

2018 - Doctorate: self-evaluation and projects



Doctoral College Information document

RECORDS FOR EXTERNAL EVALUATION BY HCERES - SEPTEMBER 2018

université
PARIS-SACLAY

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IDENTITY CARD

The doctoral college of the University of Paris-Saclay

The **doctoral college** is the **coordination component of the** University of Paris-Saclay responsible for organizing doctoral policy within the framework of site policy. It brings together the [doctoral schools of the](#) University of Paris-Saclay and organizes the coordination or pooling of transversal actions at all doctoral schools and institutions.

20 doctoral schools, in fields as varied as:

- life and health sciences
- human and social sciences
- engineering sciences for engineers
- mathematics and computer science
- chemical and physical sciences

28 member, co-accredited or associate institutions

- **19** member institutions, including
 - **7** universities and colleges (CentraleSupélec, ENS Paris-Saclay, AgroParisTech, IOGS, UVSQ, UEVE, Université Paris-Sud) and **7** organizations (IHES, CNRS, CEA, INRA, INRIA, ONERA, INSERM) are partners in the IDEX project which was confirmed under conditions in March 2018,
 - **4** grandes écoles which are currently members but which will form a new "NewUni" alliance (ENSAE, ENSTA ParisTech, École polytechnique, Télécom ParisTech & Sud Paris),
 - **1** HEC Paris member institution that has not yet fully clarified its future position regarding the doctorate,
- **6** co-accredited institutions PSL, USPC, Sorbonne-Universities, IAVFF, Paris-Est and URCA,
- **3** associated institutions for doctoral training ENSA-V, Supméca, IRT System-X.

5446 doctoral students registered in 2016-2017,

- **41%** female and **59%** male,
- **41%** of doctoral candidates of foreign nationality from 80 different nationalities,
- **33%** of doctoral students arrived with a diploma obtained abroad,
- **16.2%** of doctoral students with an engineering degree.

1296 new enrolments in 2016-2017, or 7.6% of new enrolments in France,

- **12.2%** in CIFRE agreement,
- **94%** with funding dedicated to the preparation of the thesis,
- **5.6%** of employees for another professional activity
- **0.4%** without thesis funding and without any other activity (e. g. pensioners).

1216 thesis defences in 2016, or 8.3% of national defences,

- **54%** in less than 40 months and **5%** in more than 6 years,











- 70% of theses are available online, 58% of which are written in French and 37% in English,
- 7% were prepared as part of an international thesis co-supervisor.

2950 HDRs or similar

- who supervise at **least one** doctoral student and an average of **1.87** doctoral students in 2016-2017,
- among more than 3500 HDRs or similar available to supervise and more than 1000 non-HDR co-supervisors, registered in the Adum database.
- **8%** of doctoral students are supervised by a thesis director who supervises, on an exceptional basis, more than 5 doctoral students,
- **92%** of doctoral students are supervised by a thesis director who supervises **1 to 5** doctoral students

Doctoral schools

→ Life and health sciences

N°581		ÉCOLE DOCTORALE Agriculture, alimentation, biologie, environnement, santé (ABIES)	Accredited UPSaclay and support, Paris-Est and IAVFF co-accredited, CIRAD and INERIS associated
N°567		ÉCOLE DOCTORALE Sciences du végétal : du gène à l'écosystème	Accredited UPSaclay and support
N°577		ÉCOLE DOCTORALE Structure et dynamique des systèmes vivants (SDSV)	Accredited UPSaclay and support, PSL co-accredited
N°568		ÉCOLE DOCTORALE Signalisation et réseaux intégratifs en biologie (BIOSIGNE)	Accredited UPSaclay and support, PSL co-accredited
N°566		ÉCOLE DOCTORALE Sciences du sport, de la motricité et du mouvement humain (SSMMH)	Accredited UPSaclay and support, USPC and Paris 10 co-accredited
N°570		ÉCOLE DOCTORALE Santé Publique	Accredited UPSaclay and support, Paris-Est co-accredited
N°582		ÉCOLE DOCTORALE Cancérologie, biologie, médecine, santé (CBMS)	Accredited UPSaclay and support, USPC and PSL co-accredited
N°569		ÉCOLE DOCTORALE Innovation thérapeutique : du fondamental à l'appliqué	Accredited UPSaclay and support



→ Human and social sciences



Accredited UPSaclay and support,

Project to restructure EDn°578 into two doctoral schools:

- 1 - Social sciences & humanities
- 2 - Law, economics, management

→ Engineering Sciences



Accredited UPSaclay and support



Accredited UPSaclay and support



Accredited UPSaclay and support

Restructuring and evolution of the doctoral school's scientific project

→ Mathematics and Informatics



Accredited UPSaclay and support,
PSL co-accredited



Accredited UPSaclay and support,
IRT-System X associated

→ Chemical and physical sciences



Accredited UPSaclay and support



Accredited UPSaclay and support



Accredited UPSaclay and support



Accredited PSL and support,
UPSaclay, USPC and SU co-accredited,



N°129  ÉCOLE DOCTORALE
Sciences
de l'environnement
d'Île-de-France (SEIF)

*SU accredited and support,
UPSaclay and PSL co-accredited,
USPC associate,*

N°127  ÉCOLE DOCTORALE
Astronomie
et Astrophysique
d'Île-de-France

*Accredited PSL and support,
UPSaclay, USPC and SU co-accredited,
ENS Lyon, associated IGN*





PRESENTATION AND ASSESSMENT OF THE DOCTORAL COLLEGE

Doctoral training strategy

As part of the IDEX Paris-Saclay excellence initiative, selected in 2011, the member institutions of the Université Paris-Saclay have committed themselves to building a common doctoral space, supported by research and training teams of the highest international level. This project responds to the shared ambition to make the Université Paris-Saclay doctorate a flagship degree, which contributes to the university's national and international reputation and attractiveness, which can be valued by doctors in the context of diversified professional careers and which benefits from a high level of recognition by those who will call upon their skills and expertise in France and abroad.

The doctoral school projects were submitted in 2013 and evaluated favourably by the AERES in 2014. Since [July 10, 2015, the](#) Université Paris-Saclay has been accredited to deliver the doctoral degree. In this context, it defines, coordinates and monitors the implementation of doctoral training policy and shared projects between member or associate institutions for doctoral training.

Doctoral training is organized by 20 doctoral schools, federated within a doctoral college. Doctoral degrees are awarded by the University of Paris-Saclay and signed by its president and by the rector of the academy. They specify the higher education institution where the doctorate was prepared.

The essential values and principles of doctoral training at the University of Paris-Saclay are set out in the doctoral [charter](#) and the rules and procedures are specified in the [internal regulations of the doctoral college and doctoral schools](#) adopted in 2015 and updated in 2016, following the publication of the [decree of 25 May 2016](#).



a. INVENTORY OF THE SITUATION

THE MISSIONS ENTRUSTED WITHIN THE FRAMEWORK OF ACCREDITATION

L612-7 Education Code: excerpt "Doctoral training is organised within the framework of doctoral schools [...]. They include

- a **personalized** scientific supervision of the **highest quality**
- as well as a **collective training** including courses, seminars or internships designed to:
 - ✓ to strengthen the **scientific culture of** doctoral students,
 - ✓ prepare their professional integration or **career pursuit in** both the public and private sectors,
 - ✓ promote their **international openness**".

CHALLENGES AND AMBITIONS

Ensure the quality and recognition, national and international, academic and extra-academic, of doctoral training at the University of Paris-Saclay, in accordance with international criteria
(c.f. *European Commission (2011) : Principles for innovative doctoral training*).

STRENGTHS

For the doctorate in general

- a diploma of excellence (L612-7), doctors represent less than **3%** of higher education graduates,
- international recognition of the diploma,
- the importance of doctoral training for research,

For the University of Paris-Saclay

- an exceptional potential for supervising and welcoming doctoral students (more than 300 research units, equipped with high-level scientific equipment and platforms, nearly 3000 HDRs currently managing at least one doctoral student, more than 97% by managing less than 5);
- the richness of disciplinary fields;
- a strong international presence (7% of doctoral students in international thesis co-supervision);
- a well-established culture of partnership with socio-economic and industrial circles (more than 12% of CIFRE doctoral students), the presence of numerous business R&D centres in the region;
- doctoral training conditions and practices that are rather more attractive than the national average (e. g. 94% of doctoral students funded for their thesis, 72% at the national level);
- moderate heterogeneity at the doctoral level between institutions and disciplines and a real desire to converge towards best practices;
- an integration of the doctoral training activity almost completed.

WEAKNESSES

For the doctorate in general

- a regulatory framework that is both very detailed and relatively unknown and insufficiently precise on a few sensitive issues (e. g. social protection and funding threshold for doctoral students);
- limited resources of higher education institutions to meet the financing needs of doctoral training (doctoral contracts);
- training whose readability and objectives must be further strengthened with regard to employers outside the academic sector;
- the number of doctors is fragmented between many institutions and often below the critical size required to effectively implement a policy to promote graduates.

For the University of Paris-Saclay

- an institutional context that has not yet stabilized;
- UPSaclay is not yet classified in Shanghai, which may reduce the attractiveness of certain geographical areas (Asia in particular);
- the Université Paris-Saclay is less well endowed than the national average in terms of doctoral contracts "ministry";
- the integration between member institutions of services supporting doctoral training (schooling, libraries, international reception, etc.) could not be done in phase with the "pedagogical" integration of doctoral training, generating a certain complexity and expectations of simplification.



OPPORTUNITIES

For the doctorate in general

The context is rather favourable for the doctorate:

- globalisation is favourable to diplomas with an international dimension;
- the "innovation society" is favourable to diplomas with a research dimension;
- the "information society" is favourable to diplomas associated with information synthesis and management skills;
- the registration of the doctorate in the RNCP should facilitate the valorisation of the doctorate in collective agreements;
- the Montchalin amendment attaches results to the research tax credit, in particular in terms of the recruitment of doctors, which should promote their employability.

For the University of Paris-Saclay

- The Paris-Saclay University benefits from the IDEX label and could be recognized, before the end of 2020, as one of the top 20 universities in the world;
- More than 70% of UPSaclay's annual scientific production is co-authored by a doctoral student, which makes doctoral training strategic;
- The professional future of UPSaclay doctors is very good and should help to increase their attractiveness. The number of Alumni makes it possible to build networks of ambassadors who can contribute to it;
- UPSaclay's accreditation for the doctorate, the resulting staff groupings and pooling make it possible to:
 - to increase the **visibility** and **readability** of the doctoral training activity,
 - to enrich the training offer,
 - to share best practices,
 - to increase the capacity for influence,
 - to meet the challenges of interdisciplinarity, in particular the articulation with the SHS;
- The doctorate is at the heart of the target university project;
- The target university project provides for an organization into graduate schools, which should provide additional visibility, better coordination of the scientific communities and simplify administrative operations;
- The target university project also provides for cross-functional coordination by "level" (doctoral colleges, master's and bachelor's degrees), making it possible to benefit from the grouping of staff and cross-functionality at each level.

THREATS

For the doctorate in general

- in a context of general restructuring of French higher education, with a legitimate effort focused on the ^{first} cycle, the question of the doctorate risks being overshadowed, while regulatory problems remain;
- The evolution of resources does not follow the evolution of the missions entrusted to the doctoral schools and the stated ambitions (cf. STRANES objective of 20,000 new doctors per year in 5 years without a corresponding increase in doctoral contracts or CIFRE contracts);
- The financing of doctoral contracts "ministry" has been undifferentiated in the payroll of higher education institutions at the risk of serving as an adjustment variable.

For the University of Paris-Saclay

- Geographical sites that are still far away and poorly connected by transport, which delays efforts to share, rationalize and foster a sense of belonging;
- Expectations of results from doctoral training and doctors (scientific production, business start-ups, etc.) are commensurate with the scale of investments in general on the Paris-Saclay site (real estate, transport), while the specific human and financial resources allocated to this activity remain limited;
- The attention paid to quality must be closely linked to the development of visibility. A greater reputation will involve:
 - increased **demands for exemplarity** from students, doctoral students, lecturers, researchers and public authorities towards the university and its processes (selection of doctoral students, monitoring, support, etc.),
 - increased **risks** in terms of **brand image**, particularly in the event of a breach of scientific integrity by doctoral candidates or their thesis directors,
 - a **foreseeable increase in the number of appeals in the event of non-admission of candidates to doctoral studies, non-registration or non-authorisation of the defence**,

Provided that we have the dedicated resources to respond effectively, these three points will be a powerful driver of improvement. Otherwise they will constitute a major risk.



b. GUIDELINES FOR THE

Following the action of the Paris-Saclay Excellence Initiative (IDEX), accredited in 2011, **100% of the** group's doctoral degrees are awarded by the Université Paris-Saclay, as part of the accreditation process that began on 1 September 2015.

The transformation has led to the disappearance of the "site" doctoral schools that existed in some of the ComUE's institutions, and to the establishment of disciplinary or thematic doctoral schools that bring together doctoral students from all the institutions of the Paris-Saclay University around a coherent scientific project. Enrolment remains managed, in proximity, by the institutions or their components (UFR). The doctoral training activity is coordinated by the doctoral college, to which are also transferred some of the missions of the doctoral schools, which are of a transversal nature and can thus be shared.

The transformation strategy has been implemented in 3 main areas:

VISIBILITY

Even if the first doctorates date from the 13th century, in France, outside the academic sector, the doctoral degree has suffered, and probably still does, from a certain lack of recognition. The first cause is the **fragmentation of the workforce** between many institutions. With about 15,000 graduates per year, doctors represent less than **3% of all** higher education graduates in France.

	L.	M.	D.
University of Paris-Saclay	39,5%	53,7%	6,8%
France	57,9%	39,2%	2,9%

Distribution of student numbers by LMD course in 2014-2015, source: territorial diagnosis STRATER Ile de France 2018 p.196.

They thus constitute a population of graduates whose numbers, in each institution, are often insufficient to be able to effectively carry out actions dedicated specifically to this level of diploma (relations with the socio-economic sectors, job fair, Alumni associations, employability surveys, etc.).

	25%	50%	75%	100%
2017-2018	3	9	22	85
2016-2017	3	9	22	95
2015-2016	5	14	32	109
2010-2011	7	19	42	178
2007-2008	8	25	58	299
2000-2001	8	22	51	326

Number of distinct names of French higher education institutions under which 25%, 50%, 75% or 100% of ABES doctoral theses have been registered per academic year[source].

The groupings of institutions make it possible to overcome this difficulty by leading to an annual number of graduates likely to improve the **visibility of** this level of diploma and to enable actions to be taken to promote graduates. In 2016-2017, on www.theses.fr, the number of theses submitted is now over **250** in **14** institutions, the first being the University of Paris-Saclay: UPSaclay (1100), Grenoble Alpes (737), Lyon (676), Paris 6 (605), Aix-Marseille (551).

For the Université Paris-Saclay, the effects of the grouping are particularly visible, except perhaps for UPsud, compared to which the number of graduates has only doubled.

Establishment	nb	Establishment	nb
CentraleSupélec	90	HEC Paris	15



ENS Paris-Saclay	82	ENSAE	1
AgroParisTech	59	ENSTA ParisTech	23
IOGS	18	Polytechnic School	124
UVSQ	125	Telecom ParisTech	2
UEVE	59	Télécom Sud Paris	9
UPSud	606	University of Paris-Saclay (together)	1213

Number of doctoral grants for the academic year 2016-2017 by enrolment institution.

Pooling at the cluster level is also useful because it allows **cross-fertilization between various disciplinary fields** and the sharing of knowledge and experience between universities, research organizations and grandes écoles, thus making it possible to generalize to all the "best practices" of each.

This pooling has been implemented for the [doctoral college](#), but also for other entities of the University of Paris-Saclay with which the doctoral college interacts, such as [the e-international welcome office](#), the directorates of communication, international relations and relations with companies, the [council for research ethics and scientific integrity \(Poletis\)](#) and the [mission for disability, equality and diversity](#).

READABILITY

The second cause of the lack of recognition of the doctorate in France is a lack of **READABILITY**.

First, in France, the term "doctorate" has historically been applied to diplomas with various contents. Various measures have improved the readability of the doctorate over the past 50 years. In **1968** with the **unification of disciplines** (end of doctorates "es sciences" or "es lettres"), then in **1984** by unifying the **various categories of diplomas bearing the name of doctorates** (doctorate of 3rd cycle, state doctorate...), then, in **1999**, by the launch of the Bologna process, leading to **European harmonisation**. In **2018**, the doctorate was registered, on the basis of a reference framework of transversal competences, in the National Register of Professional Qualifications (**RNCP**) at the highest level of the European Qualifications Framework (level 8 - EQF), paving the way for recognition of the doctorate in **collective agreements in the professional branches**.

Then, the doctoral students conduct, by essence, research projects on **original subjects** and they benefit from **personalized supervision**. Each doctor therefore has a **unique profile**. This is both the most valuable feature of doctoral training and a challenge for the readability of the doctorate, compared to other categories of degrees whose training framework is much less personalized.

To improve the readability of doctoral training, the approach chosen from 2014 at the University of Paris-Saclay was to adopt an approach based on **so-called "transferable" skills**, in particular via a call for projects, funded by IDEX, to set up "doctoral career paths". For each career path, a skills reference framework for the category of becoming a professional was thus established. The idea is to highlight the skills that are an added value for a category of professions and that are part of the transversal skills that doctoral candidates develop during the preparation of their thesis.

Apart from this example, the competency-based approach is very pragmatic in that it makes the skills mobilised at each stage of doctoral training organised by doctoral schools (admission, monitoring, training, defence) as readable as possible. First, to make doctoral students aware of the skills they are developing, and also to make their thesis directors and members of commissions, juries or committees who are mobilized aware of the pedagogical objectives of these steps.

For example, in the context of an "information and knowledge society", skills in **information and knowledge synthesis and management** (critical bibliographic synthesis, ability to establish and present a state of the art supporting a research strategy) have become very valuable. Doctors are the graduates who possess them at the highest level. From admission to the defense, through individual



monitoring committees, doctoral schools ensure that future doctors develop their skills in this field and learn to value them. Each doctoral school then completes this common framework with its own criteria and modalities, adapted to its context and its disciplinary or thematic field.

Then, through the doctoral charter and various awareness-raising and communication actions (notes, surveys, days...) we endeavour to give meaning to these stages of training and the procedures that accompany them so that they are not taken as administrative milestones.

Finally, the organization into doctoral colleges and doctoral schools makes it possible to provide clarity for doctoral students and their supervisors regarding **the offer of additional doctoral training** (or doctoral school courses).

The doctoral college pools the training modules **across** all disciplinary or thematic areas. This is particularly the case for actions aimed at preparing for **professional development**. The size of the workforce at this level makes it possible to develop a training offer divided into "career" paths adapted to several categories of professions. Training courses providing a **basic foundation for the** researcher (bibliographic research techniques, for example), **language and intercultural** training or training in **research ethics and scientific integrity** are also offered to them in the doctoral college's catalogue.

Doctoral schools organize, in their respective scientific fields, with their component laboratories, training enabling doctoral students to consolidate their **scientific culture** (cycles of doctoral seminars, thematic schools, etc.) or to develop their **research skills** (presentations of their work orally, by poster, etc.) or to develop their **international openness** through scientific exchanges with international researchers. Here again, the grouping makes it possible to reach a number of students in each doctoral school, making it possible to develop an attractive offer of doctoral seminar cycles both for doctoral students and also for lecturers.

