

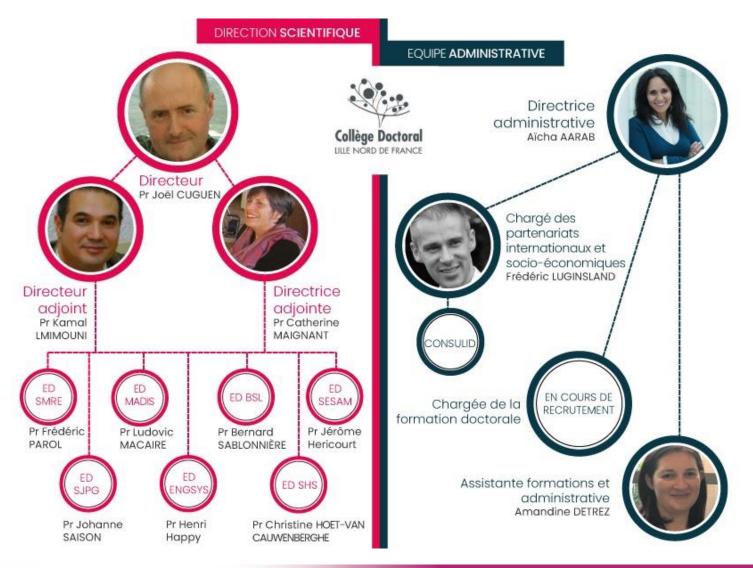


ENGineering and SYstems Sciences

Sciences de l'ingénierie et des systèmes



ED ENGSYS in Doctoral College Lille Nord de France





ED ENGSYS – New references

Direction

Dir-edengsys@univ-lille.fr Henri.happy@univ-lille.fr

ED administration

Sec-engsys@univ-lille.fr

Mrs Thi NGUYEN
Thi.Nguyen@univ-lille.fr

Mrs Céline GLOANEC celine.gloanec@univ-lille.fr

Web site

https://edengsys.univ-lille.fr



D1 StartDoc meeting Outline

ADSL: Association of PhD students in science at University of

Lille – C. MOKTHARI)

Introduction
ENGSYS doctoral school
Main Missions

Training courses
D1 Individual Monitoring Committee (CSI)
Thesis defence

After PhD

Professional project (L. DESPLANQUE- W. LHOMME)
IEEE society student branch – M. ALAWAR



General introduction

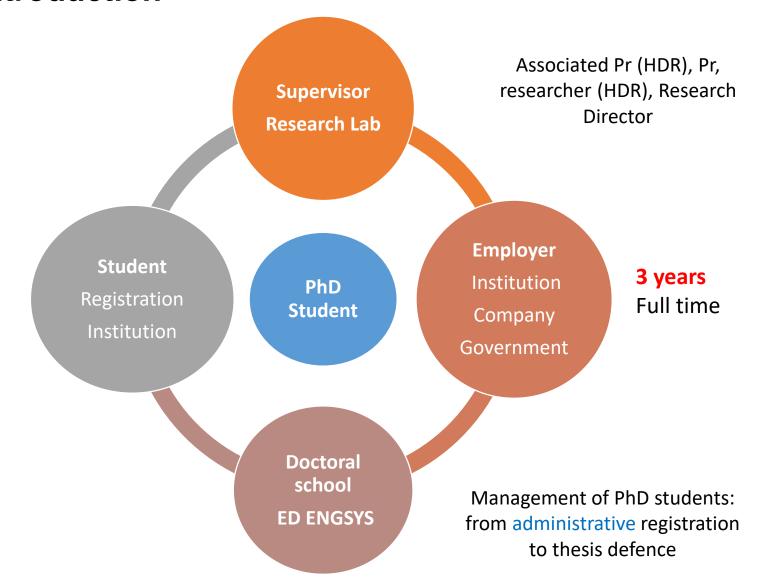
PhD in France













General introduction

ED ENGSYS (ADUM)

