



Service de Physique de l'Etat Condensé

Séminaire SPEC

Mardi 02/05/2017, 11h00-12h00

SPEC Salle Itzykson, Bât.774, Orme des Merisiers

Dr. Ir. Reinoud Lavrijs

Group Physics of Nanostructures, Applied Physics, TU Eindhoven, The Netherlands.

Ultra-Thin Film Magnetism /From Magnetic Kink Solitons to Photonic Integration

In this talk I will give an overview of my work on ultra-thin magnetic films (<1 nm) and hope to convey my excitement of the incredibly rich physics playground it offers. For instance; the recent observation that relativistic effects, initially considered useless/undetected, have huge (unexpected) impact on magnetic nanotechnology.

After a review of the basics of magnetism and thin film engineering I will show that this is not an obscure field and the basic technology is already widely integrated in your standard day. This will be the starting point of our recent discoveries and how we at the group physics of nanostructures contribute to the fundamental understanding using an experimental physics approach. Especially, our recent participation in the NWO-Gravitation project where we try to integrate magnetic racetrack memories into photonic circuits will be discussed.