Welcome and information meeting to new PhD candidates

http://www.universite-paris-saclay.fr/fr/formation/doctorat/ed-eobe

Ecole doctorale
Electrical, Optical, Bio: Physics and Engineering (EOBE)

Information and welcome meeting of new PhD candidates
Introduction and presentation of the doctoral school

- The PhD project: several actors
- Main points of the following-up of PhD candidates
- Doctoral courses:
  - Université Paris-Saclay offer
  - EOBE framework
- Information and good practices regarding the PhD project
- Your ADUM account
- Message from the second year PhD candidates
- Discussion & Questions.
Welcome to everyone.

Why a PhD project?

Motivations can vary from one to one:
- Get the higher possible degree
- International degree
- Be implied in in research or research and development
- Work later in a specialized area
- Enlarge my network through collaborative activities and conferences
- etc

• The PhD project: ~3 years during which the PhD candidate is essentially focused on his/her research activity.
• Enthusiasm, dynamism, methodology, ability to work with other people are generally key points for success.
Université Paris-Saclay doctoral space

- ABIES - Agriculture, alimentation, biologie, environnement, santé
- A&A – Astronomie & Astrophysique en Ile de France
- Biosigne - Signalisations et réseaux intégratifs en biologie
- CBMS - Cancérologie, biologie, médecine, santé
- EDMH - Ecole doctorale de mathématiques Hadamard
- EDOM - Ondes et matière
- EDSP – Santé Publique
- **EOBE - Electrical, Optical, Bio - physics and Engineering**
- Interfaces - Interfaces
- ITFA - Innovation thérapeutique du fondamental à l'appliqué
- 2MIB - Sciences Chimiques : Molécules, Matériaux, Instrumentation et Biosystèmes
- PHENICS - Particules, hadrons, énergie et noyau : instrumentation, imagerie, cosmos et simulation
- PIF - Physique en Ile de France
- SDSV - Structure et dynamique des systèmes vivants
- SEIF - Sciences de l'environnement d'Ile-de-France
- SHS - Sciences de l'homme et de la société
- SMEMaG - Sciences mécaniques et énergétiques, matériaux et géosciences
- STIC - Sciences et technologies de l'information et de la communication
- SSMMH - Sciences du sport, de la motricité et du mouvement humain
- SdV - Sciences du végétal : du gène à l'écosystème

**Paris-Saclay doctoral chart et Internal rules of the Paris-Saclay doctoral college:**
https://www.universite-paris-saclay.fr/en/doctorat/textes-de-reference
https://www.universite-paris-saclay.fr/fr/doctorat/textes-de-reference

**Head:**
Pr. Sylvie Pommier
Main research laboratories:

- **GeePs - Génie électrique et électronique de Paris** - [http://geeps.lgep.supelec.fr](http://geeps.lgep.supelec.fr)
- **IR4M : Imagerie par Résonance Magnétique Médicale et Multi-Modalités** - [http://www.ir4m.u-psud.fr](http://www.ir4m.u-psud.fr)
- **C2N- Centre de Nanoscience et de Nanotechnologie** - [http://www.c2n.universite-paris-saclay.fr](http://www.c2n.universite-paris-saclay.fr)
- **LCF - Laboratoire Charles Fabry** - [https://www.lcf.institutoptique.fr](https://www.lcf.institutoptique.fr)
- **SONDRA/SUPELEC** - [http://www.supelec.fr/sondra/](http://www.supelec.fr/sondra/)
- **CEA/DSM/IRFU/AIM** - [http://www.irfu.cea.fr](http://www.irfu.cea.fr)
- **Institut de Myologie/Laboratoire RMN** - [http://www.institut-myologie.org/ewb_pages/r/recherche_labormn_projets_s...](http://www.institut-myologie.org/ewb_pages/r/recherche_labormn_projets_s...)
- **ONERA - Département Mesures Physiques** - [http://www.onera.fr/fr/site-index/departement-mesures-physiques.html](http://www.onera.fr/fr/site-index/departement-mesures-physiques.html)
Flexible LEDs based on nanowires (M. Tchernycheva/IEF)

Energy systems for energy for mobility and environnement (O. De La Barriere/SATIE)