Validation of administrative registration

Institution Registration

| Institution | Contact |
|---|--|
| Université de Lille (ULille) | Celine.gloanec-diot@univ-lille.fr ** |
| Centrale Lille Institut (CLille) | V. Fleury and M. Baidan Scolarite.phd@centralelille.fr |
| Institut Mines Nord Europe | <u>inscription@imt-douai.fr</u> <u>christine.charlet@imt-lille-douai.fr</u> |
| Université Gustave Eiffel (Univ Eiffel) | sebastien.gaglianone@univ-eiffel.fr |



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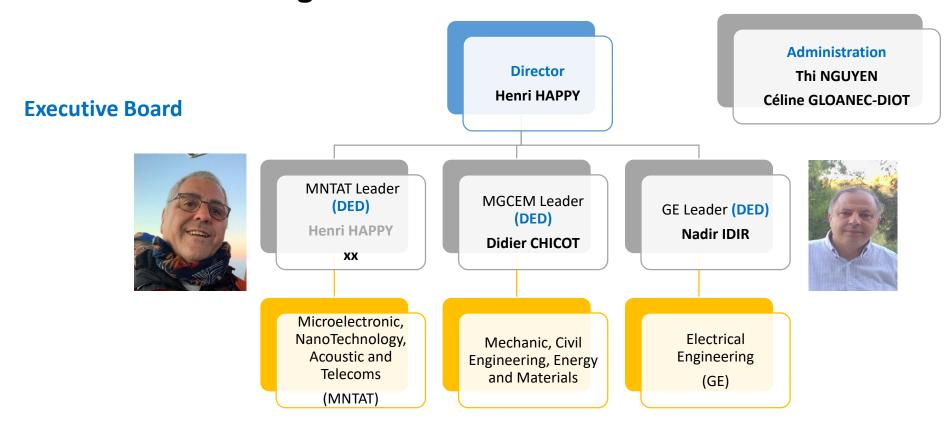
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ED ENGSYS - Organization



Legislative Board

Council of ED ENGSYS

(3 meetings/year)



ED ENGSYS Datas (2020-2021)

Research Units (208 HDR)

| Disciplinary field | Research units |
|--------------------|----------------------------------|
| MGCEM (72) | CERI EE (4) GEMTEX (11) |
| | LAMCUBE (21) LGCGE UML (19) (11) |
| MNTAT (119) | IEMN (116) COSYS (3) |
| GE (17) | L2EP (17) |

Dual referencing of HDR



ED ENGSYS Datas (2020-2021) 291 PhD students

| Disciplinary field | Doctorate speciality |
|--------------------|--|
| MGCEM (72) | Génie civil(54) Energie, Thermique, Combustion (2) Mécanique des milieux fluides (19) Mécanique des solides, des matériaux, structures et surfaces (41) Mécanique, Energétique, Génie des procédés, Génie civil (29) Génie des matériaux / Biomécanique et bioingénierie |
| MNTAT (119) | Electronique, Photonique (15) Electronique, Microélectronique, Nanoélectronique, microondes (62) Micro-nano-systèmes et capteurs(26) Acoustique (14) Systèmes optiques et photoniques Génie des matériaux / Biomécanique et bioingénierie |
| GE (17) | Génie électrique (29) |



ENGSYS Doctoral School – Datas (2020-2021)

PhD per Institution

| Institution | # students |
|---|------------|
| Université de Lille (ULille) | 206 |
| Centrale Lille Institut (CLille) | 62 |
| Institut Mines Nord Europe (IMT) | 23 |
| Université Gustave Eiffel (Univ Eiffel) | 0 |
| Total | 291 |



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- Agreement for PhD registration in co-accredited institution (CLille, ULille, IMT, Univ Eiffel)
 - Documents needed for an application to doctoral studies (transcripts, motivations,...)
 - Funding (proof of funding for the PhD duration)
 - Supporting letter from the proposed supervisor and agreement of the laboratory director
- Agreement for the joint supervision and awarding of a double doctoral degree (cotutelle)