In addition to these objectives of readability for doctoral students, supervisors and external students (especially future employers), procedures have also been put in place to clarify "*who does what and why*" during the main stages of doctoral training, for each of the actors concerned internally (laboratory, doctoral school, schools, libraries, etc.). This formalisation was essential in order to be able to pool the organisation of doctoral training between the institutions concerned, as their previous operating methods were quite heterogeneous.

QUALITY

Finally, **TRUST** is the third lever on which we are working to increase the recognition of the Université Paris-Saclay doctorate. To this end, we are committed to a continuous improvement process and ISO9001-2015 certification of "quality management of doctoral training activity". The term "quality" often gives rise to misunderstandings, which is why it may be useful to recall that the objective of this approach is in no way to guarantee the "quality" of the doctoral theses of the Université Paris-Saclay: this is the responsibility of the thesis rapporteurs and the defence juries.



- The first objective is to ensure that the **information and recommendations** that the doctoral college and doctoral schools disseminate to all are based on **facts, survey results and statistical assessments that are relevant, statistically significant and regularly updated**. For example: Obtaining statistically significant data on the professional future of doctors is essential to properly inform students and students at leading universities who are considering a doctorate. The grouping now makes it possible to draw lessons from the surveys on the employment of doctors with much more confidence than at the level of each of the member institutions of the Université Paris-Saclay. This is an essential element for the attractiveness of doctoral schools. Of course, there are also



surveys carried out at national or regional level, but they cannot be used to guide and monitor the effectiveness of actions taken at the level of an institution.

- The second objective is to ensure that the doctoral college and the doctoral schools **effectively implement the various measures they announce, monitor their progress and quickly remedy any dysfunctions or difficulties encountered**. To this end, a little time must be devoted each year to checking whether these mechanisms meet the expectations and needs of doctoral students and their thesis directors (surveys) and also those of the other actors concerned (employers, local authorities, etc.). This approach also requires time to reflect on the prevention of the main risks and on the improvements to be made.
- Finally, in terms of improvements, the grouping has also made it possible to **share experiences and compare sometimes different cultures in order to generalize everyone's best practices to all**. Among these are the competence approach that had been developed particularly at AgroParisTech, the Iso9001 quality certification of the doctoral training obtained by UPSud already 6 years before the implementation of the group, and the doctoral graduation ceremonies organized at UPSud, the forum and relations with companies particularly developed at CentraleSupélec, the training of higher education teachers developed at ENS Paris-Saclay, the surveys on the employment of doctors at UPSud, TelecomParisTech and Ecole Polytechnique, the monitoring committees already systematized at CEA, ONERA, INRIA and INRA etc. Sharing doctoral training between institutions has led to a considerable effort to harmonize and **converge "upwards" since 2014**. It has also made it possible to monitor more effectively developments and innovations in doctoral training at the national and international levels.

Organization and functioning of the doctoral college

The doctoral college is the coordination component of the University of Paris-Saclay responsible for organizing doctoral policy within the framework of site policy. As part of a doctoral training strategy decided collegially by its members, a division of powers has been defined within the University of Paris-Saclay between:

- the doctoral college, created to coordinate and pool actions and functions across all disciplinary or thematic fields (doctoral schools) and institutions and actions for which pooling and coordination at this level makes it possible to gain visibility, readability and/or quality and effectiveness;
- doctoral schools that are in charge of the pedagogical follow-up of doctoral students and the activities specific to their disciplinary fields;
- the services of member institutions responsible for implementing support functions for doctoral training in close proximity to doctoral students and their supervisors (schooling, documentary services of the institutions, etc.).

Like the other coordination components, its functioning is monitored by the Academic Council of the University of Paris-Saclay, which receives an annual report on the activity of the doctoral schools and the doctoral college, and which receives all reports on assessments and surveys. It is important to note that the internal regulations of the Université Paris-Saclay provide for the presence of **5 doctoral candidates elected to the academic council**.

The Board of Directors also monitors doctoral training activities: the doctoral college thus draws up an annual budget guidance letter (budget implementation and forecast for doctoral schools and the doctoral college and proposal for the distribution of their contributions to this budget among the institutions).

a. ORGANIZATION AND MISSIONS



The doctoral college is headed by a director, assisted by an [office](#) that meets about once a month and by the [board of the doctoral college](#) that meets at least 6 times a year. It is organised into **coordination and pooling areas** and project teams, in line with its main responsibilities.

The doctoral college is thus a source of proposals for:

- the development of the doctoral policy of the University of Paris-Saclay;
- the definition of shared objectives and priorities for doctoral training;
- the development of transversal projects for doctoral training;
- the development of processes and procedures to fulfil the missions given by the ministerial tutelles, implement the doctoral policy defined by the governance of the Université Paris Saclay, and carry out the projects.

The doctoral college is also in charge of the following coordination or mutualization axes:

- piloting and monitoring the implementation of the doctoral policy of the University of Paris-Saclay, as part of a continuous quality improvement process; monitoring and prospective;
- information system;
- coordination of the selection of doctoral candidates; actions for attractiveness;
- coordination of transverse doctoral training; preparation for the professional future of doctors;
- international cooperation in doctoral studies, implementation of international co-supervisory thesis agreements;
- communication and animation;
- monitoring the professional development of doctors, relations with socio-economic circles and companies to promote the doctorate of the University of Paris-Saclay and the careers of doctors;
- Legal deposit of the theses defended and notification of the theses in preparation.

b. ADDRESS AND CONTACT DETAILS

Address

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- [Danielle Martin-Tournier](#), Administrative and management assistant of the doctoral college, Coordinator of the "[quality approach](#)" axis
- [Bruno Bost](#), Coordinator of the "[Information System](#)" axis
- [Bruno Defude](#), Coordinator of the "[becoming a doctor's professional](#)" axis
- [Anne Marie Brass](#), Coordinator of the "[International cooperation in doctoral studies](#)" axis
- [Mireille Brenel](#), Coordinator of the "[Legal deposit of theses defended and reporting of theses in preparation](#)" axis
- [Sarah Martins](#), Communication and Events Officer (attached to the Communication Department)



C. THE BOARD OF THE DOCTORAL COLLEGE

The meetings

The doctoral college council meets in plenary session at least 6 times a year, upon convocation by the director of the doctoral college. [Consult online the agenda, agendas and supporting documents of the doctoral college board meetings](#)

Composition (July 2018)

The doctoral college board includes (cf: [UPSaclay's internal regulations](#)):

1. one representative from each member institution; the Director of the Doctoral College is an ex officio member of the Council of the Doctoral College and is considered to be a category 1 representative of the institutions.
2. a delegate from the academic council;
3. the directors of doctoral schools accredited or co-accredited by the University of Paris-Saclay;
4. ten doctoral students elected by their peers;
5. a representative of the pedagogical assistance staff attached to the Doctoral College;

The Chairman of the Board

The plenary or restricted board is chaired by the [President of the University of Paris-Saclay, Gilles Bloch](#), or, in his absence, by the Director of the doctoral college.

The representatives of the Members or Associates of the ComUE

- [Gilles Bloch, President of the University of Paris-Saclay](#)
- [Sylvie Pommier](#), Director of the Doctoral College - Université Paris Saclay
- [Christine Duvaux Ponter](#) - Agro ParisTech
- [Laurent Vigroux](#) - CEA
- [Bich-Lien Doan](#) - CentraleSupélec
- [Frédérique de Fornel](#) - CNRS
- [Vergé Thibaud](#) - ENSAE
- [Frederic Mazaleyrat](#) - ENS Paris-Saclay
- [Patrick Massin](#) - ENSTA ParisTech
- [Kristine de Valck](#) - HEC Paris
- [Emmanuel Ullmo](#) - IHES
- [Véronique Monnet](#) - INRA
- [Nicolas Anciaux](#) - INRIA
- [Laurence Parmantier](#) - INSERM
- [Jean-Jacques Greffet](#) - IOGS
- [Francis Dupoirieux](#) - ONERA
- [Alain Sibille](#) - Telecom ParisTech
- [Bruno Defude](#) - Telecom Sud Paris
- [Said Mammar](#) - UEVE
- [Etienne Augé](#) - University of Paris Sud
- [Jacques de Maillard](#) - UVSQ

The delegate of the academic council

- [Myriam Harry](#) - Academic Council of the University of Paris-Saclay

Directors of doctoral schools (or assistants for doctoral schools 127, 129 and 564)



- [Christine Le Scanff](#) - Doctoral school n°566 SSMMH | Sciences of sport, motor skills and human movement,
- [Jacqui Shykoff](#) - Doctoral school n°567 SdV | Plant sciences: from gene to ecosystem,
- [Michael Schumacher](#) - Doctoral school n°568 BIOSIGNE | Signals and integrative networks in biology
- [Christian Poüs](#) - Doctoral School n°569 ITFA | Therapeutic innovation: from the fundamental to the applied
- [Jean Bouyer](#) - Doctoral school n°570 EDSP | Public health
- [Christophe Colbeau-Justin](#) - Doctoral School n°571 2MIB | Chemical sciences: molecules, materials, instrumentation and biosystems
- [Jean-Jacques Greffet](#) - Doctoral school n°572 EDOM | Waves and subjects
- [François Hache](#) - Doctoral School n°573 Interface | Interfaces | Interfaces : interdisciplinary approaches / foundations, applications and innovation
- [Frédéric Paulin](#) - Doctoral school n°574 EDMH | Mathematics Hadamard
- [Eric Cassan](#) - Doctoral school n°575 EOBE | Physics and engineering | Electrons, Photons, Life sciences)
- [Elias Khan](#) - Doctoral school n°576 PHENIICS | Hadron particles energy and nucleus: instrumentation, image, cosmos and simulation
- [Pierre Capy](#) - Doctoral school n°577 SDSV | Structure and dynamics of living systems
- [Sandra Charreire Petit](#) - Doctoral school n°578 SHS | Human and social sciences
- [Benoît Goyeau](#) - Doctoral school n°579 Smemag | Mechanical and energy sciences, materials and geosciences
- [Nicole Bidoit-Tollu](#) - Doctoral school n°580 STIC | Information and communication sciences and technologies
- [Alexandre Pery](#) - Doctoral school n°581 ABIES | Agriculture, food, biology, environment and health
- [Martin Schlumberger](#) - Doctoral school n°582 CBMS | Cancerology | Biology - Medicine - Health
- [Matthieu Roy Barman](#) - Doctoral school n°129 SEIF | Environmental sciences of Ile-de-France
- [Alain Abergel](#) - Doctoral school n°127 AAIF | Astronomy and astrophysics of Ile-de-France
- [Claude Pasquier](#) - Doctoral school n°564 PIF | Physics of Ile-de-France

The elected representatives of doctoral candidates

List: [The research! A unit for Paris-Saclay](#) elected on July 1, 2018

- Holder: [Caroline ETIENNE](#), Alternate : [Scheherazade BENZERGA](#)
- Full member: [Pierre-Antoine VIGNERON](#), Alternate : [Olivier DORLIN](#)
- Titular: [Zeling ZHONG](#), Alternate : [Margaux BRANDON](#)
- Full member: [Arnaud FERRÉ](#), Alternate: [Ronan BRETEL](#)
- Full member: [Mélissa VINCENT](#), Alternate: [Maurane SIGOT](#)
- Titular: [Olivier VOREUX](#), Alternate : [Léon-Paul SCHAUB](#)
- Full member: [Eva BORAKIEWICZ](#), Alternate : [Ariane GAN TOMORROW](#)
- Titular: [Guillaume LACHAUSSÉE](#), Alternate : [Dory MERHY](#)
- Titular: [Suzanne LAM](#), Alternate: [Adèle PLAT](#)
- Holder: [Cirbaj DE SOUZA](#), Alternate : [Jean Michel BANTO](#)

The representative of the pedagogical assistance staff attached to the Doctoral College

- [Hamida MULLER](#) - University of Paris Saclay

d. MEANS



The mutualisation of the organisation of doctoral training activity was based on the mutualisation of the resources of member institutions: universities, grandes écoles and research organisations. This began on ¹ January 2016 and continues until 2020 in the context of a major transformation over several years, including:

- the ongoing relocation of several establishments, now to remote sites, which does not facilitate the complete pooling of activities;
- institutional developments; the great diversity of previous doctoral schools and the diversity between institutions, which means that the consideration of activities related to doctoral staff training and the distribution of doctoral costs between departments may still vary significantly from one institution to another;
- With the help of IDEX, in 2016 and 2017, which supported the development of the doctorate, the flagship diploma of the Université Paris-Saclay, and contributed to the financing of the transformation.
- the Université Paris-Saclay intends to respond to the 2019 PIA3 call for projects for university research schools and, if successful, use part of the funding to continue the transformation of doctoral training.

Each year a [budget guidance letter](#) is prepared by the doctoral college for the board of directors and widely distributed. It specifies the execution of the previous year's budget, in relation to previous projects, and the budget for the coming year, in relation to new projects, for the doctoral college and for the doctoral schools. It also specifies the distribution of each institution's contributions to the operating and training credits of doctoral schools and the doctoral college.

A first budget was approved on 9 December 2015 for the year **2016**, based on a detailed estimate of the costs and resources allocated by the institutions. The same methodology was used for the **2017** budget adopted by the Board of Directors of the Université Paris-Saclay on 14 December 2016, **on the** basis of the number of doctoral students, no longer estimated, but recorded for the academic year 2015-2016.

The 2018 budget was built on the basis of the number of doctoral students observed for the **2016-2017 academic year**, with a slight change in method and after a new inventory of the **human resources** allocated to the doctorate by all the partner institutions of the Paris-Saclay University for doctoral training.

Are integrated:

1. **Registration fees** collected by higher education institutions that register doctoral students;
2. **The human resources** allocated by the institutions and the EU Commission to doctoral training. These include the participation of their staff in doctoral schools and the doctoral college, serving all doctoral candidates, regardless of their enrolment institution (participation in doctoral school management teams, secretariats, etc.), but also the activity of their staff at the service of the doctoral students enrolled in the institution (doctoral schools, libraries, international service, etc.). These contributions from the institutions remain integrated into their budgets. However, they must be taken into account in order to correctly take into account the contributions of each institution in order to establish the distribution key for pooled credits between institutions.
3. **The shared operating and training credits** to be made available to the directors of doctoral schools to carry out the missions entrusted to them as closely as possible to doctoral students and research units.
4. **The pooled operating and training credits** to be set up for the **doctoral college** to carry out all the missions that will benefit from pooled funding at this level.

The cost of organising doctoral training alone, estimated in this way for all institutions, is around **€6 million**.

This amount typically represents **3% of the** estimated full cost of doctoral training (i.e. including the doctoral student's remuneration, the supervision of the doctoral student by his or her thesis director, the reception



in the research unit and the support provided by the various staff of the support services, doctoral schools and the doctoral college).

This amount should be seen in the context of the amount of registration fees collected by the registration institutions (approximately **€1.5 million**) and the shared operating and training funds allocated to doctoral schools and the doctoral college (approximately **€0.8 million**).

Doctoral school credits

These are provided by all universities and grandes écoles that enrol doctoral students and are included in their contribution to the COMUE.

For 2018, the doctoral schools have schematically planned to use the training and operating funds allocated to them as follows:

- **50%** is devoted to **collective training of doctoral** students in the field of doctoral school to strengthen their **scientific culture** and to provide them with an **international perspective**,
- **25%** is devoted to organizing activities or workshops that contribute to the development of doctoral students' **skills in the** field of the doctoral school (present your research work during the doctoral school days, prepare and present a poster...)
- **10%** is devoted to the functioning of the **Admission** Boards and to the **individual follow-up of** doctoral candidates,
- **10%** is devoted to the day-to-day running of the doctoral school,
- **5%** is devoted to prizes from doctoral schools (thesis prize and doctoral students' prize).

The estimate of the necessary appropriations was made on the basis of expenditure incurred during 2016-2017 and taking into account developments and projects for 2018.

In 2018, the allocated credits are **€458k**.

The operating and training credits of a doctoral school or a cluster of a doctoral school are entrusted to the institution responsible for its financial management. It is recommended that **35%** of doctoral school funds be earmarked for payroll, in order to be able to call on the services of teacher-researchers, overtime or individual contractors.

The distribution key for this amount among the doctoral schools has been modified for the 2018 budget, in accordance with the proposal made in the 2017 budget guidance text.

Doctoral College Credits

These are provided by all universities, grandes écoles and member organisations of the Université Paris-Saclay and are included in their contributions to the ComUE.

To determine the training and operating credits required for the doctoral college, the actions carried out at the doctoral college level have been individually costed (quality approach, information system (ADUM) and digital tools, becoming a doctor's professional, doctoral graduation ceremony, communication and animation, day-to-day operations).

In 2018, the allocated credits are **€327k**

When a joint action is organised by one institution on behalf of all, the necessary operating funds shall be entrusted to the institution taking charge of the action.

This is particularly the case for the "doctor career" training courses set up in 2016-2017. These make it possible to renew the principle of **doctoral students**, by organizing training courses dedicated to the preparation of a particular category of professional careers (R&D in companies, advice and expertise in



innovation, higher education and research, entrepreneurship, mediation and scientific communication professions). Each course is endowed with €20,000 annually from the doctoral college's budget.

Since 26 May 2016, doctoral schools have had a new obligation to train all doctoral students in research ethics and scientific integrity. The doctoral college created an entity responsible for organizing all actions relating to research ethics and scientific integrity: the [Council for Research Ethics and Scientific Integrity \(POLETHIS\)](#). It now has its own operating and training budget of €50,000 and the recruitment of full-time staff is planned for 2018 to provide assistance with the management and administrative follow-up of this entity.

Other transversal collective training courses remain proposed, organised and managed by the institutions, within the framework of mutualisation and coordination at doctoral college level.

Most of the recurrent resources needed for the day-to-day running of doctoral training are thus provided by the contribution of the member institutions of the EU Commission. IDEX and the EU have provided levers for transformation.

In particular:

- financial support has been provided by IDEX to help finance the organisational transformation of doctoral training and the functioning of the doctoral college (€400,000 spread over the two years 2016 and 2017),
- an excellence programme has been set up by IDEX to finance 30 interdisciplinary doctoral projects per year from 2012 to 2017, representing €3,150,000, the allocation of which is organised by the doctoral college,
- human resources, complementary to those of the institutions, are provided by the EUMC: the equivalent of 3ETP for the doctoral college and 1ETP for the ED SHS secretariat.

e. INTERNAL AND EXTERNAL COMMUNICATION TOOLS, INFORMATION SYSTEM

As the doctoral college was set up in particular to contribute to the visibility of doctoral students and doctors at the University of Paris-Saclay, communication naturally takes an important place in the general activity of the doctoral college.

Internal and external communication is based on four main tools: the information system, the website, the Sphinx platform for surveys and social networks, in particular the LinkedIn Doctoral Students & Alumni University Paris-Saclay group. In addition, many specific communication actions and events are organized with the communication department of the University of Paris-Saclay (doctoral day, CIFRE forum, graduation ceremony, press actions, etc.).

The information system

Since 2014, the University of Paris-Saclay has joined the Adum network (Unique and shared access to doctoral studies) and manages doctoral training activities thanks to the information system developed by the association Contact qui porte Adum.



The operating principles are as follows:

- Doctoral students enter their data in Adum. All the usual "forms" required for the various steps of registration, re-enrolment, training, follow-up, defense, etc. are personalized with the data entered by each doctoral student and can be printed from ADUM.
- These data, after being verified and validated during the signature circuit at registration, are then shared between the persons and departments concerned by the doctoral student's file, which each



have views on the files that concern them and have access or modification rights according to their functions. Each doctoral school has access to the digital files of the doctoral students enrolled in this doctoral school, each institution to the doctoral students whose enrolments it has operated. The doctoral college has access to all the data.