Nanofluidics for biology (A.M. Hahiri/LPN)

Electromagnetism (GeePs)

Interaction of light with substance to be detected

Mid-IR GeSi photonics (D. Morini/IEF)
Continuum between physics and engineering in the domains of electronics-nanoelectronics, electrical engineering and electromagnetism, optics/photonics/optoelectronics, sensing (sensing devices, instrumentation, metrology), imaging methods and techniques for life sciences.
Main topics of the EOBE doctoral school

1. Electromagnetism and electrical engineering
   - Electrical engineering, materials and systems for energy
   - Electromagnetism, antennas, radars, electromagnetic compatibility, propagation, diffraction systems
   - Photovoltaics
   - Physics of discharges and applications

2. Electronics, spintronics, et photonics
   - Electronics, integrated circuits, architectures, RF/telecoms circuits
   - Optoelectronics, photonics, integration
   - Nanoelectronics, nanophotonics
   - Magnetism, microstructures, spintronics

3. Micro-nano-bio-technologies, microsystems, sensors, instrumentation, metrology
   - Micro-nano-systems, nano-micro-technologies
   - Materials, thin films
   - Sensors, instrumentation, physical measurements, metrology
   - Biophysics, on-chip biology and biosensors

4. Optical systems/vision, physics and imaging systems for bio-medical appl.
   - Optical systems and metrology, physics of images
   - Date and image processes related to sensors and measures
   - Medical images, biomedical engineering, Physics for medicine

Information and welcome meeting of PhD candidates
1. Electromagnetism and electrical engineering

2. Electronics, spintronics, photonics

3. Micro-nano-bio-techn., microsystems, sensors, instrumentation, metrology

4. Optical systems/vision, physics and imaging systems for biomedical applications

Information and welcome meeting of PhD candidates
Where can I find information?

- The doctoral school website contains most of the practical information:
  - Everything is given in French and English
  - FAQs for registration and for Defense

  [Website Link]

Regarding:

- The doctoral courses
- The (re-)registration procedures
- The defense procedures

May you have any more question, you can send an email to Mrs Stephen or to your direction board member.

[Alternate Website Link]
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<table>
<thead>
<tr>
<th>Who:</th>
<th>Role:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD candidate</td>
<td>Chose the PhD topic, do a research activity within the supervision of a research, publishes results with the explicit agreement of the supervisor, writes a manuscript and defends</td>
</tr>
<tr>
<td>PhD supervisor</td>
<td>Decide the PhD topic content and supervises the PhD candidate project; deals with matter related to the PhD project</td>
</tr>
</tbody>
</table>
| Director of the research laboratory | Accepts the PhD topic proposed by the supervisor  
 Welcomes the PhD candidate within his/her laboratory                                           |
| Director of the doctoral school | Ensures that the material conditions of the PhD candidate are satisfying, settles a following-up procedure of the PhD project, organizes all the administrative steps for the registration and defense, supervises any specific procedure (delays, any conflict, etc). Organizes the doctoral school life, is implied in the monitoring of the doctor job positions. |
| President of the University   | Is the legal responsible for the PhD candidate and project, takes most of the official decisions by relying on the doctoral school proposals |

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https://www.universite-paris-saclay.fr/fr/doctorat/textes-de-reference
Role of the PhD supervisor:

- Ensures remuneration of his PhD students during the whole duration of the PhD
- Elaborate the PhD project in cooperation with the PhD student
- Ensures a frequent and regular follow-up of the thesis advancement
- Provides the needed resources for the accomplishment of the PhD project
- Encourages the PhD student to attend useful modules for his PhD project
- Commits to help the PhD student preparing the rest of his career
- Incites and helps the PhD student to publish his work
- Advices the PhD student for the writing of the manuscript and the preparation of the defense
- Proposes the two reviewers for the manuscript and the jury’s members for the defense
# Rights and obligations of the PhD student

<table>
<thead>
<tr>
<th>Interlocutor</th>
<th>Rights</th>
<th>Obligations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>Timetable established together: meetings, milestones, intermediate reports, etc</td>
<td>Regularly informed of the progress of the work, including difficulties</td>
</tr>
<tr>
<td>Laboratory</td>
<td>Working conditions identical to the other members of the institution</td>
<td>Safety regulations, attendance, professional and intellectual property rules of the institution.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tasks of general interest.</td>
</tr>
<tr>
<td>Institution</td>
<td>Voting for the representatives in the institution</td>
<td>Access to common rooms and services</td>
</tr>
<tr>
<td>Doctoral school</td>
<td>Appointment when required</td>
<td>Informed about his/her position during 5 years after the defense</td>
</tr>
</tbody>
</table>
Information and welcome meeting of PhD candidates

Get the PhD degree:

Doctorate awards ceremony!

