NANO-PHOT

Nano-Optics & Nanophotonics Graduate School

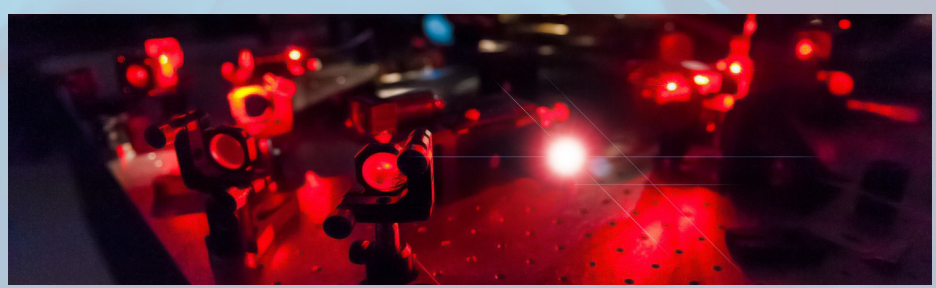
SCIENCES

Nano-Optics & Nanophotonics

Nano-Optics is the combination of "Optics" and "nanotechnology". This topic deals with light-matter interaction at the nanoscale, that is at a scale which is much smaller than the light wavelength. At this scale, the role of evanescent waves is crucial and the optical properties of materials are generally different from what they are at the microscale, opening plenty of new avenues and applications to be explored. This Research field is at the crossroad of at least 2 of the 6 Key Enabling Technologies, defined by the European Community as a priority of its industrial policy, given its connection to socioeconomic stakes in the fields of energy, telecommunications, security, health and environment.

An internationally-recognized graduate school, exclusively dedicated to Nano-Optics science and related technology.

Through its control at the nanoscale, light can be fully exploit within a sustainable development approach, based on the latest and major scientific and technologic progress to which the students will contribute in real time.



PARTNERS

Local, national and international partners

Academic and Industry partners

Seven local research Laboratories are involved in the Nano-Phot Graduate School. The coordinating lab (L2n, about 100 persons) is a world-class expert in nano-optics and nanophotonics.

While L2n manages the school (in particular by welcoming more than 50% of the students), its six partners in Reims provide complementary tools and expertise by working on applications of nano-optics in three important domains: material science (LRN and ITheMM), agro-resources/environment (FARE and SEBIO) and health (MEDYC and BIOSPECT).

Over the years, these laboratories have built broad partnership networks all over the World. Moreover, industrial partners are integrated into all dimensions of the GS: participation in courses, juries, and research projects.

Finally, entrepreneurship is promoted by the NANO-PHOT Graduate School. Indeed, students who want to get a project, like to create a start-up, have access to online courses on project management. Students can be advised, supervised and financially. Prototypes can be created thanks to the UTT's MindTech.

Links:
https://recherche.utt.fr/light-nanomaterials-nanotechnologies-l2n

NANO-PHOT benefits from the access of the Nano'Mat platform: 1000 m² of cleanrooms dedicated to Nanofabrication and Nano-characterization.
Virtual Visit of the platform at **https://salles-blanches.utt.fr**

www.nano-phot.utt.fr

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TRAINING

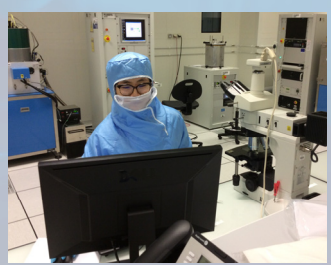
5-year program dedicated to Nano-Optics

The Graduate School program is divided in ten semesters (S1 to S10), corresponding to the Master (2 years) and PhD (3 years) programs. The first semester (S1) takes place in Reims, whereas S2 and S3 take place in Troyes. S4 is dedicated to the Master internship. Each semester of the Master program will gather inter-disciplinary and specialized/tailored courses, as well as research projects and soft skills.

The PhD program automatically includes the participation to research seminars (Summer and Winter schools) organized by the involved research teams, where international researchers are invited.

The NANO-PHOT program is divided into lectures, exercises, practical and projects and all of them are taught in English, and awarded by ECTS credits.

Nano-Phot offers a coordinated 5-year training program and promotes interactions between students in Master and PhD degrees.



Research and training programs are structured by four scientific main themes:
I) Emerging materials for nano-optics,
II) Nano(spectro)scopy & nanosensors,
III) Fondamental phenomena in nano optics,
IV) Nanofabrication for nano-optics
Modern ways of teaching are developed: virtual reality, e-learning, serious games,...
NANO-PHOT promotes international mobility and multilingual training environments and activities.
The involvement of students in research projects starts from the first semester of the master program.

INTERNATIONAL FOCUS

Services, benefits & Mobility grants

Welcome to motivated students

As Nano-Phot offers courses taught entirely in English, the GS supports the recruitment of motivated an proactive students, both national and international, through (I) integration week-end, (II) French language and culture courses offered to non-French speaking students, (III) competitive scholarships for international students, and (IV) student mobility programme.

NANO-PHOT students can take advantage of several benefits over 5 years :

- Starting mobility grant: for attracting excellent students from both overseas and France and making sure they study in excellent conditions for 5 years.
- Outward mobility of Master : Scholarships for master student for international mobility
- Scholarship for master students : For permitting student to attend conferences/worshops and to visit partners
- Budget for helping students to make concretize new personnal ideas and projects: running costs, development of small set-up,..
- Monthly stipend during the master internship

Moreover, students of the GS have the possibility to spend 1 or 2 semesters overseas and join a PhD program or a thesis part-time programme.

NANO-PHOT benefits from the UTT's International Relations department, which runs a partnership network of 150 foreign institutions.
More infos at
https://www.utt.fr/study-at-utt

www.nano-phot.utt.fr