Organization of Individual Monitoring Committee (CSI) (end of D1 and D3)

Doctoral trainings (with Doctoral College)

International mobility grants for PhD students (with Doctoral College)

Agreement for the PhD defence

Number of required CFDs

PhD committee and reviewers

Reports by reviewers before defence



PhD annual registration (fees) in the institution (CLille, ULille, IMT, Univ Eiffel)

Mobility grants for participation to doctoral trainings or conferences

Registration fees for MOOC

Organisation of the PhD defence

Doctoral degree printing



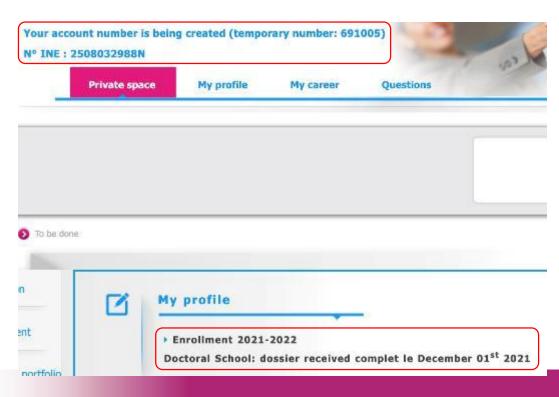
ENGSYS Doctoral School – admission rules

- Research Topic is defined by the supervisors and research unit
- Accredited supervisors (HDR) manage a limited number of doctoral students (4 supervised or 8 co-supervised students)
- Employment contract of 36 months for doctoral study is required
- Candidates are validated by ENGSYS through a well defined procedure and according to demanding academic criteria



Focus on administrative registration – D1 (1/3)

- Create a temporary ADUM ID for academic submission.
- Submit ENGSYS registration with original signed documents: 'demande d'autorisation d'inscription', 'la charte du doctorat' and 'la convention individuelle de formation'.
- Obtain ENGSYS agreement.





ENGSYS Doctoral School

Focus on Institution registration – D1 (2/3)

Register at your institution

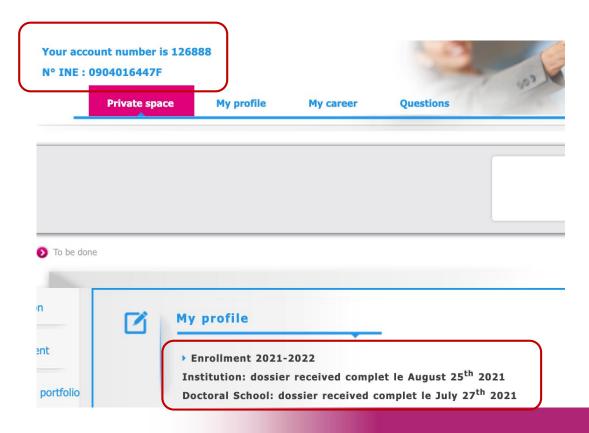
Pay the registration fees and obtain your student card.





Focus on Institution registration – D1 (3/3)

Obtain your final ADUM ID from your institution





From D1 to D2

- Obtain agreement of CSI-D1
- On line register at ENGSYS.
- Obtain your student card from your institution.
 - For ULille: Online registration via ent.univ-lille.fr
- Register at training courses available via ADUM.
- Add external training modules.
- Build your Portfolio (validated courses, teaching, PhD title...).
- Prepare your career: upload CV and scientific productions to be displayed via ADUM.