Get the PhD degree: prepared at ...
Outline

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- Discussion & Questions.
But before: have a careful look at the doctoral school website

You, as the PhD student

- Mrs Stephen + Only one director during the thesis

Information and welcome meeting of PhD candidates

Quickly contact your key ED director for any matter: conflict, health issue, etc
Following-up committee default members of your PhD project are:

BAP = BEN-ABDALLAH Philippe
BS = BOUCHOULE Sophie
CE = CASSAN Eric
DP = DESSANTE Philippe
GJC = GINEFRI Jean-Christophe
MF = MAZALEYRAT Frédéric

+ All the scientific follow-up actions carried out by the research laboratories: doctoral seminars, PhD students' days, etc:
The doctoral school accompanies these actions, lists them, and collects the return of the laboratories.

e.g. **DP**+GJC+MF or **BAP**+BS+CE

You have neither nothing to do neither to declare within your ADUM space.
The EOBE following-up confidential questionnaires

Filled by the PhD candidate:

Filled by the industry supervisor (if any):

Filled by the PhD supervisor:

We encourage you to read them early.

Focus on the questionnaire filled by the PhD supervisor:

- Technical skills for the PhD topic: A/B/C
- Scientific skills for the PhD topic: A/B/C
- Autonomy (can find information and solutions alone): A/B/C
- Ability to manage the research topic bibliography (find and draw an efficient synthesis): A/B/C
- Ability to find new solutions to problems: A/B/C
- Self-adaptation capacity (and ability to learn new tools and methods): A/B/C
- Ability to explain one's results: A/B/C
- Ability to organize one's scientific strategy: A/B/C
- Presence and punctuality: A/B/C
- Quality of the sollicitations to group members (ask when needed): A/B/C
- Integration within the research team: A/B/C
- Quality of the professional relationship with the staff: A/B/C

A: Good
B: Average
C: Not enough

Conclusion: one reply between the four:

• I am truly satisfied of the PhD candidate.
• After initial difficulties, the PhD candidate has entered a positive slope regime for the project.
• I am doubtful that the PhD candidate can achieve his/her project.
• The PhD candidate cannot achieve his/her project.
Introduction and presentation of the doctoral school

The PhD project: several actors

Main points of the following-up of PhD candidates

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Information and good practices regarding the PhD project

Your ADUM account

Message from the second year PhD candidates

Discussion & Questions.
The doctoral training program is a key component of the doctoral project as defined in the Order of May 25, 2016.

These courses are basically of two types:

- **"Scientists courses"** aiming to provide scientific skills to strengthen the PhD activity or to open their knowledge in other fields than the PhD one.

- **"Professionnal courses"** allowing the doctoral students to develop his/her skills to integrate a job (especially in private companies), once doctor.

These doctoral trainings represent a chance for each PhD student to enrich his/her range of skills and/or prepare the future insertion in an academic job or in the private sphere. Let us notice that the catalogue offered by the University Paris-Saclay are very rich.

**From an organizational point of view:**

- Each PhD student can manage his training from his/her ADUM personal space ADUM (application to courses, uploading of courses' certificates, edition of the courses'list summary).
- During each interview with the Deputy Director of the EOBE doctoral school, a point is made systematically concerning the PhD training courses.
- Your privileged interlocutors to discuss with and receive advices are your PhD supervisor and the doctoral school.
- You are strongly advised to have attended all your doctoral courses at the end of the 2nd PhD year.