- Some data, after agreement and validation, are used and transferred to other information systems with more or less advanced interfacing degrees.
- Operations are automated.
- The system allows you to send emails to doctoral students, thesis directors, etc. It also allows queries to be made on the database to establish statistical reports and provide the information on enrolments and graduates required by MESRI (SISE, ED survey).
- Similar principles are applied to thesis subjects submitted by thesis directors, collective training courses opened by doctoral schools or colleges, or member institutions, etc.

The implementation of this new information system has been a very significant and structuring element in the transformation of the doctoral training at the University of Paris-Saclay. This has led to changes in the practices not only of doctoral schools, but also of the 14 school services and libraries concerned. Training has been provided by the association **Contact** to the staff of these services, but this has nevertheless required the doctoral college to make a major effort to support the deployment of the new system.

	Number of people	%
Strongly agree	58	12%
Somewhat agree	216	44%
Rather disagree	152	31%
Disagree at all	64	13%
All together	490	100%

Answer of doctoral students in 1st and 2nd year to the question "The application system is easy to use" in the annual survey of doctoral students conducted between December 2017 and January 2018.

Beforehand, it was necessary to harmonize the procedures for application, registration and re-registration, defence, legal deposit of theses as well as all the necessary administrative forms so that they could be implemented in Adum. This was carried out from September 2014 to May 2015 by several working groups (one group per process) involving directors of doctoral schools, doctoral students and administrative staff from the various departments concerned. Since then, the procedures, forms and functioning of the Adum system have been reviewed and improved at least on an annual basis, as part of the quality approach.

Several interfaces have been developed between Adum and other systems. Doctoral students are informed of the main uses that are made of the data available in Adum apart from the day-to-day management of doctoral training and communication by email with doctoral students that Adum allows. These uses are as follows:

Elaboration of the Diploma	Manufactured by the National Printing House
Legal deposit of theses and online distribution and reporting of theses in preparation	Theses.fr portal in French and English European portal Dart Europe Automated extractions for websites on the perimeters of the University of Paris-Saclay , member and associate institutions, doctoral schools, research units...



Surveys, assessments and key figures for the valorisation of the doctorate	Responses to ministerial surveys that make it possible to establish the state of higher education on an annual basis (SISE, SIREDO) Key figures from the University of Paris-Saclay, doctoral schools and member and associate institutions Email list for individual surveys Preparation of the doctoral school budget
Dissemination of support	Announcements of upcoming defences for the entire University of Paris-Saclay, for each doctoral school and each thesis preparation institution.
Bibliometrics	Extraction from the lists of doctoral candidates and doctors belonging to the various research units to identify the portion of UPSaclay's scientific production that is the result of doctoral research.
Directory of doctoral students and doctors	Directory of doctoral students at the University of Paris Saclay
Valuation of international cooperation	Map of international thesis cotutelle agreements,

The implementation of this new system in 2015 was not very well received by doctoral students and their thesis directors, who could not be supported as it was with staff from doctoral schools, schools and libraries. But they were generally accommodating and did their best to ensure that everything went well, in spring 2015 for the first applications, then in autumn 2015 for the first registrations and support. The changes made in the first year mainly concerned the configuration of the system and the interface. In 2016, major changes had to be made again, following the publication of the decree of 25 May 2016, in particular to implement the individual training agreement and the interface for entering monitoring committees. After these two years of start-up, the system has now entered a phase of stability and the changes made can now focus on improving the user experience.

The LinkedIn Doctoral & Alumni Group University of Paris-Saclay

The "[Doctoral Students & Alumni - Université Paris-Saclay](#)" group was created to bring together doctoral students and doctors from the Université Paris-Saclay. This is a space dedicated to the discussion and sharing of these members around the news of the University of Paris-Saclay. This group was created on 21 September 2016 by [Arnaud Ferré](#) (elected representative of doctoral students on the board of the doctoral college) and has 2460 members at the end of April 2018. Membership is voluntary.

This group is used by the doctoral college to disseminate all the information that may be of interest to doctoral students and doctors.

The essential information that must reach doctoral students or doctors is always sent to them by e-mail.

The group is also used by doctoral students and doctors to communicate with each other and disseminate information about the events they organize. Job offers are also relayed through this channel.

The website

The University of Paris-Saclay has a website, in French and English, with a content and rights management system allowing the doctoral college and each doctoral school to create or modify its web pages. They can



also create news and share it on social networks. For the vast majority of doctoral schools, their web pages on the Université Paris-Saclay website are their main communication tool on the Internet.

In addition, member institutions, at the central level and/or at the level of their components, often also manage web pages dedicated to the doctorate. First, to provide information on the functioning of school services or institutional libraries. But also, because the architectures of the member institutions' websites were designed before the creation of the Université Paris-Saclay and each one included a space dedicated to the doctorate.

The [doctoral charter](#), the [internal regulations](#), all [reference texts](#), procedures and forms for special cases that are not managed by Adum, and more generally [information and news of general utility](#), are made available to all on the website of the Université Paris-Saclay. The doctoral college is responsible for maintaining this documentation. All other website managers (doctoral schools, member institutions, components) are asked to rely on this single source and to ensure that they do not replicate or adapt these documents but simply refer from their own web pages to the documents and web pages managed by the doctoral college.

Despite these precautions, information that has sometimes become obsolete (old thesis or procedure charters, invalid contacts) or even contradictory remains on the various websites of the institutions. This has been reported as a source of confusion, on a **recurrent basis** in satisfaction surveys, by doctoral students and their thesis directors. Since 2015, much progress has been made in this area, but progress is much slower than was the case for the implementation of the information system. The updating and consistency of all web pages (doctoral college, doctoral schools, institutions, components, etc.) is a "continuous" need and would require more time than today. An additional post has been requested from the ComUE for the doctoral college to provide continuous support for all communication tasks.

Despite this difficulty in keeping up to date, the website is the basic communication tool. The consultation of the doctoral college and doctoral school web pages on the Université Paris-Saclay website is gradually developing and doctoral students are relatively satisfied with it.

The two tables below summarize the responses of doctoral students on their use of the website in the "satisfaction" survey conducted between mid-December 2017 and mid-January 2018:

To find out more about the doctorate, consult yourself?

	Never ever	Rarely does it happen	Occasionally	Quite often	Very often	nb answers
The "doctoral" web pages of the Université Paris-Saclay website	22,8%	30,1%	31,5%	12,8%	2,8%	815
The website of your doctoral school	11,8%	22,3%	37,5%	22,6%	5,8%	813
The "doctoral" web pages of your institution's website	31,1%	29%	28,4%	9,5%	2%	810
Your laboratory's website	28,1%	23,2%	25,4%	16,7%	6,6%	807
From other sources	26,8%	24,3%	28,4%	12,9%	7,6%	775
All together	24,1%	25,8%	30,3%	14,9%	4,9%	4020

Are you satisfied with it, do you find the information you are looking for?

	★	★★	★★★	★★★★	★★★★★	nb
The "doctoral" web pages of the Université Paris-Saclay website	10,7%	14,6%	34,2%	29,9%	10,6%	643



The website of your doctoral school	11,1%	13,3%	28,3%	31,9%	15,3%	692
The "doctoral" web pages of your institution's website	17%	16,8%	37,2%	22,1%	7%	589
Your laboratory's website	18,2%	17,5%	28,5%	22,3%	13,4%	610
From other sources	17,2%	12,2%	32,8%	22,2%	15,6%	482
All together	24,1%	15%	32,1%	26,1%	12,3%	3016

To evaluate the progress of the use of the Paris-Saclay University web pages, we can also use the progress of the research on the theme "Paris-Saclay University" on Google Trends. The number of searches on the website has been increasing since spring 2015, when the first admissions of master's and doctoral students began. On this graph, the annual cycle, linked to the rhythm of university activity (applications, registrations, results or support) is very marked, clearly showing the importance of the website for students and doctoral candidates.

The tools for monitoring the use of web pages show that the most frequently consulted "doctoral" pages are the following pages: "offer of thesis subjects" (15.2% of visits), "registration and re-registration" (8.5% of visits), "reference texts" (6.4% of visits), "special and exceptional cases" (4.5% of visits) and "defend your thesis" (3.1% of visits).

Notes and the Sphinx platform

The University of Paris-Saclay has acquired the Sphinx survey software and servers to host and consult survey data online. Two members of the doctoral college have been trained in the use of Sphinx. This tool allows us to carry out annual surveys among doctoral students (5400 people), thesis directors (about 3000 people) and co-supervisors registered in the Adum database, as well as among graduates.

These surveys, as well as the statistical assessments carried out on the basis of Adum, are used to obtain feedback on the mechanisms, actions or projects of the doctoral college and doctoral schools (case of the monitoring committees). Briefing notes are produced and distributed to those who responded to the survey, via Adum's mailing, and on the LinkedIn group. They are addressed to the various bodies of the Université Paris-Saclay to which the doctoral college reports on its action (doctoral college council, members' council, academic council, board of directors). They are also available on the website in the [surveys and assessments](#) section.

- 2018

 - [Notes - 1 - Provisional distribution of doctoral contracts between doctoral schools and terms of competition](#)
 - [Notes - 2 - Becoming a doctor's professional, first results of the 2018 survey](#)
 - [Notes - 3 - Monitoring committees, the 2018 survey](#)
 - [Notes - 4 - Review of the 2018 competitions](#)
 - [Notes - 5 - Dissemination of theses and their legal deposit, anti-plagiarism](#)
 - [Etc.](#)
- 2017

 - [Notes - 1 - Doctoral students' monitoring committees](#)
 - [Notes - 2 - Research Ethics and Scientific Integrity](#)
 - [Notes - 3 - Review of the 2017 competitions](#)
 - [Notes - 4 - Year 2016-2017 A statistical review](#)
 - [Grades - 5 - Annual satisfaction survey](#)
 - [Notes - 6 - 2017 Activity Report and plans for 2018, management review](#)



- [Budget guidance letter 2018, budget balance sheet 2017](#)

	Doct. % Doct.	DT % %
Very dissatisfied	2%	2%
Dissatisfied	2%	3%
No opinion	47%	50%
Satisfied	33%	33%
Very satisfied	17%	12%
Number of people	811	723

Annual "satisfaction" survey 2018 among doctoral students and their thesis directors, answer to the question "your level of satisfaction with the production and distribution of notes (survey reports, statistical studies) on the UPSaclay doctorate (ISO 9001 framework)".

These scores may attract more or less interest depending on their themes, but they are part of the mechanisms set up by the doctoral college, whose survey respondents are rather satisfied. The notes that generated the most feedback and comments were those on doctoral contracts and monitoring committees.

Press review

Finally, the Communication Department provides support to the doctoral college to communicate in the press about the doctorate and the main activities of the doctoral college. 9 different themes in 2 years were covered in the press. The objective is to strengthen the attractiveness of the doctorate and particularly that of the University of Paris-Saclay.

The survey on the employment of doctors

- 22 – mai-2018, [New app for PhD students reveals what life after graduation is really like](#), BDaily news (UK)
- 23-mai-2018, [New app for PhD students reveals what life after graduation is really like](#), Global banking and Finance Review,
- 24-Apr-2018, [La thèse : un antidote au chômage \(sous certaines conditions\)](#), Les Echos (France)
- 26-Apr-2018, [Paris-Saclay University publishes its 1st survey on the employment of doctors and prepares the creation of graduate schools](#), AEF (France)

The place of the doctorate today

- September 2018, [La place du doctorat aujourd'hui](#), Fenêtres ouvertes sur la gestion, Xerfi Canal

SHS research for public action

- 19-Mar-2017, [Engaging doctoral projects in partnership between academic research and public action](#), slate.fr (France)

Admission and recruitment of doctoral candidates

- 21-Jul-2017, [University of Paris-Saclay: 1,300 more doctoral students for the institution](#), MCE Ma Chaîne Etudiante,
- 13-Nov-2018, [The Paris-Saclay University doctoral competition in a few figures](#), the World of Grandes Ecoles and Universities,
- 05-Dec-2018, [Comment l'Université Paris-Saclay a généralisé le recrutement de ses doctorants sur concours](#), Newstank Higher Ed & Research,

Creation of the Polethis



- 12-fév-2018, [The Morning Risk Report: Baking Ethics and Integrity Into Research](#), The Wall Street Journal (USA)
- 19-janv-2018, [French university scrutinises ethics of AI research](#), timeshighereducation.com (Royaume-Uni)
- 3-janv-2018, [AI causes new challenges for research ethics at universities](#), BDaily news (UK)
- 3-janv-2018, [AI causes new challenges for research ethics at universities](#), FE news (UK)
- 3-janv-2018, [AI causes new challenges for research ethics at universities](#), Sync ni (Irlande)
- 3-janv-2018, [AI causes new challenges for research ethics at universities](#), Irish tech news (Irlande)
- 3-janv-2018, [AI causes new challenges for research ethics at universities](#), Information age (UK)
- 3-janv-2018, [AI causes new challenges for research ethics at universities](#), Education Dive (USA)
- 12-Dec-2017, [Paris-Saclay University sets up a council for research ethics](#), Le Parisien (France)

My thesis in 180 seconds

- May 2-May-2017, [Kelly Pasquon, finalist of the "My thesis in 180 seconds" competition at the University of Paris-Saclay](#), France 3(France)
- 2-May-2017, [My thesis in 180 seconds: with them, science is easy](#), Le Parisien (France)
- 1-May-2017, [180 seconds to pitch his thesis on Martian climatic activities... and cardboard](#), L'Usine Nouvelle (France)
- 27-Apr-2017, [My thesis in 180 seconds: follow the final at the University of Paris-Saclay!](#) France 3 (France)
- 23-March-2018, [Paris-Saclay: the doctoral students presented their thesis in... 180 seconds chrono](#), Le Parisien (France)

Doctoral training: the "doctoral career" paths

- 22-Feb-2017, [What career for the 5,000 doctoral students at Paris Saclay?](#) L'Usine Nouvelle (France)

Theses: languages of writing and distribution in open archives

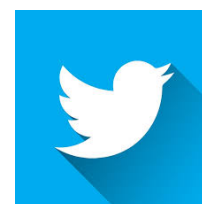
- 6-nov-2016, [Does French lose ground in doctoral theses?](#) The Conversation (France)
- 9-nov-2016, [Does French lose ground in doctoral theses?](#) EducPro by l'Etudiant (France)

The doctoral graduation ceremony

- 19-Juil-2016, [Doctoral Graduation Ceremony, why this enthusiasm?](#) The Conversation (France)
- July 13th-2016, [At the university, togas and toques are once again released](#), Le Monde (France)

Other communication actions

Other communication actions have been launched, with the support or under the direction of the Communication Department, such as, for example, the production of brochures, in French and English, to present the Université Paris-Saclay's doctoral training offer at the various exhibitions or forums, the production of posters and kakemonos, or the organization of events and activities, described in more detail in other sections of this report.



A **Twitter feed** has also been set up for news from the doctoral college or more generally related to the doctorate and to answer questions from doctoral students and students who use this means of communication ([@PhD_UPSaclay](#)).

f. RELATIONSHIPS AND PARTNERSHIPS

Participation in networks



The doctoral college of the University of Paris-Saclay is a member of the [national network of doctoral colleges \(RNCD\)](#) and participates in its conferences. The Director of the Doctoral College is the Secretary of the NCDN Office. This network includes about twenty doctoral colleges that ensure the organization of doctoral training for nearly 80% of doctoral students in France. This network is extremely useful in that it makes it possible to monitor at the national level, share information and experiences and, above all, to speak with a single voice at the national level on doctoral topics, particularly with the Ministry.

The doctoral college also works in partnership (informal but active) with the following [doctoral colleges in Ile de France](#): PSL, USPC and Sorbonne Universities. We organize a meeting of the directors and administrative heads of these doctoral colleges about every two months to discuss current topics and common issues, including those related to the doctoral schools that we have in co-accreditation.

The doctoral college of the University of Paris-Saclay participates in the conferences of the [Council of Doctoral Education - European University Association \(EUA-CDE\)](#) and monitors the work of the North American [Council of Graduate Schools](#). The EUA-CDE brings about the same added value at the European level as the RNCD at the national level, with the possibility of meeting foreign partners to respond to calls for European projects in the field of training. A first attempt was made in 2017 (participation in the submission of a SWAFS project on the training of trainers in scientific integrity). This attempt has not been successful, but the EUA-CDE provides an appropriate framework for developing such projects in the future.

The doctoral college of the University of Paris-Saclay is also a member of the [Adum network](#) and has been participating in the **Adum** Days since 2015, particularly in the person of the coordinator of the "information system" axis. The 2016 Adum Days were organized on the Saclay plateau. Participating in the Adum network allows us to offer new functionalities, discover new modules and make the best use of this system.

The doctoral college is a member of the [ABES network](#) and the coordinator of the axis "Legal deposit of theses defended and reporting of theses in preparation" participates whenever possible in **ABES** days or webinars. Participating in the ABES network makes it possible to make the most of the offer of the Bibliographic Agency for Higher Education, the coordinator of the axis, by then making the 14 librarians of the institutions' libraries benefit.

The University of Paris-Saclay is a member of **ANRT (CIFRE)**. The doctoral college participates in general assemblies and various events organized by ANRT.

With the other doctoral colleges in Ile de France, the doctoral college of the University of Paris-Saclay also has a partnership with [PhD Talent](#), to organize meetings between companies and doctoral students as part of the "[PhD Talent Career Fair](#)" Forum.

Committees and associations

The director of the doctoral college is president in 2017-2018 of the [national Bachelor-Master-Doctorate monitoring committee](#) and of the doctoral commission of this committee (for a period of 3 years from June 2017), and, in this capacity, has contributed in particular to the work on the doctoral skills reference framework.

She is also a member of the board of directors of **ABG** (Association Bernard Grégory) and secretary of the association's board.

The director of the doctoral college is one of the directors of the IDEX/ComUE and as such participates in the [management offices of the Université Paris-Saclay](#) on Monday mornings and, whenever useful, in the councils of the central authorities of the Université Paris-Saclay (members' council, academic council, board of directors).



Role of the doctoral college in the operation of doctoral schools

a. NATURE OF THE PARTNERSHIP BETWEEN THE COLLEGE AND DOCTORAL SCHOOLS,

The doctoral college council is the body where all orientations, projects and actions, rules and procedures are discussed collectively as **they apply to all**.

This is the case of the doctoral charter, the model individual training agreement, the model international co-supervisory thesis agreement, the rules of procedure of the doctoral college, etc.

As far as the **doctoral charter is concerned**, a first charter was adopted at the end of 2015. It was then revised in 2016 to arrive at the [charter currently in force](#). The doctoral charter of the Université Paris-Saclay was to be brought into line with the new decree on doctoral studies, which came into force on 1 September 2016. In addition, when the 1st charter was adopted, the Academic Council wanted an assessment of the application of the doctoral charter to be carried out and a revision of the doctoral charter to be undertaken, following this assessment. The doctoral college conducted a survey of doctoral students and thesis directors, which largely confirmed the need for a revision of the doctoral charter, both in terms of content and form. Even if the consultation had been very broad for the adoption, in 2015, of the 1st charter, the University of Paris-Saclay did not have, at the time, the necessary means to conduct a direct consultation with the approximately 10,000 people concerned (doctoral students, thesis directors, etc.). The implementation of the common information system has given us the means to extend the scope of this consultation to all persons registered in the Adum database. This consultation was also an opportunity to involve doctoral students and their supervisors in the reflection on "good practices" in doctoral training.

