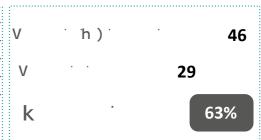
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# ÉCOLE DOCTORALE DES SCIENCES FONDAMENTALES

# **PhD Degree**

o FUNDAMENTAL SCIENCES



#### **Contents**

- 1 Profile of respondents
- 2 Studies before PhD program
- 3 PhD program
- 4 Situation of PhD holders on December 1st 2019
- 5 Developments in doctors' situations after 1 year and after 3 years

## 1 - Profile of respondents

#### All PhD holders

|        | JCA |      |
|--------|-----|------|
|        | N   | %    |
| Female | 12  | 26%  |
| Male   | 34  | 74%  |
| Total  | 46  | 100% |

Sex

#### Nationality

|         | IN | %    |
|---------|----|------|
| French  | 26 | 57%  |
| Foreign | 20 | 43%  |
| Total   | 46 | 100% |

#### Age

Average = 28 years Standard deviation = 2

|                   | N  | %    |
|-------------------|----|------|
| Under 24 years    | 0  | 0%   |
| 24 to 29 years    | 32 | 70%  |
| 30 to 34 years    | 14 | 30%  |
| 35 to 39 years    | 0  | 0%   |
| 40 to 44 years    | 0  | 0%   |
| 45 years and over | 0  | 0%   |
| Total             | 46 | 100% |

#### Responding PhD holders

Sex Nationality

|        | Ν  | %    |
|--------|----|------|
| Female | 9  | 31%  |
| Male   | 20 | 69%  |
| Total  | 29 | 100% |

|         | N  | %    |
|---------|----|------|
| French  | 22 | 76%  |
| Foreign | 7  | 24%  |
| Total   | 29 | 100% |

<u>NOTE</u>: The profile of respondents is similar to that of the PhD holders surveyed, with the exception of foreign doctors, who are under-represented among the respondents.

#### Age

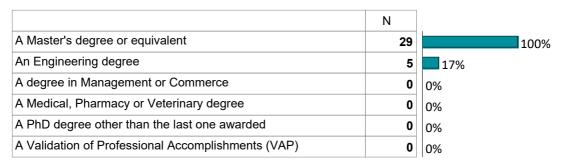
Average = 28 years Standard deviation = 2

|                   | N  | %    |
|-------------------|----|------|
| Under 24 years    | 0  | 0%   |
| 24 to 29 years    | 25 | 86%  |
| 30 to 34 years    | 4  | 14%  |
| 35 to 39 years    | 0  | 0%   |
| 40 to 44 years    | 0  | 0%   |
| 45 years and over | 0  | 0%   |
| Total             | 29 | 100% |



# 2 - Studies before PhD program

#### ► Last degree(s) awarded before PhD program

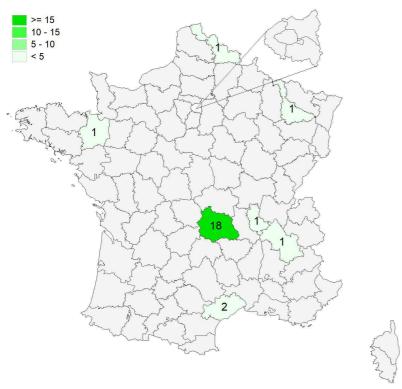


Response rate: 100%

#### ► Location of last degree received

**36%** of doctors received their last degree from another institution than UCA.

#### **Numbers**



| Caaauan | احمنا | . ما نوخ دالم | .+:   |
|---------|-------|---------------|-------|
| Geograp | nıcaı | aistribt      | ıtıon |

| Auvergne-Rhône-Alpes                | 20 | 71% |
|-------------------------------------|----|-----|
| Ile-de-France                       | 0  | 0%  |
| Other department in mainland France | 5  | 18% |
| Abroad:                             | 3  | 11% |
|                                     |    |     |
| Canada                              | 1  |     |
| Italy                               | 1  |     |
| Venezuela                           | 1  |     |
|                                     |    |     |

Response rate: 97%

#### Professional status before receiving PhD

- 2 doctors were employed before the PhD program.
- At enrollment, **3** doctors had a job unrelated to their PhD project, of whom **2** held onto the job during the program.



