



What to do after thesis?

Vincent THOMY - Henri HAPPY

Professors at University of Lille















General information about your future career

Where are jobs?

How to apply as Researcher with CNRS

How to apply as Assistant Professor at University

Conclusion



Tomorrow



The day after



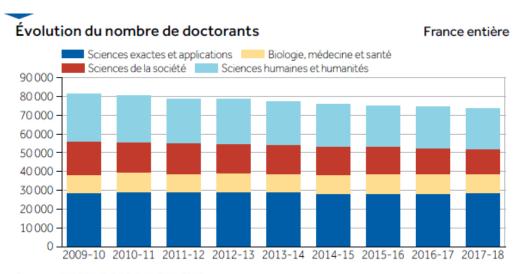
Today



Get started
Prepare

Inquiry





Good news

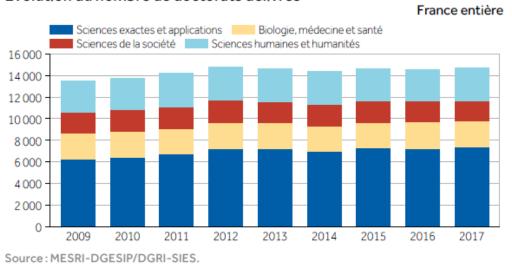
About 80 % of thesis are funded

(100% for ENGSYS - Lille)

Source: MESRI-DGESIP/DGRI-SIES.

2017: 14 700 thesis defended (50% for scientific domains)

Évolution du nombre de doctorats délivrés



Focus on data for I-Site University of Lille North of Europe (ULNE)

Source : Observatoire de la Direction des Formations (ODiF) de l'Université de Lille, n°47, Novembre 2021

CHARACTERISTICS OF 2017 PHDS

	for Is	ite UINE	% for Engineer	ring sciences
Gender				
Female	182	42%		24%
Male	251	58%		86%
Nationality				
French nationality	247	57%		40%
International students	186	43%		60%
PhD graduates in 2017				
Total for I-Site ULNE	433	100%		135 / 31%
median age		29 years old	28 years old	
average age		31 years old	29 years old	

Response rate: 68%

Engineering Sciences: Mechanics - mechanical engineering - engineering mechanical engineering, civil engineering, computer science, electronics - electrical engineering - EEA



Focus on data for I-Site University of Lille North of Europe (ULNE)

Source : Observatoire de la Direction des Formations (ODiF) de l'Université de Lille, n°47, Novembre 2021

Doctoral project funding										
		Territorial		International	French Public	Mixed public /				
	State	authorities	CIFRE	funding	funding	private funding	Other			
For Engineering sciences	36%	10%	15%	12%	9%	7%	7%			
Total For I-Site ULNE	41%	16%	10%	9%	7%	6%	11%			

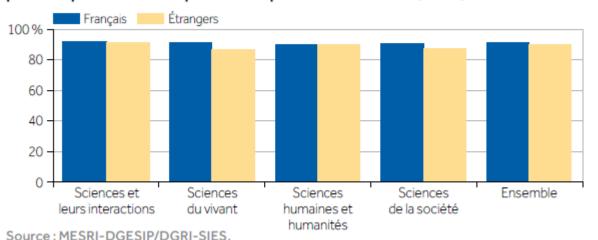
LENGTH OF THE PHD'S COMPLETION										
	< 40 months	from 40 to 52 months	from 53 to 72 months	more than 72 months	median lenght	average lenght				
For Engineering sciences	53%	42%	5%	-	38 months	41 months				
Total For I-Site ULNE	48%	31%	41%	7%	40 months	46 months				