The [charter currently in force](#) was then adopted by the Board of Directors of the Université Paris-Saclay on 21 September 2016, after a favourable opinion from the Academic Council of the Université Paris-Saclay on 20 September 2016, after a unanimous favourable opinion from the Council of Members and the Council of the Doctoral College of the Université Paris-Saclay and after extensive consultation with doctoral candidates, thesis directors and co-supervisors.

The new doctoral charter specifies the roles and responsibilities of the doctoral student's individual monitoring committee. It also places greater emphasis on research ethics and scientific integrity and on the prevention of discrimination and harassment and further clarifies how mediation can be used in the event of conflict. It is supplemented by the internal regulations of the doctoral college and by a model individual training agreement, made mandatory by the decree of 25 May 2016 and adopted pursuant to the doctoral charter. The [internal rules of the doctoral college](#) have been adopted under the same conditions as the doctoral charter and specify what applies to all and what can or must be specified in the internal rules of each doctoral school.

b. RECRUITMENT POLICY FOR DOCTORAL CANDIDATES

A common admission policy

One of the most transforming achievements of the Université Paris-Saclay has been the implementation, since spring 2015, of a unified doctoral recruitment policy applicable to all applications, whether for funding managed by doctoral schools (competitions) or other situations ([see the doctoral charter](#) and [internal regulations of the doctoral college](#) and the [joint admission procedure](#)).

While the general principles are common to all doctoral schools, each doctoral school has its own specificities. For example, the number of doctoral candidates that can be submitted each year by the same thesis director is not the same in each doctoral school. These terms and conditions are voted in the doctoral school councils and announced before each recruitment campaign.



The implementation of this policy is monitored and has been the subject of annual reports since the summer of 2015 on the results of recruitment operations. These reports are submitted to the authorities of the University of Paris-Saclay and distributed on the [website](#) and by e-mail to all doctoral candidates and thesis directors.

A common policy for the distribution of doctoral contracts

Since January 2018, as part of a human resources policy defined and supported jointly by the Université Paris-Saclay and its members, the board of the doctoral college has been drawing up, at the very beginning of the calendar year, a reasoned proposal for the provisional distribution of the doctoral contracts of member institutions among the doctoral schools.

This is the subject of an advisory opinion from the board of the doctoral college and is then presented to the board of members of the Université Paris-Saclay, where each of the heads of the institutions concerned are represented, before being presented to the authorities of these institutions competent for the use of their payroll. It is then widely distributed [on the website](#) and by e-mail to all potential thesis directors, which makes it possible to remind everyone of the principles set out in the [European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers to which the Paris-Saclay University adhered on 17 July 2015](#), as well as in the [Doctoral Charter of the Paris Saclay University](#).

The [doctoral charter](#) thus specifies that the member and associate institutions of the University of Paris-Saclay:

- collectively organise a recruitment of doctoral candidates that is transparent, open, equitable and conducted in accordance with internationally recognised principles, in particular those set out in the [European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers](#);
- seek excellence and encourage originality and scientific risk-taking and the international and interdisciplinary openness of the doctoral projects involved;

Doctoral School Awards

To encourage scientific risk-taking, excellence and interdisciplinarity and to promote doctoral students and doctors, a [doctoral school prize](#) policy was implemented in 2016 at the Université Paris Saclay.

Raising awareness among admission committees or panels

The [doctoral charter](#) also specifies the role of admission committees and panels, including:

"The doctoral admission committee or jury shall assess each candidate's research skills, understanding of the innovative nature of his or her research subject, ability to situate it in the international scientific context and exposure qualities. The doctoral admission committee or jury shall decide on the candidate's ability to carry out his or her doctoral project under the conditions laid down for its conduct, in particular the host research unit or team and the direction of the doctoral project.

Representation of the University Paris-Saclay in fairs or forums dedicated to the recruitment of doctoral candidates

With the support of the International Relations, Corporate Relations and Communication Departments of the University of Paris-Saclay, the teams of the doctoral schools and the doctoral college coordinate their efforts to organize or participate in recruitment fairs in France and abroad to increase the visibility and attractiveness of our doctoral courses:



- participation in a forum to raise awareness among SMEs and ETIs of the CIFRE scheme organised by the [Essonne Développement](#) departmental agency (2018) with the support of several professional organisations,
- organisation of a [doctoral day](#) in Orsay on 3 December 2016 and then on 9 December 2017, to inform students and students of the grandes écoles about the doctorate and how to access it,
- holding a UPSaclay stand at the [CIFRE forum at the](#) Cité internationale in Paris (in 2015, 2016, 2017 and 2018),
- held an UPSaclay booth at the [MIT Career Fair](#) in Boston (2017 and 2018) and visited universities.
- stand at PhD Days in China (2017), and meetings with Chinese universities
- interventions during the reception day for CSC scholars organized by the Chinese Embassy in France (2016 and 2017),
- participation in a doctoral tour in Chile (2017),
- participation in a doctoral forum in Mexico (2017).

c. IDEX INTERDISCIPLINARY DOCTORAL INITIATIVES PROGRAM

From 2012 to 2017, IDEX Paris-Saclay funded a [program of 30 doctoral contracts per year](#) to initiate doctoral projects on interdisciplinary topics.

This program, initially managed by the FCS, has been managed by the doctoral college of Paris Saclay University since 2015. Subjects are first selected, without information on any candidates already identified, by priority axis juries that assess the scientific quality and originality of the projects, their inclusion in the call axes and the interdisciplinary nature of the project.

Candidates are auditioned and evaluated by the doctoral schools. The board of the doctoral college holds the closing meeting of the competition and proposes the eligibility list. The initiative is open to all teams within the scientific scope of IDEX Paris-Saclay, under the sole conditions of demonstrated scientific quality and interdisciplinarity.

An [interdisciplinary thematic school](#) was organized from 4 to 8 April 2016 by the doctoral college for the training of all doctoral students recruited on the programme. The objectives of the Interdisciplinary School were:

- to follow the work of the 90 doctoral students of the Paris-Saclay Interdisciplinary Doctoral Initiative,
- to reflect and debate on the major issues related to research, training and the professional future of doctoral students,
- to offer testimonies of personalities who have been confronted in their professional lives with the challenges posed by the increasing complexity of our society.

d. INTERNATIONAL OPENING

Framework agreements

Several framework agreements have been set up with foreign universities to facilitate exchanges of students, doctoral candidates and researchers. These agreements are established by the International Relations Department of the Université Paris-Saclay. When the agreements include a doctoral component, the "international" component of the doctoral college participates in the preparation of the agreements and in exchanges with foreign delegations. The [map of international agreements](#), currently in force, can be consulted on the website of the University of Paris-Saclay.

Individual agreements of international thesis cotutelles



Individual agreements are managed by the doctoral college. The model individual agreement for an international thesis co-supervisor was established at the end of 2014 by a working group that included project leaders from doctoral schools, representatives of institutions and a lawyer. This model was then gradually improved and translated into several languages (English, Spanish, Italian).

A [dematerialized interface has been set up](#) to encourage and facilitate the implementation of individual international thesis cotutelle agreements and amendments to these agreements, help thesis directors to specify their projects and ensure that the [partnership conditions envisaged will allow the](#) thesis to [proceed smoothly](#).

Thesis Start Year	In international cotutelle			% of doctoral students in cotutelle among those enrolled in 2017-2018
	no	yes	All together	
2017-2018	1167	114	1281	8,9%
2016-2017	1233	91	1324	6,9%
2015-2016	1084	76	1160	6,6%

The activity of writing/negotiating these agreements has been re-organized to make it more effective, in particular by mobilizing a full-time person on this activity at the doctoral college level and automating several tasks that facilitate the progress of files and the exchange of information. It will still take a few more years to see the effect of these changes on the theses defended, but a slight increase in the number of students enrolled in an international cotutelle can already be noted among those enrolled in 2017-2018 according to their year of 1st enrolment in doctoral studies.

European label

The Paris-Saclay University awards the ["European Doctorate" label](#). This label allows doctoral students to enhance a European research experience during the preparation of their thesis and can constitute, by its flexibility, an interesting alternative to international thesis co-supervisors. However, the device remains relatively unknown and little used.

Monitoring of internationalization

Finally, the flows of foreign students, both incoming and outgoing, are monitored during the [statistical assessments](#) carried out each year, in particular, the proportion of foreign candidates is monitored at the various stages of the selection process (submission of applications, invitation to auditions, main list candidates).

e. QUALITY APPROACH

Why? Why?

It was chosen to rely on a [continuous quality improvement approach \(ISO 9001-2015 standard\)](#) for the [quality management of](#) doctoral training activities within the University of Paris-Saclay in order to:

- to guarantee the quality of the information disseminated (statistics on the situation of doctoral candidates and doctors) and the monitoring,
- to clarify the missions and responsibilities of each person,
- to guarantee a certain homogeneity of practices, beyond the variety of structures,



- and to ensure a real **cohesion and convergence of the** whole through the management of improvement actions.

How? How?

The doctoral college council devotes two of its six annual meetings to the quality process to review the surveys and the general functioning and actions undertaken, and to decide on the various projects and actions for improvement. The operational missions of the quality axis of the doctoral college are as follows:

- Organization of annual audits of internal and external doctoral schools and colleges (by [Bureau Veritas](#)); Coordination of HCERES evaluation; Organization and facilitation of dedicated meetings of the doctoral college council and steering and quality monitoring committees;
- Implementation of [harmonised and transparent processes and procedures](#); Training and support for staff and all stakeholders in these procedures and processes;
- [Management and dissemination of reference documents](#);
- Implementation and [monitoring of indicators, production of statistical reports](#); Identification of risks and recurring or systemic dysfunctions and proposals for corrective actions, in particular via the [register of significant facts](#);
- Organisation of [surveys](#) among doctoral students, thesis directors and doctors; drafting of summary notes.

Role of the doctoral college in the supervision and training of doctoral students

a. COMMON FRAMEWORK POLICY

The doctoral charter

The [doctoral charter](#), which was adopted by all the bodies of the University of Paris-Saclay after extensive consultation, states that:

*"The thesis director has the following roles and responsibilities: ...] in order to **guarantee its availability**, limit to **five** the number of doctoral students who are simultaneously under its control and responsibility, unless otherwise specified by the doctoral school lowering this limit or unless otherwise agreed; inform each doctoral student of the number of doctoral students who are also under its control and responsibility".*

It also states that *"The doctoral student is placed under the **control and responsibility** of his or her thesis director. For each academic year, this responsibility is carried by **one thesis director and one only**. This thesis director is the only one who signs, as thesis director, the administrative acts associated with the doctoral training at the University of Paris-Saclay.*

*The thesis director is responsible for the **scientific direction of the doctoral student's** doctoral project. This responsibility may be carried out jointly by the thesis director and a **co-director**. **Co-supervisors** can also contribute to the scientific supervision of the doctoral student. »*

The internal rules of the doctoral college and those of the doctoral schools

The [internal regulations of the doctoral college](#) specify the procedures for applying the principles set out in the charter, with the objective that decisions on exceptional or special cases be taken on the basis of the examination of each individual situation by the doctoral school council:



"IX.2.1 Personalized supervision: A thesis director may supervise a maximum of **five doctoral candidates** to ensure their availability.

A number of **less than five doctoral candidates** may be decided, for a particular field of study or a particular doctoral school, on a proposal from the doctoral school council. The maximum number of supervised doctoral students is then specified in the **doctoral school's internal regulations**.

In the event of co-directorships, international co-directorships or exceptional situations, the doctoral school board may grant individual exceptions to this rule, after a prior examination of each individual situation, by the doctoral school board or by a committee set up by it, in accordance with the procedures defined in the doctoral school's internal regulations.

The policy for awarding doctoral contracts

Finally, for the **award of doctoral contracts**, the juries of the doctoral schools are called upon to take into account the availability of the thesis director and the conditions of reception in the research unit. In particular, it is specified that "an application will not be **eligible** if the prospective thesis director is **placed in a derogation situation on the number of doctoral candidates or the supervision rate set by the doctoral school** by obtaining a new contract".

Monitoring the implementation of this framework policy

The management ratios are monitored during the annual statistical reviews, via the Adum information system, in order to ensure that derogations (i.e. over 5) remain exceptional.

Statistics on the conditions under which doctoral students at the University of Paris-Saclay are supervised have been compiled on the basis of information on doctoral students enrolled in 2015-2016 and 2016-2017. They therefore do not take into account researchers and teacher-researchers at the site, who hold an authorization to conduct research, **but who do not currently supervise doctoral students**.

In the information system, the following are accounted for separately

- 1) The number **N of** thesis directions assumed by each thesis director. For the same thesis supervisor, N is integer, because **1 doctoral student counts for 1**
- 2) The share that each thesis director takes in the supervision of each of his doctoral students when the scientific direction of the thesis is the subject of a co-direction or co-supervision (**supervision ratio Q expressed in %**). For each doctoral student, the sum of the supervision units of his thesis director and his co-directors and co-supervisors must be equal to 100%.

In 2015, we enrolled in doctoral studies at the University of Paris-Saclay, all doctoral candidates who were previously enrolled in member institutions. The University of Paris-Saclay therefore only had a role on the student-teacher ratios for new enrolments, from the start of the academic year in September 2016.

In 2016-2017, **73.5% of doctoral students** are supervised by a thesis director who supervises **1 to 3 doctoral students** simultaneously and **91.9%** by a thesis director who supervises **1 to 5 doctoral students** simultaneously. **8.1% of doctoral students** are supervised by a thesis director who supervises **more than 5 doctoral students** (derogation situation). The proportion of derogations did not change significantly between the two academic years.

of doctoral students supervised by a thesis director who simultaneously

leads	2015-2016	2016-2017
1 doctoral student	35,6 %	29,7 %



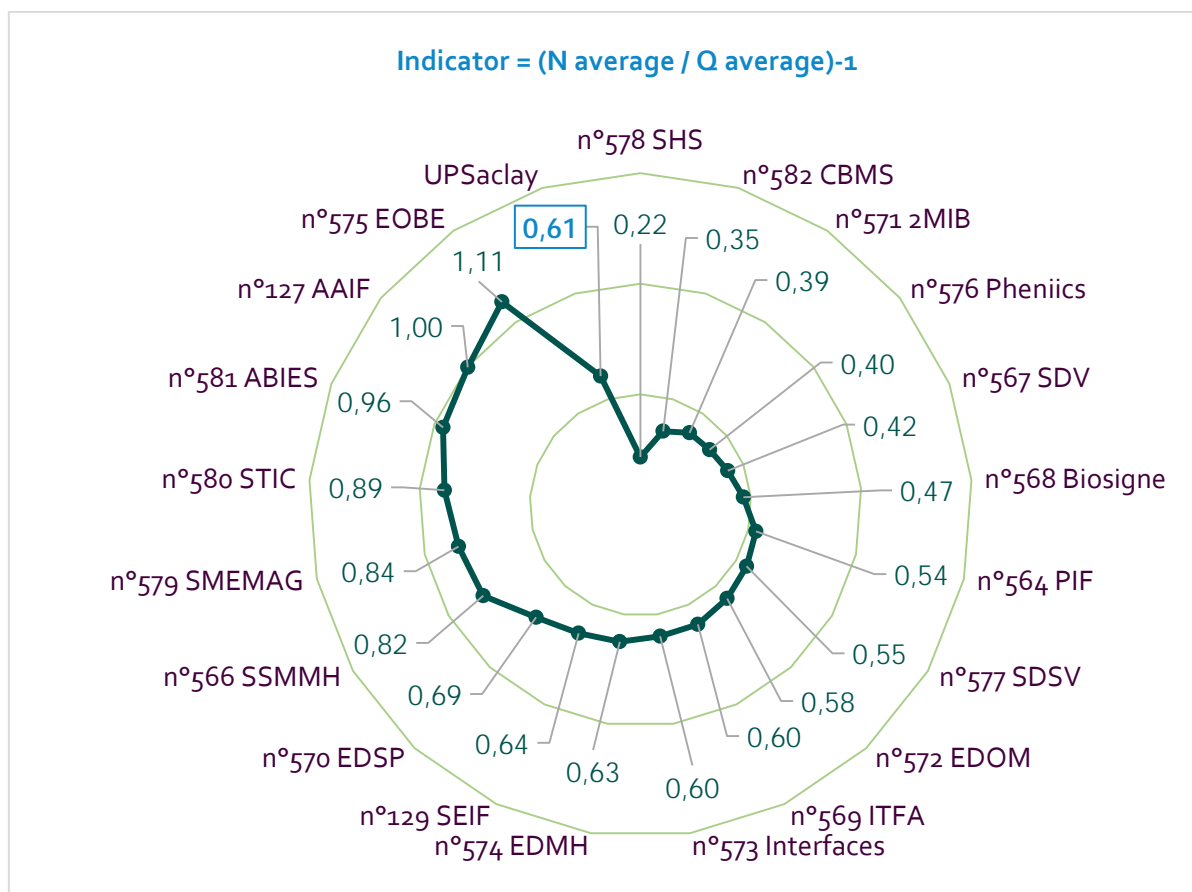
2 PhD students	26,7 %	26,8 %
3 PhD students	15,9 %	17,0 %
4 PhD students	8,2 %	11,9 %
5 PhD students	5,4 %	6,5 %
from 1 to 5 doctoral students	91,8 %	91,9 %
6 PhD students	3,2 %	3,6 %
7 PhD students	2,2 %	2,6 %
8 PhD students	2,4 %	1,3 %
9 PhD students	0,4 %	0,6 %
10 PhD students	0,0 %	1,2 %
11 PhD students	0,0 %	0,4 %
more than 5 doctoral students	8,2 %	8,1 %

Percentage of doctoral students who are supervised by a thesis director simultaneously supervising a given number of doctoral students.

Thesis directors who supervise at least one doctoral student, supervise an average of **1.87 doctoral students** in 2016-2017. This rate is slightly higher than in 2015-2016, when they headed an average of 1.71 doctoral students. These rates vary from 1.11 to 2.47 doctoral candidates per thesis supervisor, depending on the doctoral school in question. The average supervision ratio is **Q=116%** per thesis supervisor.

We have constructed an indicator of co-supervision practices calculated as the ratio between the average number **N** of doctoral students supervised by each thesis director and the average number **Q** of supervisors in each doctoral school, **minus 1**. when the average number of supervisors is equal to the average number of doctoral students per thesis director, the co-supervision is non-existent and the indicator is then zero.





Prevalence of thesis co-supervision or co-supervision practices determined as the ratio between the average number **N of doctoral students per thesis director and the average ratio **Q** of supervision of these same thesis directors in each doctoral school, minus 1.**

A high value of this indicator is observed for thematic doctoral schools that are often also **interdisciplinary** (ABIES, EDSP, SSMMH). It may also be the result of a policy of promoting co-supervision and co-supervisors, in particular to **encourage the transition of HDR** (EOBE, STIC). The doctoral school or co-direction or co-supervision is the most practiced is EOBÉ and it where the practice is the least practiced is the SHS doctoral school.