**Before attending trainings, you have to submit its program to your deputy director and register the course only after.**
The composition of the EOBE doctoral school training program is as follows:

- **A minimum of amount of 110h** is to be followed by each doctoral student for the duration of his/her thesis, (no exception).
- **2 professional and 2 scientific modules must be followed.**
- 1 single training module, even of a very large number of hours, cannot validate more than one course.
- The balance between professional and scientific modules must be limited to a maximum asymmetry of 60% / 40% of the hourly volume followed within the doctoral training program.
- Learning French for non-francophone students is accepted (and recommended) by the school. It will result in the validation of a Pro module if the number of hours monitoring is greater than or equal to 30h.
- A cultural language module (learning the language for itself) is recognized by the doctoral school, including in the case of English. One maximum technical language module can be considered.
- Involvements in the organization of scientific events (seminars, conferences, etc.) can be considered if the doctoral student investment involved is estimated to be high enough by the direction of the doctoral school. Such participation should, naturally, be certified by the head of the organizing committee. This type of transverse tasks will result, at most, to the validation of a Pro training module.
- The involvement of doctoral students in the organization of events addressed to the general public (“Fête de la Science”), or involvement in actions of dissemination of science (elementary schools, secondary schools) will be considered also as Pro Module if the involvement is estimated as satisfactory (discussed case by case with the direction of the doctoral school).

\[
\begin{align*}
40\% \text{ of } 110h &= 44h \\
60\% \text{ of } 110h &= 66h \\
Pro + Sci &\geq 110h \\
Pro &\geq 44h \\
Sci &\geq 44h
\end{align*}
\]

Over 3 years
From an organizational point of view:

- Each PhD student should manage his training from his/her ADUM personal account (applications to trainings, file tracking certificates, edit training program statements of accounts).
- At each meeting with the (deputy) director of the doctoral school, a point is made concerning doctoral training. The PhD student must prior to the meeting have completely updated his/her training program within his/her ADUM space.
- The contact people of each doctoral student are his/her PhD supervisor and the doctoral school itself.
- It is strongly advised to have completed all courses at the end of the second PhD year.

**Note:** Before attending trainings, its nature and its program must be submitted by the PhD student to the (deputy) director of the doctoral school who follows him/her, which will validate (most often) or not the request. Registration will then be performed by the PhD student.

- **Part-time PhD degree:** Standard program required if no permanent contract
- **Permanent contract (CDI):** No PRO course
- **Joint PhD (Cotutelle internationale):** Half of the standard program

**Any question?:**
Introduction and presentation of the doctoral school

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Discussion & Questions.
PhD duration

- The standard duration is 3 years, but this needs an active involvement!
- The PhD student is committed to end his/her thesis in 36 months.
- The 4th year registration is allowed only on exemption.
- If the duration is longer than 36 months, funding has to be insured.

The PhD supervisor and yourself have to anticipate this deadline (at least 6 months before).
Progress of the PhD

- **3 years is short!!**

The thesis is a living personal project to be carried out dynamically and enthusiastically.

<table>
<thead>
<tr>
<th>Year</th>
<th>Step</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>Entering the subject</td>
<td>Bibliography Scientific Modules</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Production</td>
<td>Experimentation First publications Professionnal Modules</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>Production and defense</td>
<td>Submit a journal paper Writing Defense</td>
</tr>
</tbody>
</table>
Publications

• Valuation of works:
  Seminars, congresses, publications

• How many?:
  By default, one journal paper and one intern. conf. com. are required by the EOBE doctoral school

• Advice:
  Participation to at least one international conference

• Remark:
  The communication of any result needs the explicite agreement of the PhD supervisor
The defense (1/2)

- **Conditions:**
  - Writing the PhD thesis
  - Agreement of the supervisor
  - Sufficient scientific production
  - Validation of all scientific and professional modules

- **4 steps**
  1. Designation of two external reviewers
  2. Designation of the jury
  3. Authorization of the defense according to the reviewers’ reports
  4. Legal deposit of the thesis: ADUM + Appointment with the library
The defense (2/2)

• Writing the PhD thesis
  - Full report different from the papers
  - Not gathering the papers

  Sometimes a very difficult step!:  
  - Test before your ability to organize ideas and write.
  - Allocate enough time for writing the manuscript in agreement with your PhD supervisor.