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 85% are in employment

3yrs after: more than 90%

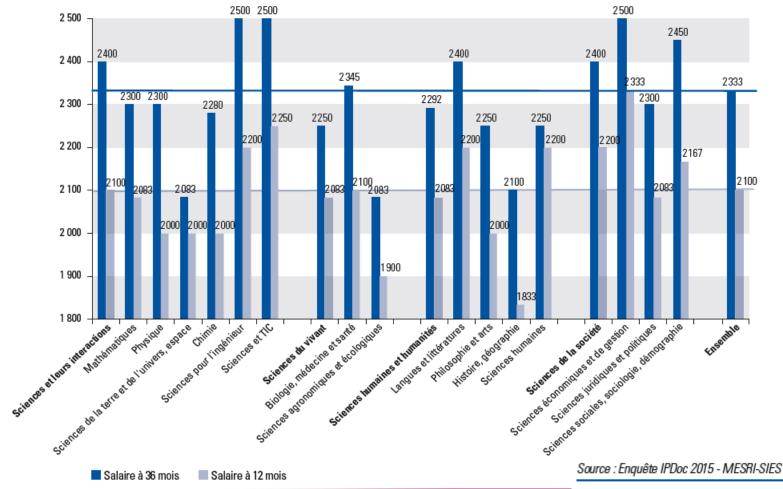
EMPLOYMENT STATUS AS OF DECEMBER 1, 2020 (Phd defended in 2017)							
	Looking for a job						
For Engineering sciences	95%	5%					
Total For I-Site ULNE	91%	8%					

Source : Observatoire de la Direction des Formations (ODiF) de l'Université de Lille, n°47, Novembre 2021



Salary (without taxes)

Executive (senior) type job





Source : Observatoire de la Direction des Formations (ODiF) de l'Université de Lille, n°47, Novembre 2021

Employement conditions										
	rate of									
	employment	employment rate of p								
	at executive	permanent	employment	median net						
	level	employment	rate	monthly income						
For Engineering sciences	99%	72%	16%	2 508 €						
Total For I-Site ULNE	96%	72%	14%	2 500 €						

JOB LOCATION									
		Hauts de France							
	MEL	without MEL	Ile de France	Other regions	other countries				
For Engineering sciences	25%	8%	12%	17%	38%				
Total For I-Site ULNE	28%	9%	12%	21%	30%				



Source : Observatoire de la Direction des Formations (ODiF) de l'Université de Lille, n°47, Novembre 2021

Ways to obtain the job (for all Isite PhD students combined):

- one third of the PhDs obtained the job they had on December 1st, 2020 thanks to their professional network (PhD director, colleagues, ...),
- 17 % by passing a competitive examination
- and 12 % by employment organizations (APEC, Pole emploi)
- 3% after their CIFRE PhD

Economical activity sectors (in exact sciences)

In our disciplines, one doctor out of two works in the public sector and the other half in the private sector.

50% is in teaching or research or R&D (6% are assistant professor).
23 % in specialized scientific or technical activities (such as computer science),
15 % in industry (construction, production, energy, ...).



Source : Observatoire de la Direction des Formations (ODiF) de l'Université de Lille, n°47, Novembre 2021

LEVEL OF SATISFACTION WITH THE JOB OCCUPIED										
	Very satisfied	Satisfied	Unsatisfied	Very Unsatisfied						
Professional situation in										
general	41%	51%	7%	1%						
Suitability of job /										
doctorate	40%	44%	10%	6%						
Perspectives of evolution										
or opportunities	39%	40%	16%	5%						
Openness (international,										
interdisciplinary)										
brought by the activities	36%	47%	15%	2%						
Salary	20%	53%	18%	9%						





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Where are jobs for PhD?

Private – Industry sector

Public – Academic sector

Doctoral training will help you to make your choice

02) Effectifs de l'emploi scientifique par secteur et type d'établissement en 2015

en ETP recherche

en%

			en ETP recherche			
	Chercheurs*	Personnels de soutien	Ensemble = effectif total de R&D	Chercheurs*	Ensemble	
Secteur des entreprises						
Industrie manufacturière	105 495	65 883	171 378	38,0	40,0	
Primaire, énergie, construction	5 781	4 188	9 969	2,1	2,3	
Services	54 568	15 528	70 096	19,7	16,4	
Total secteur des entreprises	165 845	85 599	251 444	59,7	58,7	
Secteur des administrations						
Secteur de l'État	47 307	33 593	80 900	17,0	18,9	
Ministères et autres établissements publics (EPA)	1 075	765	1 840	0,4	0,4	
EPST	30 550	25 844	56 394	11,0	13,2	
EPIC	15 682	6 983	22 665	5,6	5,3	
Secteur de l'Enseignement Supérieur	60 760	28 233	88 993	21,9	20,8	
Universités et etab. d'ens. supérieur sous tutelle du MESRI	50 354	17 734	68 089	18,1	15,9	
CHU-CLCC	6 0 3 6	9 161	15 197	2,2	3,5	
Étab. d'ens. supérieur hors tutelle du MESRI	4 3 7 0	1 338	5 707	1,6	1,3	
Secteur des ISBL**	3 720	3 587	7 307	1,3	1,7	
Total secteur des administrations	111 787	65 412	177 199	40,3	41,3	
Total France	277 631	151 011	428 643	100,0	100,0	

^{*} yc ingénieurs de recherche et doctorants financés.