Doctoral school	Average number of doctoral students per thesis supervisor (DT)		Quota Average Q of DTs' management
	2015-2016	2016-2017	2016-2017
n°127: astronomy and astrophysics of Ile-de-France (AAIF)	1,09	1,11	56%
n°576 : hadron particles energy and nucleus : instrumentation, image, cosmos and simulation (Pheniics)	1,20	1,27	91%
n°577: structure and dynamics of living systems (SDSV)	1,24	1,37	88%
n°564: physics of the Ile-de-France region (PIF)	1,20	1,39	91%
n°568: Signals and integrative networks in biology (Biosigne)	1,41	1,43	97%
n°567 : plant sciences: from gene to ecosystem (SDV)	1,33	1,47	103%
n°581: agriculture, food, biology, environment and health (ABIES)	1,41	1,57	80%
n°572: waves and materials (EDOM)	1,42	1,61	102%
n°129: environmental sciences of Ile-de-France (SEIF)	1,46	1,65	101%
n°570: public health (EDSP)	1,47	1,69	100%



n°574: Hadamard mathematics (EDMH)	1,48	1,72	106%
n°569: Therapeutic innovation: from the fundamental to the applied (ITFA)	1,66	1,77	111%
n°571: chemical sciences: molecules, materials, instrumentation and biosystems (2MIB)	1,52	1,78	127%
n°582 : oncology : biology - medicine - health (CBMS)	1,63	1,79	133%
n°573: interfaces: interdisciplinary approaches, foundations, applications and innovation (Interfaces)	1,80	2,08	130%
n°566: sports, motor and human movement sciences (SSMMH)	1,80	2,11	116%
n°580: Information and Communication Sciences and Technologies (ICTS)	1,89	2,13	113%
n°575 : electrical, optical, bio-physics and engineering (EOBE)	1,95	2,25	107%
n°579: mechanical and energy sciences, materials and geosciences (SMEMAG)	2,22	2,46	134%
n°578: Human and Social Sciences (SHS)	2,43	2,47	203%
University of Paris-Saclay (UPSaclay)	1,71	1,87	116%

Availability of thesis supervisors: Average number N of doctoral students supervised by thesis supervisors who supervise at least one doctoral student (each doctoral student counts as 1). The average supervision ratio Q of thesis directors takes into account the sharing of scientific direction between the thesis director and other supervisors.

Doctoral school	% of thesis directors directing		
	from 1 to 2 doctoral students	from 3 to 5 doctoral students	more than 5 doctoral students
n°127: astronomy and astrophysics of Ile-de-France (AAIF)	100 %	0 %	0,0 %
n°564: physics of the Ile-de-France region (PIF)	96 %	4 %	0,0 %
n°576 : hadron particles energy and nucleus : instrumentation, image, cosmos and simulation (Pheniics)	95 %	5 %	0,0 %
n°568: Signals and integrative networks in biology (Biosigne)	91 %	9 %	0,0 %
n°567 : plant sciences: from gene to ecosystem (SDV)	91 %	9 %	0,0 %
n°581: agriculture, food, biology, environment and health (ABIES)	88 %	12 %	0,0 %
n°570: public health (EDSP)	84 %	16 %	0,0 %
n°577: structure and dynamics of living systems (SDSV)	93 %	6 %	0,5 %
n°572: waves and materials (EDOM)	87 %	13 %	0,6 %
n°571: chemical sciences: molecules, materials, instrumentation and biosystems (2MIB)	76 %	23 %	0,6 %
n°569: Therapeutic innovation: from the fundamental to the applied (ITFA)	81 %	18 %	0,9 %
n°129: environmental sciences of Ile-de-France (SEIF)	87 %	11 %	2,2 %
n°582 : oncology : biology - medicine - health (CBMS)	84 %	14 %	2,2 %
n°574: Hadamard mathematics (EDMH)	84 %	14 %	2,3 %
n°580: Information and Communication Sciences and Technologies (ICTS)	69 %	29 %	2,4 %



n°566: sports, motor and human movement sciences (SSMMH)	69 %	28 %	2,8 %
n°573: interfaces: interdisciplinary approaches, foundations, applications and innovation (Interfaces)	75 %	21 %	4,0 %
n°575 : electrical, optical, bio-physics and engineering (EOBE)	67 %	27 %	5,3 %
n°578: Human and Social Sciences (SHS)	65 %	28 %	6,9 %
n°579: mechanical and energy sciences, materials and geosciences (SMEMAG)	64 %	27 %	8,2 %
University of Paris-Saclay (UPSaclay)	79 %	18 %	2,5 %

Availability of thesis directors: % of thesis directors (supervising at least one doctoral student) who supervise 1 or 2, from 3 to 5 or who supervise more than 5 simultaneously, per doctoral school.

These data show that thesis directors are generally available to supervise their doctoral students and that more doctoral theses could be prepared at the Université Paris-Saclay. The factor limiting the number of doctoral candidates remains the obtaining of funding for doctoral candidates.

b. PROVISION OF DOCTORAL TRAINING COURSES MANAGED BY THE DOCTORAL COLLEGE

Training catalogue

The entire training offer is presented to doctoral students during the back-to-school days organized by the doctoral schools and is also available on the website of the [Université Paris-Saclay](https://www.universite-paris-saclay.fr/).

Doctoral students have access to disciplinary training offered by their doctoral schools and to transversal training offered in the doctoral college's training catalogue and organised either by the doctoral college or by the member institutions.

The number of hours of additional training that doctoral candidates must follow varies from one doctoral school to another. In general, a minimum of 100 hours of training, spread over the 3 years, is required for each doctoral student, including at least 50 hours of disciplinary training and at least 50 hours of cross-functional training. Harmonisation between doctoral schools of the expectations for cross-functional training would be useful for the future, since this is the subject of recurrent questions from doctoral students.

The cross-disciplinary doctoral training offered by the various institutions of the Université Paris-Saclay is very rich and diversified. The main role of the doctoral college is to coordinate, pool and harmonize this training offer. Nearly 450 training courses are offered each year in the doctoral college's shared catalogue. As of April 30, 2018, the number of training courses offered is 315 for 2017/2018. An increase in the number of enrolments has been recorded, from 4030 in 2016/2017 to 5614 in 2017/2018 (the year is not yet over).

Doctoral students are informed and register for the courses offered in the [shared training catalogue](#) through their ADUM account and through the website of the [University of Paris-Saclay](https://www.universite-paris-saclay.fr/).

The catalogue of cross-functional training courses is structured as follows:

- A basic training foundation for researchers, useful for all doctoral candidates from the beginning of their doctorate;
- Training for the development of language skills and intercultural openness;
- "Doctoral career paths" dedicated to preparing for professional development;
- Training in research ethics and scientific integrity.

A very precise description sheet accompanies each training session. In particular, it is requested to clearly indicate the skills that are developed in each of the courses, the objective being to enable doctoral students



to become aware of the interest of these courses both in the implementation of these skills during their doctorate and in their enhancement in their pursuit of a professional career.

Particular attention is paid to the choice of training courses set up to meet the specifications defining the skills to be developed. More and more, researchers and teacher-researchers at the University of Paris-Saclay are being called upon to provide these cross-functional training courses. A study on the possibility of reserving a few hours in educational services for doctoral training is under way. In most cases, however, training is provided by external providers recognized in their field of expertise.

An evaluation questionnaire is sent to doctoral candidates after each training session. The response rate to questionnaires is generally over 98%. The validation of training hours is conditional on receipt of the questionnaire.

The analysis and use of the responses to the evaluation questionnaires is systematic for training in the ["doctor career" pathways](#). Thus, for example, the format and content of the "Mediation, communication and scientific journalism course" have been modified following the feedback from doctoral students, integrating more in-depth training as part of the preparation for the MT180s competition.

Similar work will have to be carried out for training in other categories for which the use of the answers to the evaluation questionnaires is not systematic.

Preparation for professional development

The "doctoral career paths" currently proposed are as follows:

- [Higher education](#) (possibility of VAE Master MEF ENS Paris-Saclay)
- [R&D in companies](#) (possibility of CDEFI label)
- [Consulting and expertise in innovation](#) (possibility of CDEFI label)
- [Doctopreneurship](#) (possibility of DU Etudiant Entrepreneur UPSaclay)
- [Scientific mediation, communication and journalism](#) (Possibility of a Paris-Saclay University label)

Two courses are still under construction and should be ready to open by the end of 2018:

- Valuation and support of research
- Steering and management of "innovative structures", "research manager

Each of the "doctor's career paths" is composed as follows:

- A competency framework for the category of becoming a targeted professional, which makes it possible to link the competencies that are decisive for a category of professions with the competencies that doctoral candidates develop during the preparation of their thesis,
- An overview of the professional sector and its organisation, the diversity of careers available to doctors at national and international level, employment volumes and the means of accessing them,
- Meetings with professionals in the sector, who will be able to talk about their activity and what their doctorate has brought them for their current activity,
- Training or activities to help doctoral students develop the skills they lack or need to strengthen,
- Situational contexts to develop these skills, either as part of their research activity, or as part of complementary activities (teaching, consulting, mediation, etc.)
- The possibility of obtaining a label or, for some courses, a complementary certification (subject to additional registration),



Doctoral students may follow some training in a course, or, if they meet all the criteria of the course described above, obtain a label, diploma or additional certification.

These courses are offered to all doctoral students at the University of Paris-Saclay. They operate using the mutualized credits of the doctoral college and are supported, by subsidiarity, by some of the UPSaclay actors on behalf of all. The "Higher education" programme is thus supported by the ENS Paris-Saclay, that on "R&D in companies" by CentraleSupélec, that on "Innovation Consulting" by the Institut Mines Télécom, the "Docto'preunariales" are supported by the Corporate Relations Department and the SATT Paris-Saclay....

Training of doctoral students in research ethics and scientific integrity

The doctoral college of the University of Paris-Saclay initiated and supported the creation by the Board of Directors, on 6 December 2018, of a [Council for Research Ethics and Scientific Integrity \(POLETHIS\)](#), backed by a support service, equipped with dedicated resources, responsible for organizing all actions relating to research ethics and scientific integrity within the University of Paris-Saclay.

The following actions have already been carried out:

- Decision to create the Polethis during the UPSaclay Board of Directors meeting on December 6, 2017. Allocation of €50k of operating and training funds and decision to recruit an administrative manager (Mrs Tarral).
- Constitution of the Steering Team (E. Hirsch President, F. Coulée - Formations axis, F. Yvon CERNI axis, Patrick Berthet - Scientific integrity axis, Léo Coutellec - Prospective axis, & Research) appointed on 5 June 2018 after a prefiguration phase.
- Participation in a EUA-CDE symposium in January 2017 and a symposium in Nancy on the training of trainers in research ethics and scientific integrity;
- Organisation of two symposia at the University of Paris-Saclay on this theme, on 16 January 2017 and 30 January 2018, each attended by some 40 people;
- Organisation of a pilot training for doctoral students in May 2017 followed by 3 face-to-face training sessions (**in French**) on 29 May, 31 May and 7 June 2018 (more than 1500 participants in total) and a study day on the Ethics Committee on Non-Interventional Research (CERNI) in December 2017;
- Production of ["the essentials"](#), a series of video modules introducing research ethics and scientific integrity with contributions from experts such as Pierre Corvol and Michèle Leduc. These modules will be backed up in 2018 with questionnaires to validate the training;
- Implementation by ED STIC and provision of an **English-language** MOOC for ethics and integrity training in the field of ICST to all, via the Polethis;





Introductory days on research ethics and scientific integrity, above: May 29, 2018 in the Michelin amphitheatre of CentraleSupélec (about a thousand participants) and May 31, 2018 in Sceaux (400 participants).

POLETHIS has the following main missions:

- **Training:** The Polethis provides training in research ethics and scientific integrity for doctoral students enrolled at the Université Paris Saclay. The training is both theoretical and practical, general and specialized.
- **Ethics Review Committee:** The purpose of the Ethics Review Committee of the University of Paris-Saclay is to provide an advisory ethics opinion on research protocols involving human subjects, when these protocols do not aim to advance biological or biomedical knowledge for which there are national committees.
- **Scientific integrity referents network:** Around the "scientific integrity" referents of the Paris-Saclay University institutions, this network is a place for exchange, sharing of experience, advice for the prevention and treatment of cases of failure to comply with scientific integrity.
- **Research:** new technologies and knowledge bring new ethical issues, the Polethis brings together research teams and units in the field of research ethics and scientific integrity but also other fields within the scope of the University Paris-Saclay. It organizes unifying events, monitors and promotes the conduct of prospective studies in a laboratory of ideas approach.



The cross-functionality of the Polethis between disciplinary fields and the grouping in the same pole of the various activities related to research ethics and scientific integrity (training, research, network of integrity focal points, ethical evaluation committee) was intended to ensure that all fields quickly benefit from the experience of the disciplinary fields most sensitive to ethical and scientific integrity issues (biomedical research, animal experiments, law, food). It was also intended to build a practical ethical reflection, resulting from the emerging issues encountered in our research laboratories, and so that the training can benefit from the field experience constituted both by the ethics evaluation committee and by the "scientific integrity" referees.

Training of doctoral students in "open science",

The "electronic theses" axis of the doctoral college, which coordinates the network of librarians participating in the doctoral training activity, has organized several courses that we encourage our doctoral students to follow. The following training courses (non-exhaustive list) have been offered, for example, as part of the "basic researcher's foundation":

Workshops organized each year as part of OpenAccessWeek, open to all (students, doctoral students, researchers...), lasting 3 hours, dedicated:

- Open Access (principles, green path and golden path, deposit a publication in a tank, find an OA journal in its discipline, copyright),
- research data (managing, structuring, preserving, sharing, disseminating, finding and reusing research data)
- to the researcher's digital identity.

At AgroParisTech: Awareness session on Open Access and the deposit of publications in HAL organized every year during the ABIES doctoral students' welcome day ().

At CentraleSupélec: 3 hours of Open Access training

- History and definition of Open Archives. Publishers' policy / researchers' position
- Types of open repositories: some examples by domain
- Inventory: 3 types of AO (green lane, golden lane, grey lane)
- Exploring the HAL Portal

At Université Paris-Sud: 3 hours of Open Access training

Understand the challenges of Open Science, know the different paths of Open Access, know the copyright that applies to scientific publications and decipher publishers' contracts, know how to deposit a document on an open archive, find an Open Access journal in your discipline, manage, disseminate and share your research data, manage your digital identity.

In addition:

Web-tutorials dedicated to open science (covering the themes covered in doctoral courses) will be put online at the beginning of the 2018 academic year.

Training courses are offered to research teams involved in H2020 projects on the implementation of Open Access filing requirements for publications and research data.

C. COMMON RECEPTION AND MONITORING SYSTEMS

Reception of foreign doctoral students



The University of Paris-Saclay has set up an [e-international Welcome Office](#) to help foreign students, doctoral students and researchers in their efforts to settle in France. These actions are managed by the Campus Life Department. The system, which allows everyone to receive a personalized guide, has been designed to meet the specific needs of doctoral students. Language and intercultural training courses are also available.

The doctoral college informs foreign students of the existence of this system.

Each doctoral school organizes open days. The doctoral college is regularly asked to present an overview of doctoral training and the offer of doctoral training courses and modules during these days.

Equality-Diversity-Handicap Mission (MEDH)

The Mission Egalité-Diversité-Handicap is part of the Education Department of the Université Paris-Saclay (UPSaclay). The doctoral college calls on the MEDH for actions dedicated or proposed to doctoral students.

While the reflection on the construction of an inclusive university was initiated in 2014, the MEDH was formally launched in June 2015, six months after the creation of the Université Paris-Saclay on 1 January 2015. It deals with gender equality, social diversity and disability issues. Reporting to the Training Department, the MEDH is composed of a full-time equality-diversity project manager and a part-time disability project manager, it also coordinates the activities of 66 referees on the 19 UPSaclay establishments, some on several themes, with the following breakdown:

- 22 gender equality referees representing 16 institutions
- 25 social mix referees representing 12 establishments
- 35 disability referees representing 17 institutions

It should be noted that since March 2016, 2 diversity referees have been appointed to work on the theme called "racism, anti-Semitism".

Actions for [gender equality](#) include awareness-raising and training actions, actions for professional integration and career development, the development of tools and the provision of resources, a working group on [sexual harassment](#). Following the survey on the employment of doctors and the observation of inequality between doctors on remuneration and access to employment, a mentoring programme dedicated to female doctoral students will be organised between the doctoral college, the MEDH and the association Femmes et Sciences.

The MEDH also carries out actions for [social diversity and equal opportunities](#). These are mainly dedicated to middle and high school students with the objective of reducing inequalities in access to higher education. Doctoral students are invited, as are groups of students and students from grandes écoles, to participate in individual tutoring actions for middle and high school students from disadvantaged neighbourhoods. The flagship device is the rope of success. The UPSaclay string is unique in its shared form. It was launched on 4 November 2016 in the presence of Mrs Hélène GEOFFROY, Secretary of State to the Minister for Cities, Youth and Sport, in charge of the City.

Actions on the theme of [disability](#) also include awareness-raising, training, support and assistance for the integration of young disabled people, a draft travel plan on campus to make travel accessible to all, research actions (H-Lab), a disability master plan and finally the autism project Aspie-friendly.

In addition, since 2016, IDEX Paris-Saclay has been supporting the Ministry's programme to finance [doctoral contracts for disabled people](#) by financing a doctoral contract based on IDEX funding for each contract financed by the Ministry. The call for applications is jointly managed by the doctoral college and the [disability unit of the](#) University's [MDEH](#).



Individual follow-up of doctoral students

The roles and responsibilities of the individual monitoring committee are defined in the [doctoral charter](#) as follows:

Extract from the charter: *"The individual monitoring committee is an advisory body that ensures, through an interview with the doctoral student, that his or her doctoral training is carried out properly, based on the doctoral charter and the individual training agreement."*

The rules for the composition and organisation of the monitoring committees are laid down in the internal rules of the doctoral college and doctoral schools, in close liaison with the research units and teams federated by these doctoral schools. They ensure that the monitoring committee does not replace the doctoral direction but is complementary to it by providing a neutral and external point of view on the progress of the doctoral project, which can be used constructively by everyone.

The monitoring committee monitors the doctoral student's progress in his or her ability to present his or her research work, to demonstrate its quality and innovative character, to place it in its international scientific context; The monitoring committee leads, in particular, the doctoral student to clearly explain and defend the approach and scientific directions that are followed. The follow-up comité also leads the doctoral student to show that he or she has mastered the time registration of his or her doctoral project and its completion within the planned time frame;

The monitoring committee helps the doctoral student to review the progress of his or her doctoral training, the development of his or her scientific culture and international openness, as well as the state of preparation for his or her professional future, the development of his or her expertise and skills; The monitoring committee ensures that the doctoral student benefits from collective training, that he or she is aware of research ethics and scientific integrity, that he or she knows and applies the instructions concerning scientific publications;

If malfunctions are noted, the monitoring committee may recommend to the doctoral school director that he or she propose mediation or convene a conciliation commission. »

Two surveys, one year apart, were conducted among doctoral students and thesis directors with specific questions on the functioning of these committees.

- **At the end of 2016**, 589 doctoral students and 418 supervisors responded to the survey. An analysis of the responses was conducted in order to draw lessons and make **recommendations that were** disseminated to all in the form of a [dedicated note](#). During this first survey, doctoral students who had expressed their opinions were more likely (75%) to support the generalization of monitoring committees than thesis directors (61%).
- **At the end of 2017**, a new survey was conducted, with more specific questions (8 closed questions and one free field). This time, 811 doctoral students and 723 thesis directors responded to this new survey. 63% and 68% respectively consider that the roles and responsibilities of the monitoring committees are fairly clear or very clear and 84% and 88% are satisfied or very satisfied with their functioning. The reading of the comments in the open field, many of which were constructive, was carried out by about fifteen people (doctoral college office, doctoral school teaching assistants, librarians) during a collective working session. The whole was also returned and distributed via a [second dedicated note](#)

A [conflict resolution procedure has been put in place](#) to deal with the various conflicts that may arise between doctoral candidates and thesis directors or within the laboratory. Its principles are set out in the doctoral charter and its terms and conditions are defined in the internal regulations of the doctoral college. A [detailed procedure](#) is available on the website. This is implemented by the doctoral school upon request or if the doctoral school identifies a difficulty, for example, at the end of a monitoring committee. A procedure for doctoral candidates to request a second opinion from the academic council, when the doctoral



school does not propose the re-inscription of a doctoral candidate, has also been established and some cases have already been dealt with.

d. ACTIVITIES LED BY THE DOCTORAL COLLEGE

In addition, all the teams involved in doctoral training (doctoral schools, doctoral college, schools, libraries) participate in the organization of [doctoral graduation ceremonies](#), the organization of which is jointly managed by the doctoral college and the Communications Department. These ceremonies contribute to the value of the doctorate and to creating a sense of belonging to the Université Paris-Saclay and to the same "promotion" of doctors, on whom we rely to contribute to the development of closer relations between graduates and doctoral candidates and to the better knowledge of their professional future.