# 3 - PhD program

#### **▶** PhD Specialization

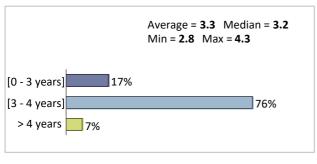
|  | Female | Male |
|--|--------|------|
| Materials Chemistry                                    | 3      | 3    |
| Chemistry and Physical Chemistry                       | 1      | 2    |
| Organic, Mineral and Industrial Chemistry              | -      | 1    |
| Elementary Particles, Theoretical Physics, Hot Plasmas | -      | 5    |
| Mathematics and Interactions                           | -      | 2    |
| Physics and Materials Science                          | 2      | 2    |
| Earth and Universe Sciences                            | 3      | 1    |
| Solid Earth and Deep Strata                            | -      | 1    |
| Solid Earth and Superficial Envelopes                  | -      | 3    |

Response rate: 100%

#### **▶** Dual-Degree Thesis Program

2 PhDs were awarded as part of a dual-degree program.

#### **▶** Duration of PhD program\*



# ► PhD funding

|                              | N  |     |
|------------------------------|----|-----|
| Specific funding             | 28 | 97% |
| Personal resources           | 1  | 3%  |
| ATER position                | 1  | 3%  |
| No funding                   | 1  | 3%  |
| Job unrelated to PhD project | 0  | 0%  |
| Total                        | 29 |     |

Response rate: 100%

Response rate: 100%

#### Sources of specific funding

|   | N   |             | PhD funding contract types |      |               |                |
|---|-----|-------------|----------------------------|------|---------------|----------------|
| State funding                                     | 18  | 64%         |                            | N    |               |                |
| Regional government                               | 4   | 14%         | Doctoral                   | 20   |               | 74%            |
| French public research funding agencies           | 4   | 14%         |                            |      | 100/          | 7470           |
| CIFRE   | 2   | 7%          | Scholarship                | 5    | 19%           |                |
| European Commission Funding                       | 1   | <b>1</b> 4% | Temporary job              | 3    | 11%           |                |
| Foreign funding                                   | 1   | 4%          | Permanent job              | 0    | 0%            |                |
| Both private and public funding (excluding CIFRE) | 0   | 0%          | Includes concurre          |      | acts          |                |
|   | - 0 | 1           | (e.g. temp. + scho         | ol.) |               |                |
| Private funding from French-based organization    | 0   | 0%          |                            | F    | Response rate | e: <b>93</b> % |

Response rate: 97%



<sup>\*</sup>Deviation between the defense date and the registration date in number of years

#### Career Plan

|   | N  |     |
|---|----|-----|
| Teaching or research in a public or private institution of higher education | 12 | 41% |
| Working in R&D at a company   | 6  | 21% |
| Working in public research  | 6  | 21% |
| None  | 1  | 3%  |
| Creating a company  | 1  | 3%  |
| Career change   | 1  | 3%  |
| Pursuing or progressing in job held before PhD                              | 1  | 3%  |
| Working in a company excluding R&D  | 1  | 3%  |
| Working in the public sector excluding research and higher education        | 0  | 0%  |
| Other   | 0  | 0%  |
| Total   | 29 |     |

Response rate: 100%

#### CNU Qualification (National Council of Universities)

38% doctors applied for a CNU qualification, of whom 91% received the qualification.

|                                   | Female | Male | Total |
|-----------------------------------|--------|------|-------|
| Received CNU qualification        | 2      | 8    | 10    |
| Did not receive CNU qualification | 1      | -    | 1     |
| Did not apply                     | 6      | 12   | 18    |
| Total                             | 9      | 20   | 29    |

Response rate: 100%

#### **▶** Continuing studies

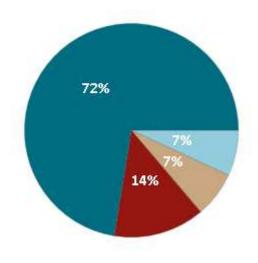
6 doctor enrolled in a program or a civil service exam after their PhD.

|   | Male | Female | Total |
|---|------|--------|-------|
| Master, Engineering degree or equivalent                    | 2    | 1      | 3     |
| PhD, Accreditation to Supervise Research (HDR)              | 1    | -      | 1     |
| BTS, DUT, DEUST or equivalent                               | -    | 1      | 1     |
| Other: professional certifications (IT, TOEIC, TOEFL, etc.) | 1    | -      | 1     |
| Total   | 4    | 2      | 6     |

Response rate: 100%



#### Situation of PhD holders on December 1st 2019



|                          | Female | Male | Total |
|--------------------------|--------|------|-------|
| Employed                 | 7      | 14   | 21    |
| Employed after 1/12/2019 | 1      | 1    | 2     |
| Job Seeker               | -      | 4    | 4     |
| Other                    | 1      | 1    | 2     |
| Total                    | 9      | 20   | 29    |

- **72%** of the doctors from the class of 2016 were employed on December 1st 2019.
- ▶ 4 PhD holders had been seeking employment for the past 16 months on average and all had been employed before the PhD program.

