**Séminaire GEMaC**

**Vendredi 15 décembre 2017**

Salle F4109 à 10h00

**Vladimir Belotelov**

Russian Quantum Center/Lomonosov Moscow State University

**Magnetoplasmonics and optical generation of spin waves**

Resonant optical phenomena in hybrid metal-dielectric structures containing magnetic dielectrics arise and significantly affect direct and inverse magneto-optical effects. Due to the excitation of surface plasmon polaritons and plasmon-waveguide modes in such structures, magneto-optical effects resonantly increase, and new effects appear. This allows you to control light via magnetic field. On the other hand, when the magnetic materials are irradiated with femtosecond laser pulses due to the inverse Faraday effect, magnetic dynamics is excited and spin waves are generated. Thus, there is the possibility of optical control of the magnetic order.