

Paris-Saclay International Programs for Physical Sciences and their Interfaces

Call for scientific programs in 2018

!! Prolonged !! Deadline September 4th, 2017

The present document calls for proposals in the framework of Ψ^2 , an *Initiative de Recherche Stratégique* of the *Université Paris-Saclay*. The Ψ^2 -project represents the starting phase of the scientific activity of the *Institut Pascal*, which will be operational in 2019.

The Ψ^2 -project aims at fostering advances on important and challenging problems in Physical Sciences and their interfaces by bringing together in a single location some experts of the field for a sustained period of time. Ψ^2 will fund and organize a series of **international thematic programs**, each one lasting **from 4 to 8 weeks**. Every program will be focused on a precise theme in **Physics, or at the interface between Physics and other disciplines**. These programs will be based on **long-term visits** (≥ 2 -3 weeks) in a stimulating environment for initiating new collaborations, training young researchers, and for stimulating scientific breakthroughs.

The deadline for applications is September 4th, **2017, for the programs to be held in 2018**.

The Ψ^2 -board (psi2@universite-paris-saclay.fr) volunteers to be consulted at an earlier stage, to go over the tentative proposal with the scientific organizers and to provide them with constructive feedback to ameliorate the proposal.

Scientific themes

Two series of programs will be run in parallel:

- one series devoted to Astrophysics and Cosmology,
- and a second series of programs devoted to Physics and its interfaces.

Organization and execution

Ψ^2 plans to run up to **8 programs in 2018**, with each program lasting between 4 and 8 weeks, and bringing together leading experts on a specific topic.

Invited participants, from France or abroad, are requested to stay at least 2 weeks (this limit is lowered to 1 week for experimentalists), and longer stays are encouraged. The program schedule should be such that from 5 to 10 visitors are present at any given time during the program. Such continuity is important to insure fruitful interactions among the invited participants as well as with local researchers.

The scientific coordinators of each program are in charge (with the help of the Ψ^2 -board, psi2@universite-paris-saclay.fr) of setting up the scientific animation during the whole period: seminars, lectures, tutorials and informal discussions. This animation is the core of each program. The coordinators are encouraged to plan for a more traditional one week workshop or conference that could attract more people (these participants would not benefit from the Ψ^2 -funding).

The program can be held in one of the two Ψ^2 -locations. One is at *Institut d'Astrophysique Spatiale* (*Université Paris-Sud* campus, walking distance from *Orsay-ville* train station). It is composed of a small separate building with 8 double occupancy offices (15 desks), a large common discussion room and a seminar room for 50 people.

The second one is at *Institut de Physique Théorique* (*Orme des Merisiers, CEA Saclay*), with about 10 desks available for Ψ^2 guests, a seminar room and an amphitheater (150 seats).

Selection of the programs

The programs will be selected by the scientific committee (composition given below). The selection criteria are:

- scientific importance of the topic, timeliness, intellectual challenges;
- scientific excellence of the invited participants, fraction of foreign guests;
- overlap with the research activities carried in the Paris-Saclay labs;
- size of the community in the Paris area that could attend the program;
- interdisciplinary character of the program is a plus.

Budget for invitations

Ψ^2 will reimburse the local expenses of the invited participants, up to 120€ per hotel night, with an upper limit of 10 invited participants per week and 15€ per meal. Some budget is allowed to cover some part of the travel expenses of the invited participants, with an upper limit fixed at 4.000 € per program.