These ceremonies were held at the Palais des Congrès in Versailles on 1 July 2016 and 30 June 2017 and in the Michelin amphitheatre of CentraleSupélec on 29 June 2018. Each of these three ceremonies brought together about a thousand doctors and their families as well as the heads of institutions, the teams of doctoral schools and doctoral colleges and personalities invited for the ceremony (rector of the academy, major academic and industrial witnesses, doctoral students' associations). The participant surveys conducted just after the ceremony show a very high level of participant satisfaction.

[The photos of the last ceremony and the speeches of the great witnesses are available on the website of the University of Paris-Saclay.](#)

The college also participates in other activities, such as MT180s, which is very successful and which are mentioned in the paragraph "valorization of the doctorate".



Memories of the first graduation ceremony on July 1st 2016.





Memories of the third graduation ceremony on June 29, 2018.



A video broadcast during the third graduation ceremony on June 29, 2018.

e. COMMON RULES RELATING TO THE MANAGEMENT OF THE END OF THESES AND THE DEFENCE OF THESES

Management of thesis ends

The management of the end of theses is the subject of an article in the internal regulations of the doctoral college and of each doctoral school.

The internal regulations of the doctoral college specify that an extension of the duration of the thesis may be granted, by **way of derogation**, by the head of the school, on a proposal from the thesis director and after consulting the monitoring committee, the director of the doctoral school and the director of the unit or research team hosting the doctoral student, at the doctoral student's justified request and in accordance with the generic terms and criteria specified below, and the criteria and modalities specific to each doctoral school, which are then specified in its internal regulations,



- If the defense does not take place before **August 31 of the** current calendar year, a re-registration for the following academic year is required.
- If the defence is scheduled **before 31 December of the current year**, re-registration is still necessary, but a **waiver of registration fees** may be granted by the member or associate institution of the Université Paris-Saclay in which the doctorate is prepared (exemption by a general decision of the board of directors of this institution). The extension is derogatory, but it will be granted provided that all the elements necessary to ensure that the defense will actually take place before December 31 are presented by the doctoral student.
- The extension of the doctorate to the fourth year and beyond, with a defence scheduled **after 31 December of the current year**, is an exception. The headteacher may grant a derogation on a proposal from the thesis director and after consulting the monitoring committee, the director of the doctoral school and the director of the research unit, at the doctoral student's justified request. The list of beneficiaries of derogations is presented each year to the Academic Council of the University of Paris-Saclay, the Council of the Doctoral College and the Council of the Doctoral School.

The request for derogation over the duration of the thesis must specify the **expected date of defense** and the **financing modalities envisaged for the** doctoral student in the extension period. The director of the doctoral school checks that the scientific, material and financial conditions are met to ensure that the doctoral student's work progresses smoothly **until the date of the defence**.

The doctoral school council is informed of the duration of the theses in the doctoral school (average and distribution) and decides on the orientations to be given on the duration of the theses. The doctoral student must be informed, from the beginning of his doctorate, of the duration of the theses in the doctoral school (average and distribution).

The average duration of the theses and its distribution for each doctoral school is the subject of a dedicated chapter in the annual statistical review which is carried out by the doctoral college.

Common rules relating to the defence

The doctoral college shall establish a general defence procedure, adopted by the council of the doctoral college and applicable to all doctoral schools. The general defense procedure is provided in the collection of procedures of the doctoral college of the University of Paris-Saclay and [published on the website of the University of Paris-Saclay](#). The additional modalities (e.g. number of publications required) specific to each school are specified in the school's internal rules and distributed on its own web pages.



The defense, who decides what?
[To know more...](#)



Prepare your defense
[To know more...](#)



The thesis: content, language of writing, format and cover page, copyright, confidentiality
[To know more...](#)



The defense
[To know more...](#)





The composition of the Jury
[To know more...](#)



Finalize the defense
[To know more about it...](#)



Doctoral degree
[To know more...](#)



The complete and detailed defense procedure and all the useful documents for a defense: [Learn more...](#)

The diploma is [manufactured and personalized by the national printing house](#), based on the data entered in the [adum information system](#), which the new doctor will have ensured compliance with at the doctoral school after the second legal deposit of his thesis. The first two years, the data were extracted from Adum, verified and formatted by the doctoral college and sent every **6 months** to the national printing house for diploma production. At the end of 2017, an interface system between Adum and the national printing house was developed and now allows more frequent (**once a month**) and more automated editions of diplomas.

The diploma is published in a 297 x 210 mm Italian format, watermarked RF paper special diploma 110 g/m², printed in 3 colours. The doctoral degree from the University of Paris-Saclay contains the following elements of protection against fraud:

- The diploma is signed manually by the doctor, after verification of his identity, at the time of graduation.
- The paper has a first print, visible under natural light, with low contrast to the background, formed by micro lettering.
- The paper also has a second printing, different from the previous one, visible only under red UV light, also formed by micro lettering.
- The diploma number, at the bottom right of the diploma, consists of the number of the legal deposit of the thesis, a serial number affixed by the national printing house and a control key that allows the authenticity of the number to be verified and that exists nowhere else but on the parchment of the diploma. The national printing house ensures the authentication of diploma numbers for life.
- A digital image of the diploma (without the serial number and control key to authenticate the diploma) is given to new doctors at the same time as the original diploma. This image is intended to be printed, distributed, each time a copy of the diploma is requested from the doctor.
- The QR-Code, at the bottom right of the diploma, encodes the permanent URL address of the legal deposit of the thesis or works on which this diploma is based and refers to the description of the doctor's thesis on the national portal www.theses.fr. This code is a graphic code that can be placed by the doctoral student on a CV or personal page of a social or professional network.



Role of the doctoral college in monitoring the professional careers of doctors

a. DEVICES FOR MONITORING THE CAREERS OF DOCTORS - THE STARTING POINT

In spring 2016, a survey was conducted on the professional future of doctors who graduated in 2013 and 2015 (before the creation of the Université Paris Saclay), as part of a partnership between the doctoral colleges of Ile de France, the firm Adoc Talent Management and the Ile de France Region.

Within the University Paris Saclay, only 3 institutions participated, the University Paris-Sud, the Polytechnic School and the Institut Mines Telecom. This "Ile de France" survey had already been carried out for several years in these establishments, with cohort follow-up. It had some shortcomings, some of which stemmed from the constraint of using this survey also to respond to ministerial requests (SIREDO survey):

- Questions with categories that are not mutually exclusive and do not cover all situations (e.g., doctors had to choose between "in employment" and "job search");
- A formulation of questions that does not take into account the large population of foreigners among doctors on the one hand and the large proportion of doctors, French or foreign, posted abroad on the other hand;
- A treatment of results that does not take sufficient account of the internationalisation of doctors' careers (e.g. average salaries calculated without restriction in France or without correction of purchasing power parity between countries);
- A number of survey respondents still remaining limited despite good response rates (on focus 2013: 859 doctors who had supported between 1 January and 31 December 2013 at participating Paris-Saclay University institutions were interviewed in spring 2016 as part of the Employment project. The response rate at Université Paris-Saclay was 61% (524 respondents).

Following this initial feedback, it was considered that remedying these difficulties should take precedence over the need for statistical continuity in cohort monitoring, which is in any case compromised, given the very significant changes that occurred when the University of Paris-Saclay was created.

At the same time, the Ministry set up a national IPDOC experimental survey in which the University of Paris-Saclay participated (on graduates of the Polytechnic School in a year prior to the creation of UPSaclay). Based on this experience, the doctoral college participated in a Ministry working group in spring 2017, which made it possible to develop a new questionnaire, unified at the national level, to address all the difficulties identified.

This national IPDOC questionnaire was implemented in the Sphinx platform of the University of Paris-Saclay. This will make it possible to aggregate the data collected at UPSaclay with other data to create a regional (with the doctoral colleges in Ile de France) or national (SIES department of the Ministry) perspective. The questionnaire was also completed with some questions for internal use (membership of our LinkedIn group, satisfaction, skills).

b. SURVEYS CARRIED OUT IN 2018

The following conclusions are drawn from three surveys:

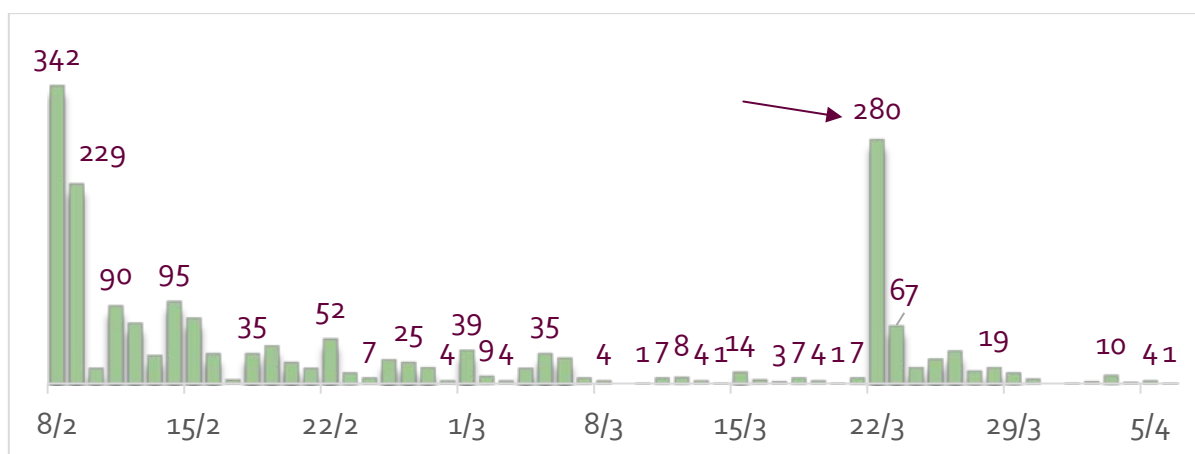
- the two "*satisfaction*" surveys of doctoral students and supervisors, which are carried out each year between mid-December and mid-January,
- a survey on the **future of doctors** in doctoral schools at the University of Paris-Saclay, which was carried out between 8 February and 8 April 2018.



Survey on the professional future of doctors

The [doctoral charter of the](#) University of Paris-Saclay provides that the doctoral student has the right to have information concerning academic and extra-academic professional opportunities, in particular by making statistics on the future of doctors available. It also states that the doctoral student has a duty to communicate, for **5 years** after the defence of his or her doctorate, information on his or her professional future in order to be able to compile and make available these statistics.

72% of doctors responded to the survey



Responses to the survey on the fate of doctors registered between 8 February and 8 April on the survey platform. The peak in responses, recorded after March 20, is the result of the call for thesis directors.

The mobilization of thesis directors was decisive.

The survey was first intended for the **2729** doctors who graduated from Paris-Saclay University between ¹ September 2015 and 31 December 2017, of whom **1978** responses were collected.

72% of graduates responded to the survey. Given the length of the questionnaire (nearly 100 questions), this response rate is very satisfactory. It is the result of the strong mobilization of doctors to

respond to the requests of the doctoral college and doctoral schools. It also owes a great deal to the mobilization of thesis directors with regard to the professional future of their doctors. After about 6 weeks, a message was sent to them to solicit those of their doctors who had not yet responded to the survey. Their action was quick and effective and led to a doubling of the number of responses.

Annual surveys of doctoral students and thesis directors

The annual "*satisfaction*" surveys conducted in 2018 as part of the quality approach included questions on various aspects of doctoral training, including some related to professional development.

811 doctoral students and **723** thesis directors replied to these surveys, which represents, in both cases, a response rate of around **15%**. Results from these two surveys are also included in this note, but these results must be taken with more hindsight than those of the survey on the future of doctors, first because of the lower response rate and second because of the nature of the questions asked, which are naturally much more subjective.



In these surveys, doctoral students and thesis directors were asked about the importance of a series of actions for the professional development of doctors. The objective was for the doctoral schools and the doctoral college to ensure that their efforts focused on the actions considered most important by all.

The survey on the employment of doctors is the action that is considered the most important of all for the professional development of

The first thing the survey shows is that doctoral students and thesis directors generally agree on the relative importance of these various actions. However, there are nuances, in terms of the effect of the presence of industrialists in certain councils or international rankings, that doctoral students consider more important than their thesis directors.

In your opinion, to become a doctor's professional, the following action is required	Very important		Somewhat important		Not very important		It doesn't matter	
Action	Doct	DT	Doct	DT	Doct	DT	Doct	DT
Surveys on the employment of doctors (rates and types of employment at 1 year, 3 years, 5 years, and salary levels...)	40%	37%	46%	50%	11%	12%	3%	2%
Forum for the employment of doctors	37%	36%	48%	50%	12%	12%	3%	1%
Alumni Association	26%	29%	47%	49%	23%	19%	4%	3%
Training course "Careers of Doctors"	24%	18%	41%	55%	30%	22%	5%	5%
Presence of industrialists on the University's boards	32%	14%	43%	46%	17%	26%	9%	15%
LinkedIn Group (PhD students & Alumni University Paris-Saclay)	24%	20%	40%	50%	30%	26%	6%	5%
Selection for doctoral entry, communication on competitions	21%	18%	42%	45%	27%	27%	11%	9%
Shanghai ranking or other international university ranking	15%	6%	28%	26%	34%	39%	23%	29%

Satisfaction" survey: answers from doctoral students (Doct), thesis directors (DT) to the question: "In your opinion, for the professional development of doctors, the following actions are very, somewhat or unimportant? »

The conduct of surveys on the professional future of doctors is, together with the forums, the most important action of all for the professional future of doctors, both by doctoral students (86%) and by thesis directors (87%).

However, while they consider these surveys very important, most doctoral students, and more particularly those who have not read the doctoral charter, do not feel committed to their future successors to answer these surveys when they have defended their thesis.

They also have little knowledge of the length of time they will be asked to complete these surveys (5 years). Even if they have not all retained the duration of their engagement, 50% of doctoral students who declare that they have read the doctoral charter completely consider these surveys very important, while 38% of those who have read it only in general or not at all consider them very important. On the other hand, their interest in these surveys is the same whether they are in their 2nd, 3rd, 4th year of doctorate or more.

For how many years have you committed to completing the surveys on your professional future?



Have you read the doctoral charter?	I have not made any commitment	1 year	3 years	5 years	10 years old
Completely	45%	1%	13%	31%	10%
In general terms	54%	2%	15%	25%	5%
Not at all	76%	3%	10%	10%	1%

Annual survey of doctoral students.

Thesis directors, even when they have not read the doctoral charter, are quite well informed about the length of time doctors will be interviewed.

Do you know how many years we have a regulatory obligation to conduct investigations into the professional future of doctors (and during which we may ask you, when they do not respond, to motivate them to respond)?

Have you read the doctoral charter?	1 year	3 years	5 years	10 years old
Completely	3%	30%	60%	8%
In general terms	3%	34%	52%	10%
Not at all	14%	36%	43%	7%

Annual survey of thesis directors.

Doctoral students are seeking information on the future of doctors, but they will need to be made more aware of the importance of answering these surveys after their defence.

C. DATA MINING AND ANALYSIS

An online platform, [PhDFuture](#), has been created by the doctoral college to learn about the professional future of doctors. On this interface, Internet users can use filters to restrict the sample according to various criteria. They can also export the statistics they are interested in in various formats.

Where are they? What are their remunerations? Their employment and unemployment rates? What responsibilities are assigned to them? Are they satisfied? How did they access their jobs? What geographical mobility? Tables, maps, histograms can be adapted according to the selected sampling criteria.

The data were de-duplicated and made more reliable by cross-checking with available information on graduates, but they were neither adjusted nor analysed.

A doctoral consulting mission in quantitative social sciences will be devoted, before the end of 2018, to analysing these data, putting them in perspective and drawing the main lessons from them. The main results of the survey are presented below. Tables and graphics are extracted from the [PhDFuture](#) interface.

The professional situation of doctors

[PhDFuture](#)
An interface to explore the professional future of doctors at the University of Paris-Saclay



Doctors support their theses, mostly in the last quarter of each year, with a peak in December. Given the time it takes, on average, for them to find a job and given that the survey began on 8 February 2018, employment and unemployment rates have not been determined for doctors who defended their theses in 2017. Only the years **2015 and 2016** are taken into account.

92.4% are currently employed. **7.6%** are not employed, but not all of them are looking for work. They can be retired, engaged in new training, etc. The unemployment rate is thus **5.8%** on average over the years 2015 and 2016.

Doctors 2015 and 2016:
an employment rate of
92.4% and an
unemployment rate of

Moreover, those who are unemployed are not necessarily unemployed since their graduation. They may be between two positions, particularly after the end of a post-doctoral research mission. Detailed information on this subject is available on [PhDFuture](#).

However, the results show a worrying difference between men and women, which, given the small number of cases, may be only an artifact but, as we will see later, will deserve further attention because it is also reflected in statistics compiled with larger numbers of workers, such as wages and access to employment for those currently in employment.

2015				2016			
Ensemble	5,3%	Femmes	6,6%	Ensemble	5,9%	Femmes	9,2%
		Hommes	4,3%			Hommes	3,6%

Unemployment rate at the beginning of 2018, doctor graduates in 2015 and 2016. Comparisons between men and women.

The majority of doctors are currently employed in France (**63.6%**) and have a permanent job (**55%** of those employed in France). Just over a third of doctors (**36.4%**) are employed abroad where, on the other hand, employment contracts are mainly for a limited period (**75%**).

It is important to note that doctors **working abroad**:

- are satisfied with their job in general (**52.3%** very satisfied, and **40.1%** somewhat satisfied),
- and are satisfied with the career opportunities offered by this job (**38.9%** very satisfied, **39%** somewhat satisfied).
- what gives them the most satisfaction is the international and intercultural openness that their job brings them: **60.8%** are very satisfied with it and **29.8%** are quite satisfied.

Doctors in **employment in France**:

- are also satisfied with their job in general (**49.5%** very satisfied, and **41.1%** somewhat satisfied).
- despite the fact that more of them are in permanent positions than those employed abroad, they are no more satisfied than the latter with the career opportunities offered by this job (**38.3%** very satisfied, **36.4%** quite satisfied).
- what gives them the most satisfaction in their job is the quality of professional relations: **61%** are very satisfied and **32.6%** quite satisfied.

The first years following the defense correspond to a period of high international mobility, **54%** of French doctors are employed in a foreign country and **84%** of foreign doctoral students are not employed in their country of nationality.



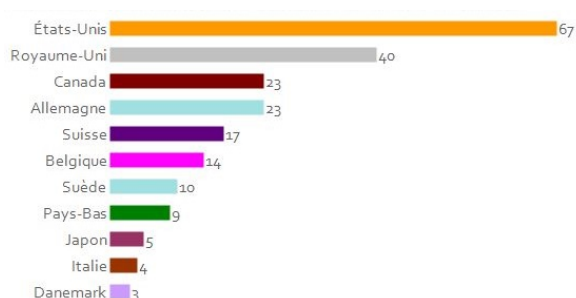
Les docteurs sont-ils en emploi dans leur pays de nationalité ?