• Language: in French by default
  Possible exemptions upon written request are accepted for writing in English (only); an extended summary in French is the required (5-10p)

• Defense: in French by default
  Exemptions: if all jury members agree with a defense in English
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Your ADUM account

TOOL THAT WILL FOLLOW YOU ALL ALONG THE PHD (AND THAT MAY BE USED AFTER):

At any time during the thesis:
- I upload the list of each my publications,
- I upload my doctoral trainings including attestations, etc

PhD period: use of

- \( R_1 \)
- \( R_2 \)
- \( R_3 \)
- \( D \)

\( R_j = \) Registration « j »
\( D = \) Defense procedure (soutenance)

Any question?:

https://www.universite-paris-saclay.fr/fr/formation/doctorat/ed-eobe#inscriptions-reinscriptions-informations-preliminaires
• Take in charge by yourself to learn all the possibilities offered by your ADUM personal account.
• Things are pretty intuitive and you can switch in English.
Publications:

Within ADUM

- 2016 - Comparison of three measuring systems at high frequency for non oriented silicon steels: influence of the rolling direction on magnetic losses and B(H) curve
- 2015 - Skin effect in steel sheets under rotating induction
- 2014 - Comparaison des systèmes de mesure et influence de la direction de laminage sur les pertes magnétiques et sur la courbe anhystérétique
Information and welcome meeting of PhD candidates

Your ADUM account

Journal article or conference communication, etc

URL when possible
All doctoral schools can be managed here

Master 2 courses, research schools, etc
ADUM will follow your process; eg: Towards the PhD defense

Deposit Space for the digital file of the thesis manuscript, identical to the version transmitted to the jury members.

To download the required documents to get the authorization to defend your thesis, you must (caution! check the deposit deadline with your establishment) upload the PDF version of your thesis, identical to the version transmitted to the jury members, and define the dissemination rights according to the establishment. It is compulsory to deposit this file before the defense, according to the Order of 7 August 2006. This will also allow the BU (University Library) to check the format of the file. You have to check the validity of your PDF file with the tool FACILE of the CINES. If your file is declared invalid, please do not hesitate to contact the CINES Support service, by clicking on the link on the top of the page: “demander une analyse de second niveau”.

No later than 3 months after the defense, you will have to upload in your Private space the definitive file of your thesis, which must comply with the corrections requested by the jury.

Thesis Archiving version --> Save my file

Is the archiving version the same that the dissemination version?  ☐ non  ☑ oui

Dissemination area of your thesis:
- Do you want your thesis to be disseminated by your establishment via the Internet network?  ☑ yes  ☐ no
- Do you assign the ESTABLISHMENT the Reproduction rights, including the Printing and the Copying rights on any medium?  ☑ yes  ☐ no

By saving the page, YOU DECLARE YOU HAVE UPLOADED your PhD Thesis digital version, identical to the version transmitted to the jury members, and YOU HAVE CHECKED the PDF validity with the CINES “FACILE” tool.
Regarding all the administrative steps: \( R_1 + R_2 + R_3 + D \) (+ additional \( R_{js} \), if needed):

**Print, fill, and respect the checklists**
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Preliminary information:

- 5 PhD students are elected each year for one year
  - Representatives of the doctoral school PhD students within the ED council and may contribute to help:
    - e.g. to the POST-THESIS DOCTORAL SCHOOL DAY ORGANIZED IN SPRING EACH YEAR (jointly with the STIC doctoral school in 2016 and 2017)

In 2017:

- pierre.bonnet@u-psud.fr
- Juliette.LeHir@geeps.centralesupelec.fr
- guillaume.marcaud@u-psud.fr
- olivier.lefebvre@c2n.upsaclay.fr
- abounar@ens-cachan.fr

- Elections between January 15 and February 15 février of each year
- Short period to collect the applications
- On-line vote organized by the doctoral school
- You can apply several times
- We encourage to ensure that representatives from the main different locations of the EOBE laboratories are present (eg ‘Orsay-Vallée’, ‘Gif-Plateau Moulon’, ‘Palaiseau Plateau-IOGS’)
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Discussion & Questions

Any more question?:

ed_eobe@universite-paris-saclay.fr

https://www.universite-paris-saclay.fr/fr/formation/doctorat/ed-eobe#contacts-acces