Source: MESRI-SIES (enquête R&D).



^{**} Institutions sans but lucratif.

Where are jobs for PhD?

Public sector and research acronym

- Type EPST (Établissement public à caractère scientifique et technologique): CNRS · IFSTTAR · 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): Grands établissements · **Universités** · Écoles normales supérieures



Where are jobs for PhD?

Research in industrial sector

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

Typical jobs in public sector

Attaché Temporaire d'Enseignement et de Recherche

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

Salary: from 2221 € to 4999 €

Permanent position

CR

Chargé de Recherche – Researcher with **EPST/EPA/EPIC**

Salary: from 2300 € to 4740 €



UL Université de Lille

IR

Ingénieur de Recherche – R&D with EPST/EPA/EPIC Salary: from 2038 € to 4999 €





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Researchers ith CNRS – Situation in France

Open position during the last 5 years



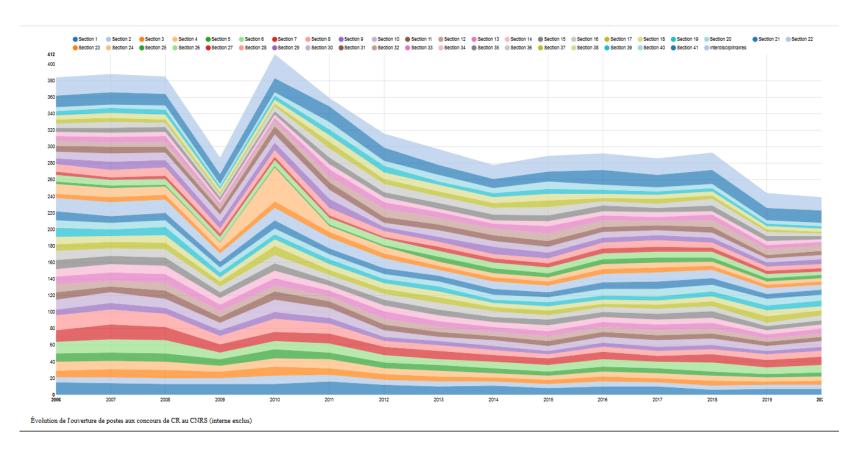
2019: 250 open positions

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



Researchers with CNRS – Situation in France

Open position during the past years



About 4 to 6 positions /sector !!!



Researchers with CNRS – How to apply

How to apply to open position?

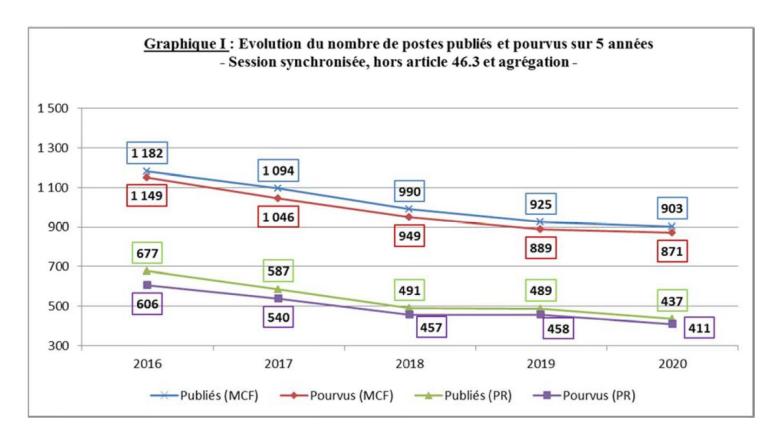
- PhD
- Publications requirements:
 A number, with high impact factor
- Propose a Research project in relation with a Lab of CNRS