ENGSYS Doctoral School – Some rules

From D1 to D2

- PhD students conduct training-by-doing research, under the scientific and personalized direction of supervisors within 36 months
- Are young researchers who are integrated in research units
- D4 registration is exceptional and needs a new CSI
- Develop skills beyond their area of scientific expertise

Before defence: a number of doctoral training credits (on thematic-methodology and language/professional skills) and training about ethics must be validated



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ENGSYS Doctoral School – Training courses

- The number of credits (CFD) to be collected depends on the PhD type:
 - 60 CFD including at least 20 CFD on professional training for a full
 time PhD student
 - 30 CFD in three training areas for a PhD student with a joint supervision between two institutions of different countries (coagreement or cotutelle)
 - 40 CFD distributed in the area of thematic training and research methodology for CIFRE PhD Student
- One course about ethics must be followed



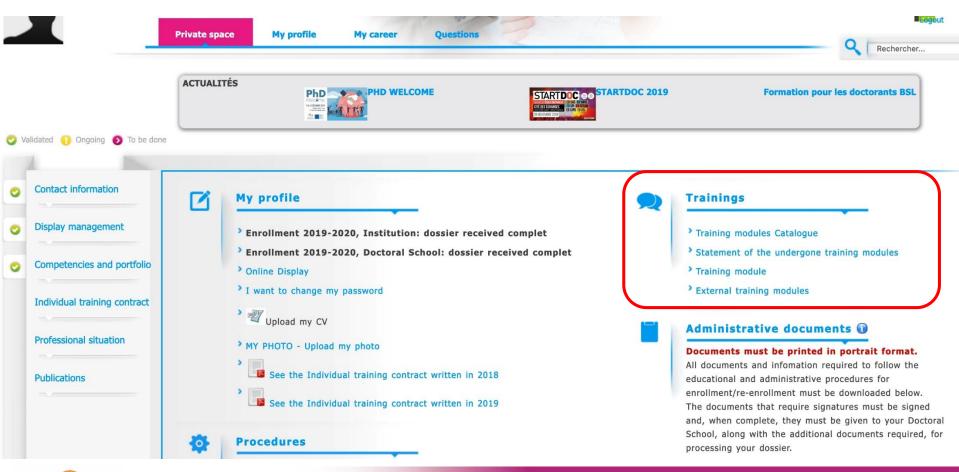
ENGSYS Doctoral School – Training courses

- All PhD students must collect a number of credits following their participation in doctoral training in the three areas:
 - Thematic training (summer schools, master classes, training courses organized by the laboratory or ENGSYS, technical courses) (# 20 CFD)
 - Training related to language, research methodology or tools (organized by ENGSYS or Doctoral College) (# 20 CFD)
 - Professional training (organized by Doctoral College) (# 20 CFD)
- One course about ethics must be followed
- 2021 : 20 CFD can be obtained by MOOC
- 2 hours -> at least 1 CFD.



ENGSYS Doctoral School – Registration to training courses (ADUM)

You must have an ADUM account number !!





ENGSYS Doctoral School – Registration to training courses (ADUM)

- Training module list
 - Trainings courses offered by ENGSYS
 - French foreign language
 - English
 - Scientific trainings
 - Transversal training courses offered by Doctoral College
 - Doctors and companies
 - Training courses in English
- Your ongoing training modules of list
 - 3 states: Enrolment asked, Enrolment accepted, Registered and given credits.



ENGSYS Doctoral School – Registration to training courses (ADUM)

Add an external training module

- Master class, MOOC, summer or thematic school, Member of organization committee of conferences...
- Give the title- category university and city topic
- Add a PDF file with attendance certificate and detailed training program, so that ENGSYS can give credits (1 CFD/ 2 hours)

Not validated as external training

- Paper presentation at conference, workshop
- Teaching



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D1 Invividual Monitoring Committee (CSI)

- For all D2 registration, an Individual Monitoring Committee (D1-CSI) is set up
- At minimum the committee includes
 - The supervisor and co-supervisors
 - A HDR member who is conducting research activities in the domain of the thesis but who is not a member of the host team, and who will be chosen by the supervisor.
 - A member of the Doctoral School ENGSYS (DED) who will be the chairman of the D3 CSI meeting
- At the end of the meeting, a collective report will be written under the authority of DED. This report is posted in ADUM



D1 CSI manuscript

• The PhD student provides a manuscript on its work, two weeks before the meeting to all members of the CSI.

