

## **SUMMER INTERNSHIPS 2016**

**TITLE:** Nanooptics of 2D materials

**DESCRIPTION (Objectives, tasks, materials, equipment...):**

Due to extraordinary properties of novel two-dimensional (2D) materials, (like e.g. graphene, thin semiconductor layers, etc.), they are considered as very promising candidates for their use in many exciting optoelectronic applications. However, the nanooptics of 2D materials is still essentially unexplored, where some basic concepts of the light-matter interaction should be studied and understood.

We invite talented and highly-motivated candidates (with a background in physics/mathematics/programming/engineering) to be absorbed in an interesting scientific research based on either experimental or theoretical study (or both) of the optical effects appearing in atomically-thin sheets. A close daily contact with experiments performed with the help of a state-of-the-art equipment will allow the candidate to touch the very frontiers of science.

**SUPERVISOR:** Alexey Nikitin

**SUITABLE FOR:** physics, engineers