Application details

Each file should provide the following information:

- **Title and acronym** for the program;
- **Names of the scientific coordinators** (at least 2, one being from the Paris-Saclay community);
- **Detailed scientific description** of the program (5 pages maximum), including a brief description of the field for non-experts, and a list of important questions to be addressed;
- **Tentative list of invited and accepted participants** (from France and abroad), plus their affiliation: a few keywords about their field of expertise is a plus. **Specify explicitly** who have already accepted to come in case the program is selected, **with the length of their stay, bearing in mind an optimal spread over the full length of the program (4-8 weeks)**;
- **List of researchers** (or teams) **in the Paris-Saclay** and Paris areas, who are working in the field, and who will benefit from the program and potentially attend the seminars on a regular basis;
- **Duration** and preferred **starting date** for the program;
- **Tentative program structure**. For example the type of scientific animation, and scientific themes associated to the different weeks;

- Other possible sources of **funding**. If available, these could for instance cover some extra invitation costs or some short workshop during the program;
- Preferred **location** for the program:
 - *Institut de Physique Théorique (CEA Saclay)* preferentially for general Physics programs,
 - Or *Institut d'Astrophysique Spatiale (Université Paris-Sud)*, preferentially for astro-cosmo programs,
 - Or as an exception, a program could be held in another laboratory of the *Université Paris-Saclay*, which research activities overlap with the program, and which can provide sufficient office spaces for the invited participants, and a seminar room. In that case, include a support letter from the director of the lab.

The application (single pdf-format) should be sent by email to psi2@universite-paris-saclay.fr before **September 4th, 2017, for programs to be held in 2018**.
 Please contact the Ψ^2 -board at an earlier stage, if you wish to receive constructive feedback in time to ameliorate the proposal.
 The result of the selection of this second wave of programs will be announced before June 15th.

The scientific programming will be closely coordinated with that of the forthcoming **Institut Pascal** (IPa), which, from 2019, will host analogous activities, but on a broader spectrum of scientific themes and on a larger scale in terms of number of participants. The call for these proposals will also be announced soon. Once the IPa building ready, the Ψ^2 -projects will be “hosted” by the IPa structure, and will benefit from its management and administrative support.

Contact - Ψ^2 direction

For additional information, please contact the Ψ^2 -board via psi2@universite-paris-saclay.fr

Board members are :

- **Olivier DULIEU**, *Laboratoire Aimé Cotton (UMR 9188, CNRS, Université Paris-Sud, ENS Cachan, Université Paris-Saclay)*, building 505, Campus d'Orsay, 91405 Orsay Cedex
- **Marc-Antoine MIVILLE-DESCHÊNES** *Institut d'Astrophysique Spatiale (UMR 8617, CNRS, Université Paris-Sud, Université Paris-Saclay)*, building 121, Campus d'Orsay, 91405 Orsay Cedex
- **Grégoire MISGUICH**, *Institut de Physique Théorique, (UMR 3681, CEA, CNRS, Université Paris-Saclay) Orme des Merisiers, CEA – Saclay*, 91191 Gif-sur-Yvette

Web page: <https://www.universite-paris-saclay.fr/fr/programmes-thematiques-psi2>

Scientific committee

« Astro-Cosmo » sub-Committee: David ELBAZ (*SAP, CEA*), Pierre-Olivier LAGAGE (*SAP, CEA*), Patrick HENNEBELLE (*SAP, CEA1*), Thierry FOGLIZO (*SAP, bbCEA*), Sébastien FROMANG (*SAP, CEA*), Nabila AGHANIM (*IAS, U. P-Sud*), Julien GRAIN (*IAS, U. P-Sud*), Mathieu LANGER (*IAS, U. P-Sud*), Yann MAMBRINI (*LPT, U. P-Sud*).

« General » sub-committee: Cécile APPERT-ROLLAND (*LPT, U. P-Sud*), Silke BIERMANN (*CPhT, Polytechnique*), Arnaud COUAIRON (*CPHT, Polytechnique*), Marie-Pierre GAIGEOT (*LAMBE, U. Evry*), Gilles MAYNARD (*LPGP, U. P-Sud*), Nicolas PAVLOFF (*LPTMS, U. P-Sud*), Lucia REINING (*LSI, Polytechnique*), David SIMEONE (*SRMA, CEA*), Odile STEPHAN (*LPS, U. P-Sud*).