Groupes de nationalités en colonnes, mobilité en ligne

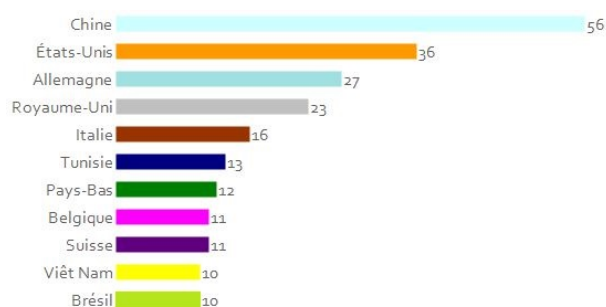
	Non		Oui	
	N	% cit.	N	% cit.
FR	846	54%	725	46%
Etranger hors EU	745	84%	137	16%
EU sauf FR	233	84%	43	16%
Total	1824	67%	905	33%

Mobility of doctors from the University of Paris-Saclay by nationality group.

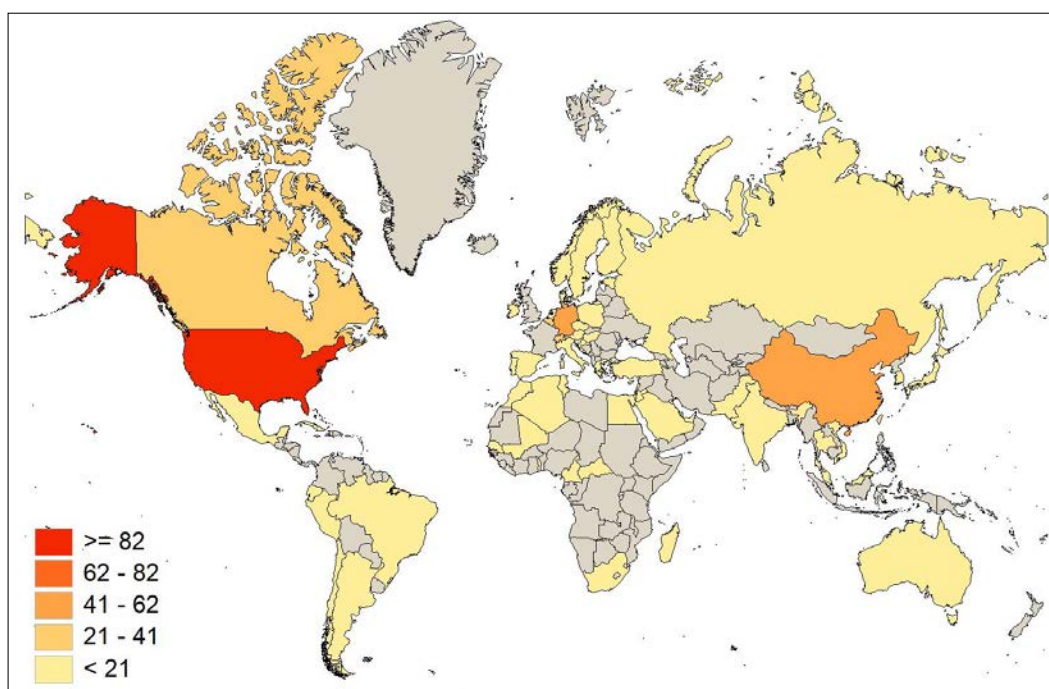
The top 10 professional destinations for doctors



French nationality (excluding France)



of foreign nationality (excluding France)



Country of employment of doctors from the University of Paris-Saclay (excluding France). The map can be viewed, by doctoral school or according to other criteria, on [PhDFuture](#).

Their responsibilities and remuneration

Doctors are quickly put in charge in their jobs: one year after their defense,



- 43.3% have staff management responsibilities,
- 43.5% of project manager responsibilities,
- 23% responsibility for a budget and,
- 55.6% work in an international context.

Almost all doctors work full-time (98% of men and 95% of women).

	All together		Public sector		Companies	
	Women	Men	Women	Men	Women	Men
Average	43 k€	46,5 k€	43 k€	44,3 k€	43,9 k€	49,5 k€
Median	40 k€	42 k€	39,6 k€	40 k€	41 k€	45k€

Gross annual remuneration of PhDs at the University of Paris-Saclay who are employed, on a full-time basis, in France (one year after their graduation, 2016), according to their gender and sector of activity.

For those in full-time employment in France, the median remuneration is around **€41k** gross per year (one year after graduation) and the average is **€45k** gross per year.

In the field of Engineering Sciences, one year after the defense, the median is **43k€** gross per year as well as for doctors who are employed in France and in companies, all disciplinary fields combined.

The significant difference between average (remuneration) and median (50% of doctors have remuneration above the median and 50% below) is due to the fact that people prepare doctorates at all ages. Those who start a doctorate after 15 or 20 years of career are few in number but generally have much higher salaries than young graduates. These cases are mainly encountered in the field of medicine and law but can be found in various disciplines.

Doctors in employment, in France, in companies: a median annual gross salary of **43k€**, one year after their

Age des doctorants au moment de leur soutenance

De 24 ans à 25 ans	115	4,3%	
De 26 ans à 27 ans	1019	37,7%	
De 28 ans à 29 ans	774	28,7%	
De 30 ans à 31 ans	319	11,8%	
De 32 ans à 33 ans	152	5,6%	
De 34 ans à 37 ans	162	6,0%	
De 38 ans à 39 ans	49	1,8%	
De 40 ans à 49 ans	72	2,7%	
De 50 ans à 59 ans	31	1,1%	

≈10% pay gap on the median between men and women in companies.

The difference is also visible between wages in the public and corporate sectors and between men and women.

On the median, the gap between men's and women's pay in the workplace (about **10%**) is larger than the gap in pay for a woman between the private and public sectors.

Access to employment



The doctors were asked about their access to their jobs after the defense. The first question asked was the number of months they were looking for a job after their graduation. The two years 2015 and 2016 have been aggregated in order to increase the representativeness of the results. The first lesson of this survey is that **doctors place themselves very quickly**. **53.6%** of them have never been unemployed or at most for a month.

Ensemble : Moyenne = 2,3 mois Médiane = 0,0 mois

	Moins de 1 mois		De 1 mois à 3 mois		De 4 mois à 6 mois		De 7 mois à 12 mois		13 mois et plus	
	N	% cit.	N	% cit.	N	% cit.	N	% cit.	N	% cit.
Homme	556	56,3%	242	24,5%	100	10,1%	63	6,4%	26	2,6%
Femme	326	49,6%	147	22,4%	91	13,9%	71	10,8%	22	3,3%
Total	882	53,6%	389	23,7%	191	11,6%	134	8,2%	48	2,9%

Doctors working in France or abroad after their graduation in 2015 or 2016. How many months have you been unemployed between the date of your defence and today?

The date of their defense seems to have a significant effect on their job search. The period from January to March, coming after the peak of the autumn defenses, is the least favourable period to quickly find a job after the defense. On the other hand, the one from July to September, which immediately precedes the peak in support, is the most favourable.

	Moins de 4 mois	De 4 mois à 6 mois	7 mois et plus
T4 - Octobre à Décembre	79,6%	9,5%	10,9%
T3 - Juillet à Septembre	79,9%	10,5%	9,6%
T2 - Avril à Juin	74,4%	17,2%	8,4%
T1 - Janvier à Mars	65,8%	17,1%	17,1%

A very instructive result of this survey is the way in which doctors found their jobs. First, the importance of **professional and personal networks** is confirmed. More than a quarter of the doctors found their jobs through a professional network.

How did you find your job?	2015	2016	2017
Professional network (LinkedIn, Viadeo, other network)	26,2%	31,1%	26,3%
Personal network, family, friends, Other	23,4%	21,4%	26,0%
Response to an advertisement (Pôle Emploi, APEC, website...)	30,7%	24,8%	21,4%
Unsolicited application	18,4%	20,2%	18,2%
Spontaneous offer (from a recruitment agency, the company...)	4,5%	6,8%	13,1%
Public Service Competition	13,5%	11,0%	9,8%
Hiring by the host company during the preparation of a CIFRE thesis	2,9%	4,7%	4,6%
Forum, trade fair	0,8%	2,9%	3,2%



Professional networks (LinkedIn etc.) are the number one way to find a job.

The number of recruitments following an **unsolicited offer from a company** or **recruitment agency** increased sharply, from **4.5%** in 2015 to **13%** in 2017. The identification of interesting profiles by recruitment agencies is facilitated by the visibility of doctors on professional social networks and the "search" features offered by these networks to recruiters.

There has been a decrease in recruitment through public service competitions, which can be explained on the one hand by the increase in the age of recruitment and by the decrease in the number of posts put out to competition.

It is also worth noting that very few doctors cited the forums as the way they found their job. However, just after the completion of surveys on the employment of doctors, the forum is the second most important action considered by doctoral students and thesis directors (see table at the beginning of this note). The forums are a meeting place for companies and doctoral students. Knowing each other is essential to establish contact, but recruitment is done through other channels.

Their sectors of activity

The doctoral students were interviewed as part of the satisfaction survey on the reasons why they are preparing a doctorate.

Why are you preparing a doctorate?	Strongly agree	Somewhat agree	Rather disagree	Disagree at all
To obtain the title of doctor	41%	37%	17%	6%
Out of a taste for research, interest in my subject	68%	30%	2%	1%
To contribute to the increase of knowledge, the development of new technologies	41%	48%	8%	3%
To acquire an openness and an international dimension	26%	43%	24%	7%
To become an enlightened citizen, able to inform public debates, especially on scientific issues	23%	38%	26%	13%
To acquire a very high level of expertise in my field	54%	36%	8%	2%
To access research professions in general	41%	42%	13%	4%
To acquire skills useful for many trades	33%	46%	17%	4%
To become a teacher-researcher or researcher	31%	31%	26%	12%

Doctoral students' answers to the question: Why are you preparing a doctorate?

If they are first motivated by what they are currently doing, that is, by their research topic and the results they expect to achieve, their professional projects are taking shape.

83% of them are preparing a doctorate to enter the research professions in general, and **62%** would like to become a researcher or teacher-researcher (but **38%** have another project). They obviously remain open to the various options. Similar questions were also asked of thesis directors.

In your opinion, doctoral training allows?

Strongly agree Somewhat agree Rather disagree Disagree at all



To contribute to the increase of knowledge, the development of new technologies	60%	34%	5%	2%
To contribute to France's influence and capacity for influence by bringing an international dimension to young French people and/or by having contributed to the training of elites from foreign countries	35%	48%	13%	3%
To train informed citizens capable of informing public debates, particularly on scientific issues	29%	47%	21%	4%
To train high-level experts on emerging issues	40%	46%	12%	2%
To train scientists for corporate R&D	43%	45%	11%	2%
To train high-level executives, through research, for various professions with or without a research component	47%	39%	12%	2%
To train future generations of higher education and research	67%	27%	4%	2%

Answers from thesis directors to the question: In your opinion, doctoral training allows?

The vision of doctoral students and thesis directors of doctoral training can be compared with what doctors who defended between ¹ September 2015 and 31 December 2017 actually do. But this comparison must be qualified because, many doctors have their first position after the defence abroad, as part of a post-doctoral research mission of limited duration: it will take more time (3-year and 5-year surveys) to see trends emerge more clearly.

The first results are as follows:

- in the first two years following their defence, the vast majority of doctors carry out research and development and/or higher education activities (83.4%).
- Half of them are employed by public service institutions and 30% by companies in organisations whose main sector of activity is teaching, research and/or R&D.
- It should also be noted that a significant number of doctors work for non-profit organizations or associations (7.4%) or in international institutions such as the OECD or the UN (4.4%).

In the 2 years following their defense, more than 83% of doctors have research activities.

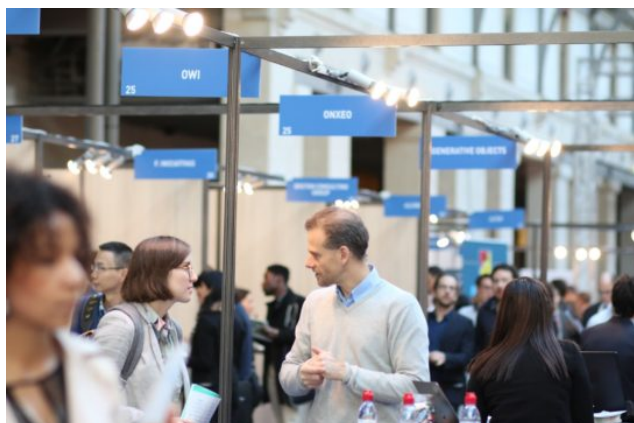
30% are in companies and half in the public sector.

d. CONTRIBUTION TO THE PURSUIT OF A CAREER

In addition to the "doctoral career paths", which were presented in a previous paragraph, the University of Paris-Saclay has been a partner since 2015 of the Forum for the Employment of Doctors "PhD talent Career Fair" organised in Ile de France.

In this capacity, the doctoral college participates in the working group to prepare the Forum and the organization of the round tables and interventions and provides a grant to PhD Talent to organize this day.





In 2015, the forum hosted about sixty company stands, then 80 in 2016 and finally 100 in 2017. The number of companies has been limited each year by the number of spaces made available to them. During these 3 sessions, the doctoral students from the Université Paris-Saclay represented the largest contingent of doctoral students in Ile de France.

Training is offered by the doctoral college, upstream, to help them prepare their interviews with companies and make the most of the day.

In 2017, the PhD Talent association became a start-up.

The system of subsidies by the doctoral colleges of Ile de France to organise the "Career Fair" should be reviewed in 2018 in order to adapt to this new status, for example by financing the rental of a stand, as is the case for the Forum Cifre.

e. VALUING THE DOCTORATE FOR THE GENERAL PUBLIC

The organization of doctoral graduation ceremonies promotes the development of a sense of belonging and allows families to be involved. About **40% of the** graduates participate in the ceremony. Many travel from abroad for the occasion with their families. This event, organized in June (most of the support takes place between September and December), also makes it possible to update contacts and pass on some messages on the importance of maintaining the link and to answer surveys on their professional future.

The doctoral college also offers doctoral students several activities that contribute to the science-society relationship and enable them to develop their skills in scientific communication and mediation and can be valued, as such, in their training plan. These activities can, in particular, be promoted in the "doctoral careers: mediation, communication and scientific journalism" course as a simulation.

The University of Paris-Saclay has been participating in "[My thesis in 180 seconds](#)" since 2014. It is a very rewarding event for doctoral students and one that generates a lot of enthusiasm.

The videos are then broadcast on the [University's YouTube channel](#). Doctoral students are prepared by a trainer as part of a course offered by the doctoral college. Several doctoral schools prepare the ground during their doctoral school days, by organizing "Pitch" sessions for doctoral students on their thesis to encourage vocations before the final of the Université Paris-Saclay.

Doctoral students are also invited to participate in the [Curiositas Art and Science Festival](#), they also take part in [heritage days](#), [science festivals](#), as part of the [MISS](#) (Maison d'initiation et de sensibilisation aux sciences), [TEDxSaclay](#), and many other events such as [Pint of Science](#).

In addition, the Université Paris Saclay is a member of "[The Conversation](#)" and its members, doctoral students, professor-researchers and researchers have already published more than 230 articles.



EVOLUTIONS AND PROJECTS



context evolution

The evaluation of the assessment and the target university project "Université Paris-Saclay" by the IDEX International Jury took place in February-March 2018. Following this evaluation, on Monday, March 19, 2018, the government extended the IdEx Paris-Saclay project, which is "close to its goal". It confirms the relevance of the strategy and the resources allocated to UPSaclay to "transform the trial", as planned in the project, no later than 30 months after this evaluation. The University of Paris-Saclay is therefore continuing its trajectory, the ComUE will be dissolved and a new, more integrated institution will be created before January 2020 (without changing its name).

The University of Paris-Sud, the University of Evry, the University of Versailles Saint-Quentin en Yvelines, the Ecole CentraleSupélec, the Ecole normale supérieure Paris-Saclay, the Institut d'Optique Graduate School, AgroParisTech, the Institut des Hautes Etudes Scientifiques as well as the CNRS, the CEA, Inra, Inria, Inserm and Onera have committed themselves to the construction of the target Paris-Saclay University.

For the past 3 years, some member schools of the cluster had indicated their reluctance to embark on a path towards greater integration. On 25 October 2017, President Macron acknowledged these concerns and announced the creation of an alliance of schools, currently known as "NewUni" and bringing together schools currently members of the ComUE Université Paris-Saclay (Ecole Polytechnique, ENSTA ParisTech, Telecom ParisTech & Sud Paris and ENSAE). This grouping corresponds to about 13% of the doctoral students and 30 to 35 of the 300 research units at the current Paris-Saclay University.

In addition, SupMéca and ENSA-V were associated with the University of Paris-Saclay, for the doctoral training activity only, through the continuity of their partnerships with some of the member institutions (SupMéca with CentraleSupélec and ENSA-V with UVSQ). Their number of doctoral students is very limited. As these two institutions are involved in other partnerships, for better readability, they will link, from the next accreditation period, their doctoral training to their ComUE de rattachement (Paris-Seine).

These changes in the contours of the University of Paris-Saclay do not modify the projects and the general doctoral training strategy presented at the beginning of this document. With more than 1050 graduates per year on these new contours, the benefits of clustering remain the same. In addition, with the departure of institutions less likely to engage in more pooling and integration, the implementation of joint actions is facilitated. Projections have also been made that show that the target university should be able to rank between 16th and 20th in Shanghai's ranking.

For 4 doctoral schools (Interfaces, EDMH, SHS, STIC), however, these departures will lead to significant modifications or restructuring. For the others, these departures will require the perimeters of the latter to be adapted in terms of research units. Finally, it remains to define the conditions under which a partnership with "NewUni" could possibly be envisaged. These uncertainties may not all be resolved during the HCERES evaluation for the new accreditation period, but for the time being only the EDMH would be eligible for co-accreditation.

The most important development for doctoral training over the next five years should come from the University of Paris-Saclay's desire to organize its research and training through research in the form of "graduate schools". These are intended to be structuring for the future target university Université Paris-Saclay and to be implemented in 2020.

Institutional projects

a. THE DOCTORAL COLLEGE AT THE UNIVERSITY OF PARIS-SACLAY IS TARGETING



The [target university model](#) presented to the IDEX International Jury, places the **doctoral college at the heart** of the target Paris-Saclay University project and **also extends its model** to other national degrees (bachelor's and master's degrees). Some excerpts from this document that illustrate this desire are reported below.

- **Page 11:** *"Finally, at l'image of the Doctoral College aujourd'hui for doctoral schools, a Licensing College will ensure the cross-functional coordination of the ^{undergraduate} university school and the selective licensing cycle. This college will allow a collective vision of l'ensemble of the undergraduate courses s'appuyant on common services of l'Université Paris-Saclay, and the development of bridges between the different undergraduate courses, a key point for the success of this scheme. »*
- **Page 12:** *"Transversal coordination of the D and M courses will be ensured respectively by the continuation of the Doctoral College and the creation of d'un Collège des Masters. »*
- **Page 35:** *"at the transverse level between graduate schools, coordination functions and quality approach by level carried out by a Doctoral College and a Masters College, at l'image de l'action of the ComUE Doctoral College for the coordination of its Doctorate level. »*
- **Page 44 :** *"Training: Three colleges are constituted to deal with Bachelor's, Master's and Doctoral degrees, and have a steering committee composed in a similar way to that of d'un Doctoral College. These Colleges are the executive bodies of the shared policy of l'Université Paris-Saclay on their fields of competence, acting within the framework of the general policy decided by the CAC or the Board of l'Université [...]. The Colleges also prepare calls for projects, as well as the implementation in the field of the general training policy (coordination of training policies for parties and organizations, preparation of the HR conference, etc.). »*

The **convergence of doctoral training** policies and practices between institutions and between disciplinary fields has been the main objective in the period that is coming to an end. The next period will make it possible to **consolidate** what has already been built and to **continue this construction**, in particular in the direction of a stronger integration/articulation between master, doctorate and research.