- This manuscript will include a minimum of 7 pages :
 - Brief description of the thesis subject and its goals (min 1/2 page);
 - Main references state of the art (min 1 page);
 - Progress work in accordance with goals and key results (min 3 pages). A
 statement of policy regarding results dissemination in terms of publications
 and software production;
 - Roadmap for the next two years with the expected contributions and a schedule, (min 2 pages);
 - Doctoral Training modules achieved;
 - Professional project.



D1 CSI review meeting

CSI review meeting includes:

- Presentation in 20 mn + questions.
- Meeting between members of CSI and the supervior (and cosupervisors).
- Discussion between members of CSI (without the PhD supervision)
 and the PhD student.
- At the end of the meeting, a collective report will be written under the authority of the CSI chairman. This report is sent to the DED by email to be posted in ADUM.



D1 CSI template report

| Nombre sur ADUM de Crédits de Formations Doctorales (CFD) : | | | | | | |
|---|-------------------|--------------|-------|------------------|--|--|
| | Très satisfaisant | Satisfaisant | Moyen | Pas satisfaisant | | |
| Maitrise sujet de thèse | | | | | | |
| tat d'avancement des ravaux | | | | | | |
| Politique de valorisation les résultats | | | | | | |
| dentification des pistes le recherche | | | | | | |
| uivi de la formation octorale | | | | | | |
| Construction du projet professionnel | | | | | | |

Membres du Comité de Suivi Individuel extérieurs à l'encadrement (nom, prénom, email) :



Avis du CSI:

D1 CSI important dates

Planning 2022

- CSI constitution before June 15 th, 2022.
- CSI manuscript has to be sent 15 days before the meeting.
- CSI meeting before September 15th, 2022.



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PhD defence

D – 9 weeks: Student submits the committee to ENGSYS via ADUM

D – 8 weeks: ENGSYS checks the required CFD, publications in ADUM and gives its agreement about committee

D – 8 weeks: Student sends the thesis to the reviewers (and to committee members)

D – 4 weeks: Reviewers send their review to the Institution and ENGSYS

D – 3 weeks: ENGSYS Leader and Research President of the Institution give their agreement about PhD defence

Defence: Committee President sends the defence report to the Institution

D + XX: Student sends the final version of the thesis to the Institution



Jury for full-time or CIFRE PhD

2 reviewers (minimum)

Must be accreditated (HDR). A full professor or french research director is accreditated. Foreign reviewer's CV is required.

Must be outside ENGSYS, IMT, ULille, CLille and UG Eiffel. Must be outside doctoral project. No work and paper with supervisors and PhD student during PhD duration.

More than 50% of members are outside ENGSYS, IMT, ULille, CLille and UG Eiffel.

More than 50% of members are outside doctoral project. All members must be PhD.

More than 50% of Full Professor or equivalent (Research Director in France).

From 4 to 8 committee members

Member categories: 1 or 2 supervisors (registered at ADUM), 2 reviewers and examiners

At least 1 member of each gender for a committee with 4, 5 or 6 members. At least 2 members of each gender for a committee with 7 or 8 members.

All the members can participate via video-meeting (specific agreement).



Jury for co-agreement with foreign institution

2 reviewers (minimum)

Must be accreditated (HDR). A full professor or french research director is accreditated. Foreign reviewer's CV is required.

Must be outside ENGSYS, IMT, Ulille, Clille, UGE and the foreign institution. Must be outside doctoral project. No work and paper with supervisors and PhD student during PhD duration.

More than 50% of members are outside ENGSYS, IMT, ULille, CLille, UG Eiffel and the foreign institution. All members must be PhD.

More than 50% of Full Professor or equivalent (Research Director in France).

