présente une
CONFÉRENCE
en collaboration avec



CONFÉRENCIER:

Prof. Philippe Lalanne

Directeur de recherche

CNRS, Université Paris-Sud

(biographie ci-jointe)

TITRE :

**Electromagnetic interactions on
metallic surfaces**

DATE :

Vendredi 24 octobre 2008

HEURE :

10 h 30

LIEU :

LOCAL 2165

(Pavillon d'optique photonique)

RÉSUMÉ :

In this theoretical contribution, we describe the nature of the surface waves that are launched by subwavelength apertures in metal films. We show that two different kinds of waves are generated on the surface, a surface plasmon polariton mode and a wave that creeps along the surface with essentially a free space character similar to that of a cylindrical wave. We further show that both waves are essential for understanding the electromagnetic interaction between nearby slits and that in the long wavelength regime, since the surface plasmon excitation completely vanishes, the interaction is only driven by the cylindrical wave. In addition, we provide experimental evidences that support the theoretical predictions.

RESPONSABLE :

Regroupement des étudiants en photonique et optique
de Laval (REPOL)

BIENVENUE À TOUS ET À TOUTES

Biographie:

Philippe Lalanne is a graduate of the Ecole Normale Supérieure de Saint Cloud. He received the Agrégation de Sciences Physiques and the M.S. degree in Solid State Physics in 1986, the PhD degree in Physics in 1989 and the Habilitation à diriger les recherches in 1996 from the University of Orsay.

After his first-year researching in the field of Optical Information Processing, he spent a sabbatical year at the Institute of Optics, Rochester in 1995. Since then, he has been involved in computational physics and in applications of subwavelength optical structures for diffractive optics, plasmonics, photonic crystals, integrated optics and microcavities. He is presently Directeur de Recherche au CNRS. He received the Bronze Medal of CNRS (1993) and was awarded the Fabry de Gramont prize from the Société Française d'Optique (1998). He is a member of the European Optical Society, the Optical Society of America, the IEEE LEOS and is a Fellow of the Institute of Physics and of the Optical Society of America.