In addition, the doctoral college is a space for sharing, dialogue and exchanges **between disciplinary fields**. Now that the foundations of a common doctorate have been laid, the doctoral college will be able to take greater advantage of its cross-functionality and the disciplinary richness of the Université Paris-Saclay to offer doctoral students training or events that provide them with an **interdisciplinary scientific perspective**. The [interdisciplinary thematic school](#), organized in 2016 for the doctoral students of the IDI programme, was a fruitful experience that should be developed in partnership with research units, Labex, Strategic Research Institutes, MSH etc.

Finally, the next period must be one of the effective entry of the Université Paris-Saclay on the **international scene**, in particular through its membership of European and international university networks (LERU, EUA...) and its entry into international rankings. The doctoral college has already begun to organize itself to meet the challenges of this greater international visibility (presence at international fairs dedicated to the recruitment of doctoral candidates, representation of UPSaclay in European networks, etc.) but will have to significantly strengthen its action in this area.

b. GRADUATE SCHOOLS

The doctoral college will participate in the reflection on the structuring of the University of Paris-Saclay with a view to integrating doctoral schools into **graduates schools with the** objective of making the **link** between **master, doctorate and research** more visible and readable while maintaining the benefit of **grouping** all staff and the **transversal nature of the doctoral college for the** visibility, readability and quality of the **doctorate**.



Graduate schools also aim to be on a human scale and provide a space where students, doctoral students, their teachers, researchers and partners can come together as members of the same "house" and exchange ideas, in a framework that encourages creativity and shared excellence.

For doctoral training, in addition to increasing visibility, these future "graduate schools", which should see the light of day at the beginning of the 2020 academic year, should enable master's students to acquire more quickly the basics of how to carry out a research activity, through a personal research subject arriving early in the curriculum, supervised by a tutor who personally supervises each student and a welcome in a research unit. The **possibilities for customising master's courses** offered by the [new national training framework](#) will be used in this sense, particularly for students wishing to pursue a doctorate (PhD track).

Graduate schools should also make it possible to welcome foreign students who wish to pursue a doctorate earlier, facilitating their learning of the French language and their adaptation to the French higher education and research system. Today, one third of all doctoral students have arrived in France for doctoral studies.

In addition to the benefits that will accrue to doctoral students, another challenge is to involve researchers from organizations more and earlier in the training through research activity. These represent 60% of the staff of researchers and research professors at the University of Paris-Saclay. The study of the supervision rates of doctoral students of the supervisors registered in the Adum database shows that the supervision potential of researchers in the organizations is not as mobilized as that of teacher-researchers. The transformation into "graduate schools" should make it possible to involve them more in the supervision of master's students, which could lead to more doctoral projects than at present.

University research school projects were submitted in 2017, of which doctoral schools will be an integral part. One of them was selected in 2017. We are preparing to respond to the second wave of the EUR call for projects in 2018.

The creation of graduate schools will also bring a new distribution of roles and responsibilities between the various entities concerned by doctoral students: the doctoral college, doctoral schools, graduate schools, but also libraries, international relations departments, tuition services, departments that establish doctoral students' employment contracts, etc.

While the distribution of missions, [defined by articles 3 and 4 of the decree of 25 May 2016](#), between **doctoral schools** and the **doctoral college** has no real reason to change, given that this distribution stems from our doctoral training strategy, on the other hand a reflection will have to be carried out on the re-organisation of the various other activities concerning doctoral candidates within graduate schools and which go beyond the scope of these missions (schooling, library etc.). The doctoral college council will be mobilized to contribute to this reflection.

C. CREATION OF THE NEW ESTABLISHMENT

The doctoral college will also be able to contribute to the reflection on the transformation that will lead to the disappearance of the current ComUE and the creation of the target Paris-Saclay University.

Having already worked, since 2015, in a very integrated way between institutions for the doctoral training activity has provided a first feedback. We were able to identify redundancies, sources of complexity and unmet needs, which cannot be addressed by the doctoral college and doctoral schools alone and which could be addressed through greater administrative integration within the framework of the target Paris-Saclay University. These had been the subject of a summary note by a dedicated working group of the doctoral college, which was brought before the DGS network in spring 2017.

In particular, today, each doctoral school brings together doctoral students enrolled in several different institutions or components of different institutions, within which the treatment of the various administrative issues concerning doctoral students can be organised in a different way and spread over several distinct



departments. In addition, for these services, doctoral candidates' files may remain a relatively marginal activity compared to other charges, even though this activity may require quite different skills from those useful for their main activity.

Now that the project to create the new establishment has been approved, the subject is becoming topical. In summary, we have identified as necessary to:

- better ensure and coordinate the handling of various **appeals, disputes** and disciplinary sanctions,
- provide teams from doctoral schools and the doctoral college with **access to the premises of** the various institutions concerned (badges for circulation, room reservations, access to computer networks, etc.).
- Better coordination of certain **human resources** issues, such as harmonizing the recognition of the activity of doctoral school directors, pooling professional training of staff, etc. ,
- simplify the methods of **financing the** activity of organising doctoral training at the University of Paris-Saclay, for example by setting **a priori** the allocations for the entire duration of an accreditation period and by limiting the annual discussion to a management dialogue, as is currently the case for RMUs, facilitating multiannual credit management and the submission of projects (e. g. H2020 SWAFS or Cofund),
- **Dematerialize** everything that can be and share information as much as possible in a common or interoperable information system, also simplify the management and circulation of information between institutions and services (website, electronic archives, etc.).
- to group, as far as possible, into a **single desk (s)** for doctoral students, the administrative treatment of the various issues that concern them and that can nowadays be dispersed into separate entities or services (schooling, employment contracts, residence permits, etc.). Specialize the activity of the staff of these services on the monitoring and processing of doctoral students' individual files or, more broadly, files relating to research and training through research.

At this stage, it seems to us that this could be done:

- in a **"doctoral house"** (as has been done, for example, for the European doctoral college of the University of Strasbourg), which could be run by the Université Paris-Saclay or, by subsidiarity, by a Member or Component of the Université Paris-Saclay, and which would deal, as far as possible, with the various issues related to the doctorate, on one or more geographical sites,
- or within a specialised support service in each **graduate school**, which would then handle all the files concerning students trained by the research, doctoral students and researchers,
- or in an intermediate configuration,
- In all cases, the doctoral student should be offered a **one-stop shop for** all his or her activities and that, in the department or departments concerned, administrative and technical staff can devote themselves full-time to training through research and/or research projects,

d. AUTHORIZATION TO CONDUCT RESEARCH

The University of Paris-Saclay will have to plan to grant the authorization to conduct research. The doctoral college will participate in the reflection, with the academic council, on what should be the conditions for the award of this diploma by the target Paris-Saclay University.

Inventory of the situation

Since the decree of 25 May 2016, doctoral schools have had a new mission to offer training to doctoral supervisors. These trainings could be integrated (or not) into the modalities of obtaining HDR.



The board of the doctoral college devoted one of its meetings to an assessment of what is currently being proposed in this area.

- The ABIES doctoral school offers, for example, an **internship programme**. A team of volunteer supervisors composed of experienced thesis directors trained in companionship accompanies HDR candidates. In addition, each year, a "MasterClass" is organized to share experiences in workshops: international thesis co-supervisors, interdisciplinarity, conflict management, etc.
- The SdV doctoral school also offers **management training** using an HR management strategy consulting firm. The training is offered over 6 days (3 modules of 2 days each for a maximum of 18 places), in the form of workshops: conflict simulation, demotivation, rivalry, failure. The EDOM and EDSP doctoral schools have benefited from this and also have a very positive experience.
- The EUA-CDE thematic symposium in January 2018 included a MasterClass which made it possible to take stock of the situation at European level on this subject.
- The SGroup European Universities' Network has published a summary document on [good doctoral supervision practices](#) following a symposium on this subject.
- Finally, EURODOC published a [Handbook for Supervisors of Doctoral Candidates at the](#) end of a European Erasmus+ project "[SuperProfDoc](#)" on this subject.

Proposed training content and formats

The training formats must be adapted to active teacher-researchers and researchers, either within the University of Paris-Saclay or from other institutions. It is desirable to offer several sessions throughout the year and several formats ("classical" training in the form of conferences, MasterClass, Role Playing Games, Moocs, companionship etc.) to adapt to diversified expectations.

The training should address the following questions:

- European, national and local framework for doctoral training,
- Supervision of people, management of humanly difficult situations,
- How to finance and manage doctoral projects,
- Research ethics and scientific integrity,
- Open-Science, intellectual property, copyright.

A [one-day pilot workshop was held on 13 July 2018](#) to train supervisors. It generated a lot of enthusiasm and finally brought together more than fifty thesis directors who exchanged ideas in a "master class" format to co-construct a doctoral supervision training program. This workshop began with a series of exchanges with the doctoral college's management to present the main issues and take stock of the situation on this subject, then choose the themes for reflection in the workshops. This first sequence was followed by discussions in small groups on the selected themes and finally a third sequence of restitution and synthesis made it possible to prioritize these needs and define the training methods to be used.



Other issues to be addressed

The design and organisation of training courses may be taken over by doctoral schools or the doctoral college since this is now part of the missions of doctoral schools, but the decree of 25 May 2016 does not specify the methods of financing these courses (vocational training?) and the link between these courses



and the HDR (obligation of such courses to pass the HDR?). These issues will have to be addressed before the end of 2019.

Projects specific to doctoral training

a. NEW PROGRAMS AND PARTNERSHIPS

IDEX Program

The Doctoral Charter of the Université Paris-Saclay states that *"together, the members of the Université Paris-Saclay seek excellence and encourage originality and scientific risk-taking, as well as the international and interdisciplinary openness of the doctoral projects involved"*.

From 2012 to 2017, IDEX supported interdisciplinary doctoral projects through the Interdisciplinary Doctoral Initiative (IDI) program, which funded 30 new interdisciplinary doctoral projects each year.

From 2018, the doctoral college and the International Relations Department plan to set up an ambitious programme to support international doctoral projects (double doctoral degree agreements). The objective would be to maintain IDEX funding equivalent to 30 doctoral contracts by directing 15 doctoral contracts per year to interdisciplinary projects and 15 doctoral contracts per year to encourage the implementation of 30 new international projects per year in partnership with foreign institutions with which we have already established framework agreements or with which we wish to establish them.

In 2018, IDEX Paris-Saclay supported an [experimental program](#) dedicated to the implementation of doctoral projects in international thesis co-supervision. At the end of June 2018, this programme was endowed with funding dedicated to mobility and support for doctoral projects for a total amount of €60k and funding dedicated to the remuneration of doctoral candidates equivalent to 216 months' salary (or 6 three-year doctoral contracts). 38 eligible applications were submitted (17 F and 21 H) and 12 projects were selected (6 F and 6H), all co-financed, with the following countries (Australia, China, Colombia, Germany (3), Greece, Hungary, Italy (2), Lebanon, United Kingdom).

Relations with companies

A [partnership](#) has just been signed with **AYMING, a company** specialising in performance consulting for companies which, in particular, advises SMEs and ETIs on the financing of research and innovation, partnerships and research tax credits. This [partnership aims in](#) particular to develop the missions of doctoral consultants, which are an integral part of some of the "doctoral career" paths. It also aims to facilitate the preparation of CIFRE theses and the recruitment of young doctors.

We have also planned to set up (see the doctoral college's internal regulations) a **committee of representatives of socio-economic circles (CoRSE)** which should meet once or twice a year to organise a dialogue with local companies on the subject of doctoral training at the Université Paris-Saclay. This action has already been initiated in collaboration with the Department of Corporate Relations at the University of Paris-Saclay.

- The first objective is to involve the companies of the Paris-Saclay cluster in the **training paths of doctoral candidates "doctoral careers"**, so that they can participate in the meetings between doctoral candidates and companies that are organised in these paths and also to exchange on the content of the training,
- The second objective is to exchange on questions relating to the **professional future of doctors, for example, on the results of the survey, on the conditions under which the doctorate can be**



recognised when hired, on the missions that companies entrust more specifically to doctors, the careers of doctors, gender equality policies, etc.

- Finally, we would also like to set up a **sponsorship program** to support the integration of doctoral candidates with disabilities, to contribute to "doctoral career paths" or to contribute to the award ceremony for doctoral degrees.

The first two meetings are scheduled for 11 October 2018 and 12 April 2019. In addition to the relevant members of the doctoral college board, this committee currently includes the following members. It is planned to contact a few more companies and ANDRH (national level or Essonne branch).

Name	First name	Function	Company name
GATE	Philippe	Scientific Director	ARVALIS Institut du végétal, the technical institute at the service of farmers and sectors
BAKHTI	Fatima	Nokia Location Development Leader	NOKIA
DI GIOIA	Lodovico	Research engineer in the Water Division	DANONE
SAHUT	Bernard	Head of the StelLab network	Scientific & Future Technologies Department PSA
MAISTER	Franck	Innovation Team Head of WAI Massy Saclay	BNP Paribas
BEN OUEZDOU	Féthi	Scientific Director	VEDECOM
LLEDOS	Bernard	Project manager	AIRLIQUID
PROVIDE	Michael	Managing Director	SATT Paris Saclay
GOZLAN	Yann	CEO of <i>Creative Valley</i> ,	CREATIVE VALLEY
JEAN JEAN JEAN	Marie Christine	Assistant Director Innovation and Entrepreneurship	CPS
DEMEURE	Cedric	VP Thales R & T, France	THALES
BUY	Olivier	Director of Innovation	HORIBA
GROGNET	Jean-Marc	Director of the Genopole	Genopole
LITRICO	Xavier	Scientific Director	SUEZ
TICKET	Laurent	Scientific Delegate	EDF
JAMAULT	Armelle	HR Action / Skills	Systematic
MIGNOTTE	Vincent	Director	GBS
DI GIOIA	Tania	Director of Innovation and Corporate Relations	University of Paris-Saclay

b. NEW TOOLS

Dematerialization of electronic signatures and archives

After a feasibility study conducted in 2017 by [Sollan](#), a project for the dematerialization of signatures and the permanent electronic archiving of documents of evidential value (appointment of jury, rapporteurs, authorization of defence or registration, etc.) was launched in 2018. On the basis of the study carried out by Sollan, the specifications and specifications were finalised in early 2018 by the IT Department of the



University of Paris-Saclay and the doctoral college. Developments will be conducted in 2018. The deployment (configuration, training, support) can only be done outside the periods when the information system is most intensively used (competition period, registration & support period). This deployment is therefore expected by February 2019. This evolution is eagerly awaited by doctoral students.

	Number of doctoral students	%
Disagree at all	12	1,6%
Rather disagree	32	4,1%
No opinion	105	13,6%
Somewhat agree	200	25,9%
Strongly agree	424	54,9%
All together	773	100%

Doctoral students' response to the question "What do you think of the project to dematerialize signatures in Adum and to electronically archive documents of evidential value (registration, re-inscription, defense) during the survey of doctoral students between December 2017 and January 2018?"

Bibliometrics

A project is underway between the doctoral college and the Learning Center, in order to be able to monitor, in real time, the scientific production of doctoral students with the same tools as that of all researchers and teacher-researchers at the Université Paris-Saclay, with two main objectives:

- highlight the contribution of doctoral students to the general scientific production of the University of Paris-Saclay and the strategic nature of doctoral training for a major research university,
- organise a communication on doctoral students' publications in order to make their work better known and to enhance their individual value.

Website

The creation of the target Paris-Saclay University will necessarily lead to an evolution of the current Paris-Saclay University website and the transformation of the member institutions' websites, and more particularly that of the Paris-Sud University. The doctoral college intends to participate in discussions on the architecture of the new website, in particular with regard to the future web pages of the doctoral college, doctoral schools and future graduate schools, with the aim of minimizing as much as possible the subsequent burden of maintaining up-to-date and consistent doctoral-related information on these future web pages. This new communication architecture will undoubtedly depend on the distribution of roles and responsibilities between these entities within the target Paris-Saclay University, already mentioned in the chapter on "institutional projects".

Quality

ISO9001 - 2015 certification provides for the organisation of annual internal audits prior to certification audits. These internal audits are valuable opportunities for exchange and discussion (visits to ED secretariats, exchanges on good practices, etc.). We would like to organize a team of internal auditors in order to be more autonomous in their implementation than at present. Indeed, we use a quality consulting engineer to lead these internal audits (prepare the auditors, conduct the first audit(s) of the year and report on the audits). This one does a very good job but is not very available. This would involve forming a small group of qualified internal auditors to

- be able to organise internal audits throughout the year and meet more people in their field each year,



- to be more autonomous in the organisation of these internal audits,
- share the approach with entities other than the doctoral college or doctoral schools.

C. ADDITIONAL DOCTORAL TRAINING

Career paths for doctors

Two of the eight "doctor career paths" initially planned have not opened in 2017 and we have the project to open them in 2018 or 2019. Six of them are already working.

These courses are based on role-playing, teaching, consulting and expertise, valorisation or scientific mediation. The doctoral college also intends to set up communication supports to promote these complementary missions among doctoral students, thesis directors and socio-economic partners (brochure, website).

Harmonization between doctoral schools

Each of the doctoral schools defines the modalities of collective training of doctoral students (number of hours of additional training requested in particular) and validates the doctoral students' training plans. Today these modalities are quite similar between doctoral schools but with differences from one doctoral school to another, including on the transversal training courses that are proposed in the doctoral college catalogue. Doctoral students repeatedly request that expectations for additional doctoral training be "clarified". Consideration should be given to harmonising the expectations and possible obligations, at least on the transverse part.

Monitoring the professional future of doctors

a. CONDUCT OF INVESTIGATIONS

The 2018 survey was the first to be conducted among doctors who graduated from the University of Paris-Saclay. The following surveys will be carried out annually among doctors who have defended their thesis in order to be able to follow the evolution of employment, at the end of their studies, at 1 year, 3 years and 5 years. For future surveys, it is planned to use thesis directors from day one and significantly reduce the collection time, the number of reminders per mailing and, if possible, the number of questions.

b. DATA PROCESSING

A doctoral consulting mission, supervised by a senior researcher in the field of quantitative social sciences, will be hired to draw the best possible lessons from this survey, put the results into perspective and advise us for future surveys.

[The PhDFuture](#) platform has been translated into English and will be improved and enriched as new surveys are conducted and new data become available to provide a **permanent space for information on academic and extra-academic opportunities**.



C. MEASURES PLANNED AS A FOLLOW-UP TO THIS INVESTIGATION

A specific action will be launched, in partnership with the **association Femmes et Sciences** and with the mission of the Université Paris-Saclay pour la diversité, l'égalité et le handicap (**MDEH**), to set up a **"mentoring" offer** specifically dedicated to the professional development of women doctors.

An **association of Alumni Doctors is being** created and should be created in 2018.

Doctors who responded to the survey and who agreed to be contacted following this survey, may be asked to create **two networks of ambassadors**:

- a network of ambassadors in the major **foreign universities** that welcome many of our doctors, in order to develop mobility,
- and a network of ambassadors **in companies**.