Interview with a jury



Assistant professor – Situation in France

Open position during the last 5 years





To be compared with more than 12 000 thesis/year



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FOCUS ON 2020 – OPEN POSITION IN FRANCE

Tableau I : Répartition des postes publiés et pourvus par article de recrutement - Session synchronisée et "au fil de l'eau" à la date du 15 juillet 2020 -

			Postes	pourvus		Postes non	
	Postes publiés (A)	Mutation	Détachement	Concours	Total (B)	pourvus ou en cours de recrutement	Ratio (B/A)
Maîtres de conférences	1 147	105	2	882	989	158	86,2%
Article 26-I-1	1 093	84	2	873	959	134	87,7%
Article 26-I-2	11	0	0	8	8	3	72,7%
Article 26-I-3	1	0	0	1	1	0	100,0%
Article 29	7	0	0	0	0	7	0,0%
Article 33	35	21	0	0	21	14	60,0%
Professeurs des universités	670	79	0	402	481	189	71,8%
Article 46.1	516	35	0	373	408	108	79,1%
Article 46.3 1)	75	0	0	0		75	-
Article 46.4	7	0	0	7	7	0	100,0%
Article 51	50	44	0	0	44	6	88,0%
Disciplines juridiques, politique, économiques et de gestion							
Article 49-2	22			22	22	0	100,0%
Total général (yc articles 29, 46.3 et agrégation)	1 817	184	2	1 284	1 470	347	80,9%
Total général (hors articles 29, 46.3 et agrégation) (1) Concours non terminés	1 713	184	2	1 262	1 448	265	84,5%

Concours non terminés



FOCUS ON 2020 - open position vs number of candidate

<u>Tableau VI</u>: Nombre de candidatures et de candidats par corps

Session synchronisée, hors articles 29, 46.3 et agrégation -

	Postes publiés (A)	Nombre de candidatures * (B)	Nombre de candidats ** (C)	Ratio (B/A)	Ratio (C/A)	
Maîtres de conférences	903	40 899	7 675	45,3	8,5	
Professeurs des universités	437	3 689	1 672	8,4	3,8	
Total général	1 340	44 588	9 347	33,3	7,0	

^{*} Candidatures recevables



^{**} Un même candidat peut l'être sur un emploi de MCF et sur un emploi de PR

Focus on recruitment during the past years – CNU Group 9 (Sections 60, 61, 62, 63)

	Maîtres de conférences										
		Publiés (A)	Candidats (B)	% femmes	Ratio (B/A)	Pourvus	% femmes	% non pourvus			
	Année										
	2015	1 299	9 497	46,9%	7,3	1 256	46,9%	3,3%			
Ensemble des	2016	1 328	9 507	47,4%	7,2	1 287	50,3%	3,1%			
sections	2017	1 254	9 034	47,7%	7,2	1 188	47,4%	5,3%			
sections	2018	1 189	8 540	47,7%	7,2	1 108	46,5%	6,8%			
	2018	1 070	7 958	47,4%	7,4	1 018	48,6%	4,9%			
		,									
	2015	437	3 913	34,9%	9,0	425	31,3%	2,7%			
	2016	455	3 788	34,1%	8,3	443	32,5%	2,6%			
Sciences	2017	417	3 282	33,1%	7,9	395	31,6%	5,3%			
	2018	390	3 115	34,5%	8,0	370	30,0%	5,1%			
	2019	364	209	47,4%	0,6	348	35,9%	4,4%			
Groupe 09	2015	132	1 056	26,3%	8,0	125	20,8%	5,3%			
Mécanique,	2016	110	982	24.8%	8,9	106	23,6%	3,6%			
génie mécanique,	2017	131	918	25,5%	7,0	121	27,3%	7,6%			
génie informatique,	2018	124	845	26,9%	6,8	113	20,4%	8,9%			
énergétique	2019	114	797	27,2%	7,0	106	34,0%	7,0%			
	2015	54	468	22,6%	8,7	51	11,8%	5,6%			
	2016	47	439	23,0%	9,3	44	27,3%	6,4%			
Section 60	2017	58	441	24,0%	7,6	51	31,4%	12,1%			
	2018	57	417	25,2%	7,3	54	18,5%	5,3%			
	2019	51	372	25,5%	7,3	49	28,6%	3,9%			