From 4 to 8 committee members

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Collective work of ENGSYS-MADIS team

Laetitia JOURDAN – Lotfi BELKOURA - Patrick POPESCU-PAMPU –

Henri Happy (ED ENGSYS-632)

Ludovic MACAIRE (ED MADIS-631)



General information about your future career

Where are there jobs?

How to apply as Researcher with CNRS

How to apply as Assistant Professor at a University

Conclusion



Opportunity for PhD studies

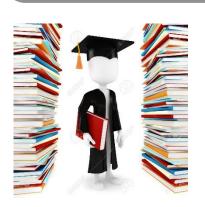
Tomorrow



The day after



Today



Get started
Prepare

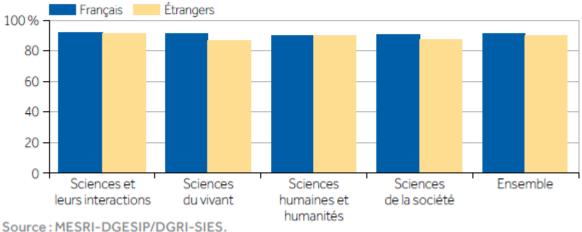
Inquiry



Opportunity for PhD studies

Professional integration rate

Taux d'insertion des docteurs de nationalité française et étrangère par discipline 36 mois après leur diplôme de doctorat (en %) France entière



1yr after thesis: More than 85% are in employment

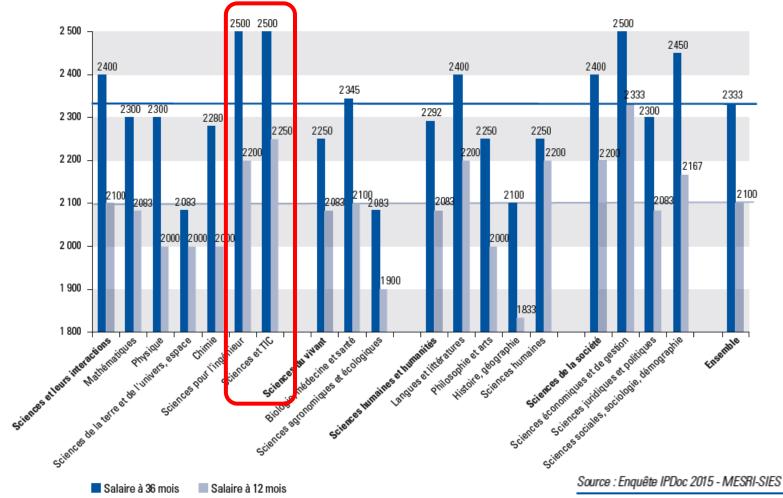
3yrs after: more than 90%



Opportunity for PhD studies



Executive (senior) type job





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Where are there jobs for PhDs?

Research in industrial sector

Doctoral training will help you to make your choice

05) Chercheurs en entreprise : répartition par discipline d'activité de recherche, en 2015

en personnes physiques au 31/12, doctorants inclus

| Discipline d'activité de recherche* | Effectifs | Part de la discipline** (%) | | | | |
|-------------------------------------|-----------|--------------------------------|--|--|--|--|
| Mathématiques | 44 038 | 20,1 | | | | |
| Sciences physiques | 6 404 | 2,9 | | | | |
| Chimie | 9 003 | 4,1 | | | | |
| Sciences de l'ingénieur 1 | 70 469 | 32,1 | | | | |
| Sciences de l'ingénieur 2 | 60 689 | 27,7 | | | | |
| Sciences de la terre/Environnement | 2 601 | 1,2 | | | | |
| Sciences agricoles | 5 111 | 2,3 | | | | |
| Sciences biologiques | 8 134 | 3,7 | | | | |
| Sciences médicales | 8 293 | 3,8 | | | | |
| Sciences sociales | 3 445 | 1,6 | | | | |
| Sciences humaines | 1 185 | 0,5 | | | | |
| Sous-total | 219 372 | 100 | | | | |
| Gestion/encadrement de la R&D | 6 3 6 4 | | | | | |
| Total chercheurs | 225 736 | | | | | |

^{*} Voir la Nomenclature et la table de correspondance section CNU/discipline en *Annexes*.

