



LAPHIA – IdEx Bordeaux

Call for Proposals – Education
Student mobility grant

Information & instructions



université
de **BORDEAUX**



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LAPHIA, Cluster of Excellence

Funded by the Excellence Initiative of the University of Bordeaux, LAPHIA (*Laser and Photonics in Aquitaine*) boosts research through collective site projects, drawing on the excellence of materials science and physics teams.

LAPHIA is building a unique center of excellence, which is becoming recognized among the most prominent national and international laser and photonics research centers.

LAPHIA unites the academic community* in three main areas:

- Lasers and high energy physics
- Photonics and materials
- Innovative imaging

Its missions are:

- To federate the entire scientific community through interdisciplinary projects in the field of lasers and photonics, and raise the international profile of Bordeaux research.
- To develop an area for collaborations with the industrials, laboratories and international partners.
- To accelerate the process of technology transfer and the employability of its students by strengthening ties with businesses.
- To provide students with a range of internationally- recognized training courses, to enable them to become managers in photonics.

** The Cluster LAPHIA federates 250 researchers, engineers, PhD students, Post-doc working on complementary themes belong to 11 top-level research laboratories. For more information, please visit our website: <http://laphia.labex.u-bordeaux.fr>*

LAPHIA Education program

The University of Bordeaux and schools are a breeding ground for future research. The Cluster LAPHIA goes hand in hand with the actors of training in physics and chemistry at the University of Bordeaux, in order to extend the innovation effort of the laser and photonics sector. To open up training to an international audience, LAPHIA offers several opportunities to partner universities.

In the framework of the LAPHIA Call for Proposals – Education, we propose to fund several student mobility grants.

These grants are dedicated to undergraduate (last year, Bachelor program) and graduate students (Master and PhD programs) and offer opportunities in a large array of scientific thematics such as laser, innovative imaging and photonics-material.

The expected outcomes of the funds are:

- To support the setting up and strengthening of research and academic partnerships and networks involving LAPHIA partners,
- To strengthen the positioning of Bordeaux as a major education and research institution on an international level,
- To enable students to enjoy an international environment early-on in their academic path,
- To participate in the internationalization of the institution through best practice exchange.

The key objective is to ensure that LAPHIA has a dynamic effect on its environment, either in the core disciplines or in neighboring disciplines. LAPHIA support is intended to provide a leverage financial effect; cofunding is mandatory.

Applications may be sent continuously. This annual call remains open until suitable candidates are identified. They will be examined monthly.

Incoming students (from all over the world to Bordeaux) and **outgoing** students (currently involved in university of Bordeaux programs) are equally eligible. Nevertheless, mobilities form or towards LAPHIA international partners (list below) will be treated in priority.

LAPHIA international partners and related research areas

- **Canada - Laval University – COPL:** chemistry and physics departments

- Guided Optics and Optical Fiber
- Lasers and brief impulses
- Biophotonics
- Optical Engineering
- Photonic materials

- **Canada - Centre INRS**

- Physics of laser-matter interaction
- Ultra-fast photonics
- Intense lasers

- **United States - University of Central Florida** – chemistry and physics dep.
- Lasers
- Fiber Optics
- Nonlinear & Quantum Optics
- Imaging, Sensing & Display
- **Germany - Jena University:** chemistry and physics departments
- Ultra-Optics
- Strong Field Physics
- Biophotonics
- **Germany - Technischen Universität Darmstadt:** physics department
- Terahertz spectroscopy, imaging
- Non-linear optical microscopy
- X uv generation
- Atom interferometry, interaction of atomic matter waves, BEC
- Characterization of behaviour of semi-conductor lasers
- Entanglement of single molecules, e.g. by plasmon
- Technologies - Femtosecond lasers
- **South Korea - Yonsei University:** physics department
- Near field optical scanning microscopy
- Non-linear microscopy
- Remote sensing
- Specialty fibers
- Biophotonics
- **Greece - University of Athens - National Hellenic Research Foundation:**
chemistry department
- Photonic materials
- Pollin structuring of glasses
- Photonic crystal fiber
- **England - Southampton University - Optoelectronics Research Centre:**
physics department
- Integrated Photonic Devices
- Physical optics
- **Finland – University of Eastern Finland:** chemistry and physics departments
- Fabrication of Micro- and Nanostructures for Photonics
- Nanostructured surfaces in Biophotonics
- Spectroscopies in materials research
- Femtosecond laser technology
- **Szeged university** – Hungary – physics department
- Femtosecond laser development

This list of the thematic is for information.

Education call - Procedure

Language

The applications can be written in English or in French.

Project evaluation

A LAPHIA internal committee will evaluate the applications monthly. The Board of Directors, according to the global strategy of the cluster, will then approve the applications.

Procedure

- Step 0: Download the Proposal model document (DOCX) online:
> <http://idex.u-bordeaux.fr/LAPHIA-education-program>
- Step 1: Submit your Proposal online using the form
> <http://idex.u-bordeaux.fr/LAPHIA-education-program>
- Step 2: Confirmation of eligibility (2-4 weeks after the reception of the application)
- Step 3: Proposition of research projects with the international partners selection (6 weeks after step 1)
- Step 4: Validation, definition of the budget, co-founding and signatures

Candidates

The candidates have to be enrolled in Bachelor (last year), Master (1 or 2), or in a doctorate program in any scientific discipline related to laser, imaging, photonics and materials.

Proactivity, participation in community activities, and capacity for team-work are also taken into account.

The internship will have to be formalized by a training agreement between the student's home university/institution and the University of Bordeaux (not necessary for PhD Students).

Duration

Between 2 and 6 months for Bachelor / Master students

PhD students: The duration will depend on the objective of the mobility.

Grant, Expenditures

Outgoing students

Students from Bordeaux

Bachelor / Master / PhD

- The grant will be devoted to **operating fees only**: the travel and the accommodation expenses are eligible.
- The amount of the grant will depend on each case.
- A co-funding is mandatory and will be asked to the appropriate agency.

Incoming students

Students coming to Bordeaux

Bachelor / Master

- A monthly grant is eligible after signing an internship agreement. The amount depends on the actual numbers of internship hours per month (for example a full month of 22 internship days : $3,75 \text{ €/hour} * 7\text{h/day} * 22 \text{ days} = 577,5 \text{ €}$)
- A co-funding is not mandatory but strongly recommended.

PhD students

- The grant will be devoted to **operating fees only**: the travel and the accommodation expenses are eligible.
- The amount of the grant will depend on each case.
- A co-funding is mandatory and will be asked to the appropriate agency.
- **The projects linked to scientific thematic listed previously are not mandatory but will be favorably considered.**

→ **All expenditures must be directly related to the LAPHIA education project.**

Non-eligible expenditures

The registration fees in a foreign university are considered as ineligible. If you have any question regarding the eligibility, please send an email to manager.laphia@u-bordeaux.fr

Involvement and report

The candidates who receive funds from LAPHIA have to respect the rules established by LAPHIA – IdEx Bordeaux regarding the publication of the results and the communication.

The sentence for the publication is the following:

This study has been carried out with financial support from the French State, managed by the French National Research Agency (ANR) in the frame of “the Investments for the future” Programme IdEx Bordeaux – Cluster of excellence LAPHIA (ANR-10-IDEX-03-02).

The logos of LAPHIA, Investissements d’avenir and Initiative d’Excellence have to be published. For all questions, please contact: manager.laphia@u-bordeaux.fr

At the end of the mobility/internship, a final report has to be sent to manager.laphia@u-bordeaux.fr. The candidate could be invited to present the report in the framework of the annual symposium.

CONTACT

LAPHIA

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