	Maîtres de conférences							
		Publiés (A)	Candidats (B)	% femmes	Ratio (B/A)	Pourvus	% femmes	% non pourvus
	Année	2.445	9 680	46.204	(=	1 202	44.707	2.70/
	2014	1 447	9 080	46,3%	6,7	1 393		3,7%
Ensemble des	2015	1 299	9 497	46,9%	7,3	1 256	46,9%	3,3%
sections	2016	1 328		47,4%	7,2	1 287	50,3%	3,1%
	2017	1 254	9 034	47,7%	7,2	1 188	47,4%	5,3%
	2018	1 183	8 540	47,7%	7,2	1 108	46,5%	6,3%
			,					
	2014	511	4 028	34,5%	7,9	495	29,5%	3,1%
	2015	437	3 913	34,9%	9,0	425	31,3%	2,7%
Sciences	2016	455	3 788	34,1%	8,3	443	32,5%	2,6%
	2017	417	3 282	33,1%	7,9	395	31,6%	5,3%
	2018	390	3 115	34,5%	8,0	370	30,0%	5,1%
Groupe 09	2014	142	1 021	22,8%	7,2	137	18,2%	3,5%
Mécanique, génie	2015	132	1 056	26,3%	8,0	125	20,8%	5,3%
mécanique, génie	2016	110	982	24,8%	8,9	106	23,6%	3,6%
informatique,	2017	131	918	25,5%	7,0	121	27,3%	7,6%
énergétique	2018	124	845	26,9%	6,8	113	20,4%	8,9%
	2014	20	207	18,8%	10,4	20	20,0%	0,0%
	2015	23	207	22,7%	9,0	21	33,3%	8,7%
Section 63	2016	18	187	21,9%	10,4	17	11,8%	5,6%
	2017	23	188	20,2%	8,2	22	18,2%	4,3%
	2018	22	194	22,7%	8,8	20	20,0%	9,1%

Section 60 - Mécanique-Génie Civil



Section 63 – Génie Electrique, électronique, photonique et systèmes

Practical information about qualification

Example of section 63

- PhD
- Publications requirements (minimum):
 - 1 international publication in journal with review (RICL)
 - 2 international conferences with proceeding
- Teaching experience
 Minimum 50H with students





https://www.conseil-national-des-universites.fr/cnu/#/

Validity of the qualification: 4 years



Practical information about qualification

Example of section 27

- PhD
- Publications requirements (minimum):