Source: MESRI-SIES (enquête R&D).



^{**} Hors gestion R&D

Where are there jobs for PhDs?

Public sector and research acronym

- Type **EPST** (Établissement public à caractère scientifique et technologique) : **CNRS** · INED · INRAE · INRIA · INSERM · IRD
- Type **EPA** (Établissement public à caractère administratif en France) : IGN · IHEST · Météo-France
- Type **EPIC** (Établissement public à caractère industriel et commercial en France): ADEME · BRGM · CEA · CIRAD · CNES · CSTB · Ifremer · LNE · ONERA
- Type **EPSCP** (Établissement public à caractère scientifique, culturel et professionnel): **Universités** · Ecoles ingénieur



Where are there jobs for PhDs?

Public sector MESRI

| Evolution des emplois sous plafond des organismes sous tutelle du MESRI | | 2012 | 2019 | Evolution 2012 / 2019 | | |
|---|---|-------------------------------|----------|-----------------------|--------------|------|
| | | | | | en effectifs | en % |
| 4 EPIC hors CEA - 6 EPST : | | Plafond d'emploi (ETP) * | 56 504 | 56 430 | -74 | 0% |
| | | Exécution (ETPT) | 52 670 | 48 906 | -3 764 | -7% |
| CNRS | | Plafond d'emploi (ETP) * | 28 638 | 28 597 | -41 | 0% |
| | | Exécution (ETPT) | 26 911 | 24 791 | -2 120 | -8% |
| INRA + IRSTEA INRAE en 2020 | | Plafond d'emploi (ETP) * | 11 055 | 11 019 | -36 | 0% |
| | | Exécution (ETPT) | 9 966 | 8 658 | -1 308 | -13% |
| Autres : 4 EPIC - 4 EPST ** | | Plafond d'emploi (ETP) * | 16 811 | 16 814 | 3 | 0% |
| | | Exécution (ETPT) | 15 793 | 15 457 | -336 | -2% |
| DEA *** | | Plafond d'emploi (ETP) * | 11 632 | 16 149 | 4 517 | 39% |
| | | Exécution (ETPT) | 11 497 | 16 083 | 4 586 | 40% |
| * inscrits en loi de finances initiale | ** INED, INRIA, INSERM, IRD, BRGM, IFREMER, CIRAD et CNES | | | | | |
| *** à partir du PAP 2015, le CEA intègre dar | ns ses effectifs la direction des | applications militaires (DAM) | <u> </u> | | <u> </u> | |
| Source : DGRI-PAP et RAP | | | | | | |



Typical jobs in public sector

A.T.E.R.

In relation with University – Research and teaching you can apply to the call during your 3rd year thesis

Non permanent position

Post-Doc

In relation with Research Lab- You can apply only after thesis defense – Reply to job offers

MDC

Assistant professor with University – Research and teaching

Gross Salary: from 2221 € to 4999 €

Permanent position

CR

Chargé de Recherche – Researcher with EPST/EPA/EPIC

Gross Salary: from 2300 € to 4740 €



IR

Ingénieur de Recherche – R&D with EPST/EPA/EPIC

Gross Salary: from 2038 € to 4999 €



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Researchers at CNRS – Situation in France

Open position during the last 5 years



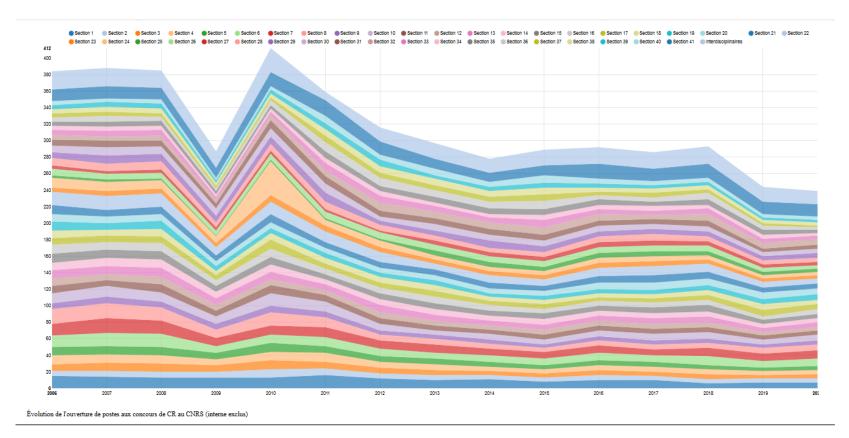
2019: 250 open positions

To be compared with more than 12 000 thesis/year + open to international recruitment



Researchers at CNRS – Situation in France

Open position during the past years



About 4 to 6 positions /sector !!!



Researchers at CNRS – How to apply

How to apply to open positions?

- PhD and post-docs
- Publication requirements:
 A high number, with high impact factor
- Propose a Research project in relation with a Lab of CNRS

Interview with a committee



How to apply as Assistant Professor

Practical information about qualification

Example of section 63

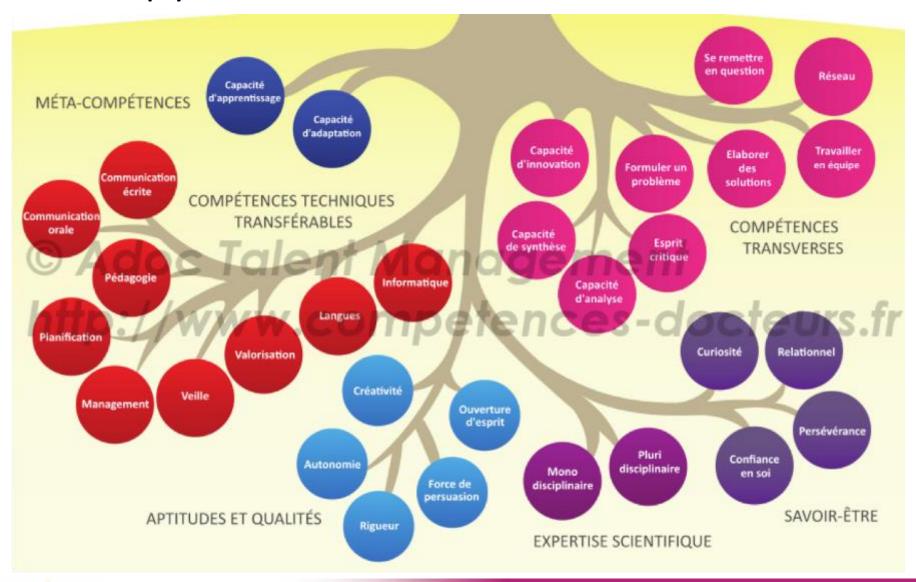
- PhD with very good reviews
- Publication (minimum):
 1 paper as first author in a good international journal referenced by Journal Citation Report (JCR)
- Teaching experience in higher eduction
 Minimum 64H with students



Validity of the qualification: 4 years



Develop your skills







Sciences de l'ingénierie et des systèmes Engineering and Systems Sciences



Ludovic DESPLANQUE

MCF, IEMN

Referents

Referents

Referents

Referents

Referents

Walter LHOMME MCF HdR, L2EP

Appui lors des évènements du Collège Doctoral

CV

Lettre de

motivation

Plan de formation

Marché de l'emploi

Communiquer

Accompagner

Portfolio de compétences

Projet
professionnel et
démarches de
recherche
d'emploi



















ENJOY YOUR PHD