1 international publication in journal with review (RICL) good ranked

or 1 international conference with proceeding ranked

Teaching experience

Minimum 64H with students



Validity of the qualification: 4 years



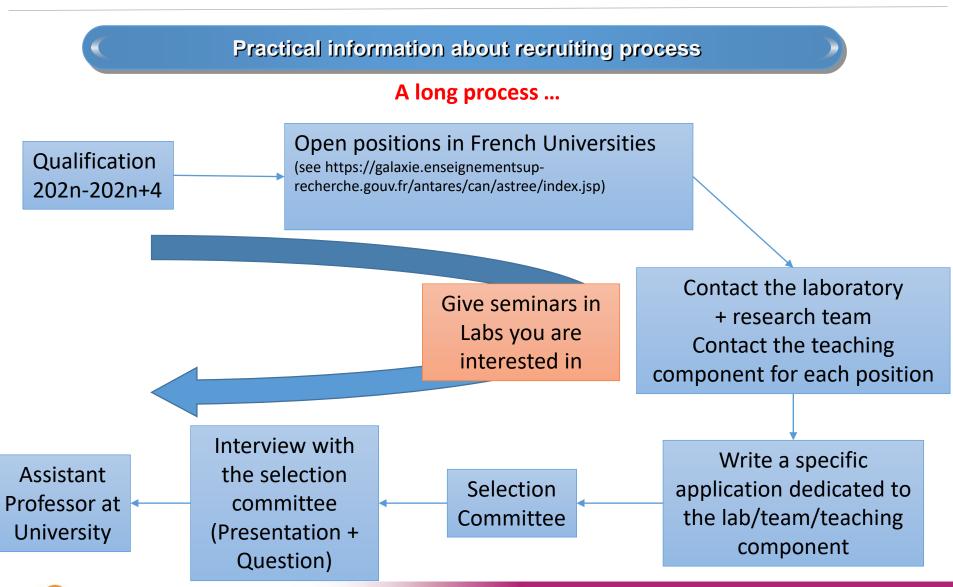
Qualification MCF CNU60

	Maîtres de conférences						
		Candidats % Qualifiés % Ratio					
		(A)	% femmes	(B)	% femmes	(B/A)	
	Année	(A)	jemmes	(B)	jemmes	(B/A)	
	2015	8 764	46,1%	6 493	45.8%	74,1%	
	2016	8 472	46.4%	6 426	45.7%	75,8%	
Ensemble des sections	2017	8 143	46.9%	6 122	46,5%	75,2%	
Ensemble des sections	2018	8 148	46.5%	6 042	46,6%	74,2%	
	2019	8 359	46.0%	6 141	45,6%	73,5%	
	2017	000)	40,070	0111	45,070	15,570	
	2015	4 392	37,8%	3 577	37,4%	81,4%	
	2016	4 165	38,2%	3 474	37.0%	83,4%	
Sciences	2017	3 778	38,0%	3 163	37,8%	83,7%	
	2018	3 730	37.4%	3 128	37,9%	83,9%	
	2019	3 871	36,6%	3 151	36,3%	81,4%	
	2017	2 071	30,070	0 131	30,370	01,170	
Groupe 09	2015	1 147	27,7%	760	25,3%	66,3%	
Mécanique, génie	2016	1 089	28,7%	809	27.4%	74,3%	
mécanique, genie mécanique,	2017	1 035	28,8%	771	28,4%	74,5%	
génie informatique,	2018	1 007	26,6%	784	26,7%	77,9%	
énergétique	2019	1 123	27.2%	838	28,5%	74,6%	
	2017	1 123	27,270	050	20,370	74,070	
	2015	431	27,1%	315	25,4%	73,1%	
	2016	397	24,4%	318	24,5%	80,1%	
Section 60	2017	375	26,4%	297	26,9%	79,2%	
Section of	2018	397	23,7%	324	23,8%	81,6%	
	2018	451	24.6%	357			
	2019	451	24,0%	35/	25,5%	79,2%	

Qualification MCF CNU63

	Maîtres de conférences					
		Candidats (A)	% femmes	Qualifiés (B)	% femmes	Ratio (B/A)
	Année					
	2014	9 123	46,3%	6 767	45,9%	74,2%
	2015	8 764	46,1%	6 493	45,8%	74,1%
Ensemble des sections	2016	8 472	46,4%	6 426	45,7%	75,8%
	2017	8 143	46,9%	6 122	46,5%	75,2%
	2018	8 148	46,5%	6 042	46,6%	74,2%
			•			
	2014	4 659	38,4%	3 824	38,4%	82,1%
	2015	4 392	37,8%	3 577	37,4%	81,4%
Sciences	2016	4 165	38,2%	3 474	37,0%	83,4%
	2017	3 778	38,0%	3 163	37,8%	83,7%
	2018	3 730	37,4%	3 128	37,9%	83,9%
Groupe 09	2014	1 204	27,3%	738	24,8%	61,3%
Mécanique, génie	2015	1 147	27,7%	760	25,3%	66,3%
mécanique,	2016	1 089	28,7%	809	27,4%	74,3%
génie informatique,	2017	1 035	28,8%	771	28,4%	74,5%
énergétique	2018	1 007	26,6%	784	26,7%	77,9%
	2014	292	21,9%	156	21,8%	53,4%
	2015	291	22,0%	179	19,0%	61,5%
Section 63	2016	252	23,8%	171		67,9%
	2017	217	24,4%	170	21,8%	78,3%
	2018	221	22,2%	176		79,6%

2019		Hommes	Femmes	
MCU	Nombre de candidats	254	62	316
	Nombre de qualifications	128	42	
	Taux de qualification	50,4%	67,7%	56%







General information about your future career

Where are jobs?

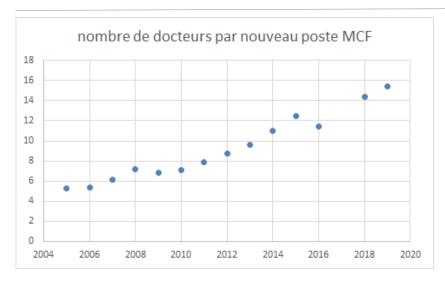
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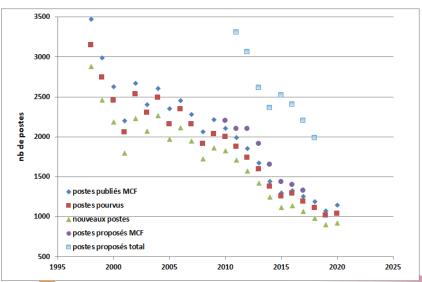
Conclusion



Conclusion



Source: ESR/Guillaume Miquelard



Maximize the chance by having contact previously to the hiring phase

Have a look to **all** the positions not only Assistant professor in University (EPST, EPIC, EPA...)

Do not neglect doctoral training to open up more job opportunities

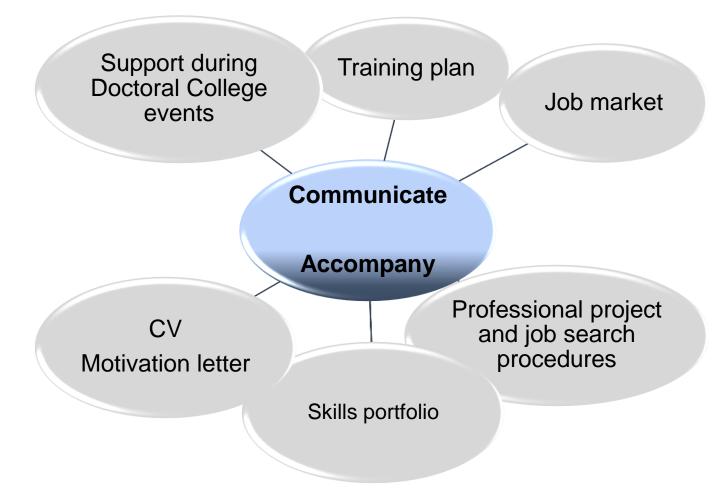


Carreers guidance referents/advisors



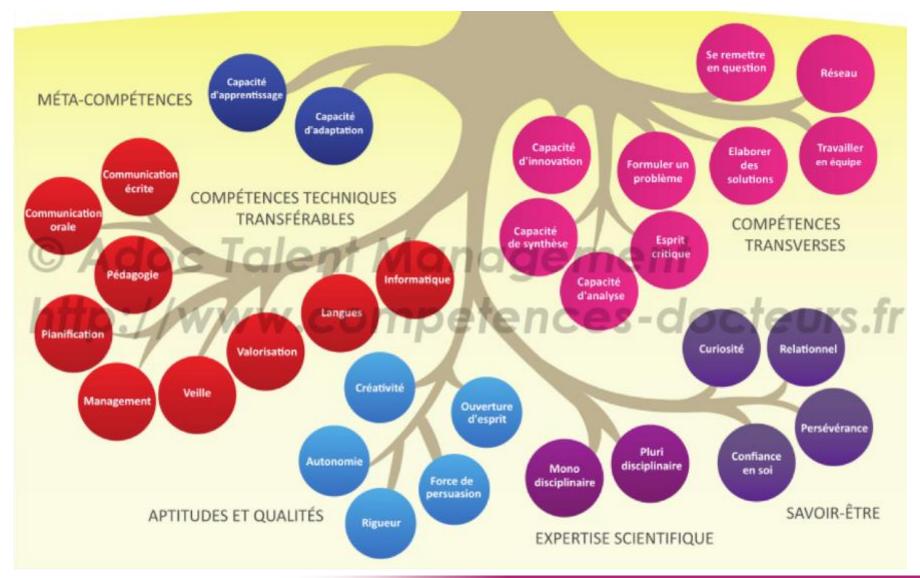
Ludovic DESPLANQUE MCF, IEMN







Develop your skills







DECIDE FOR YOUR FUTURE CAREER

THANK YOU