#### They were seeking employment in the following fields:

| Research and Development                            | 3 |
|---|---|
| Higher education and research                       | 2 |
| Education (excluding higher education and research) | 0 |
| Research valorization and assistance, innovation    | 0 |

#### They were seeking employment in the following locations:

| Their department of residence           | 2 |
|---|---|
| Everywhere in France                    | 1 |
| Their region or neighboring departments | 1 |
| Abroad                                  | 0 |

▶ 2 PhD holders were in another situation on December 1st 2019. They did not give any further information about their situation.

#### **KEY FIGURES**

|          | Employed PhD holders                |                          |                             |                                |                         |                                |   |                                       |
|----------|-------------------------------------|--------------------------|-----------------------------|--------------------------------|-------------------------|--------------------------------|---|---------------------------------------|
|          |                                     | Contract Type            |                             | Sector                         |                         | Other key figures              |   |                                       |
| rate (1) | <i>Cadre</i><br>rate <sup>(2)</sup> | Permanent <sup>(3)</sup> | Post-doctoral contracts (4) | Other contracts <sup>(5)</sup> | Research <sup>(6)</sup> | Not<br>research <sup>(7)</sup> | Median time<br>spent before<br>1st job <sup>(8)</sup> | Median gross<br>salary <sup>(8)</sup> |
| 84%      | 86%                                 | 57.1%                    | 23.8%                       | 19.0%                          | 50%                     | 50%                            | 7 months  | €2,768                                |

- (1) Number of employed PhD holders/ (Number of employed PhD holders + Number of job seeking PhD holders)
- (2) Cadres of the following categories: civil servant, administrative, IT, company head, accredited profession, higher education teachers and scientific professions, secondary and school teachers
- (3) Number of PhD holders with a stable contract: permanent, civil servant, company head, accredited profession/Number of employed PhD holders
- (4) Number of PhD holders with a post-doctoral contract/Number of employed PhD holders
- (5) Number of employed PhD holders with another contract: temporary, interim, adjunct position, ATER/Number of employed PhD holders
- (6) Number of employed PhD holders in a company working in research/Number of employed PhD holders
- (7) Number of employed PhD holders in a company not working in research/Number of employed PhD holders
- (8) Median=value separating the top 50% of respondents and the 50% bottom respondents



### **Employment held on December 1st 2019**

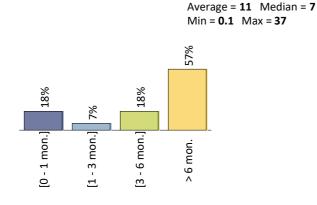
#### **Current employment contract type**

|                                 | Female | Male | Total |
|---------------------------------|--------|------|-------|
| Permanent                       | 4      | 8    | 12    |
| Temporary (excl. post-doctoral) | 2      | 2    | 4     |
| Post-doctoral contract          | 1      | 4    | 5     |
| ATER position                   | -      | -    | 0     |
| Adjunct position                | -      | -    | 0     |
| Other                           | -      | -    | 0     |
| Total                           | 7      | 14   | 21    |

Response rate: 100%

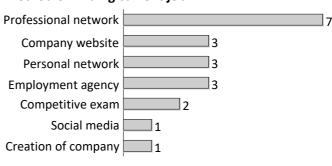
- ▶ 33% of PhD holders were still working at the first job obtained after their PhD defense.
- 100% of PhD holders worked full-time and 0% worked part-time.
- Temporary contracts varied between 4 and 24 months, with the median duration being 12 months.
- **57%** of PhD holders had a stable job.

#### Time spent before 1st job



Response rate: 100%

#### Method of finding current job



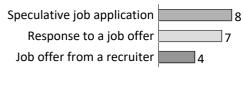
Response rate: 95%

#### Skills required for job

|                    | N |     |
|--------------------|---|-----|
| International work | 8 | 57% |
| Project management | 8 | 57% |
| Staff management   | 7 | 50% |
| Budget management  | 5 | 36% |

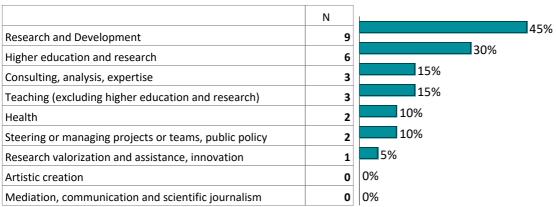
Response rate: 95%

#### Method of applying for current job



Response rate: 95%

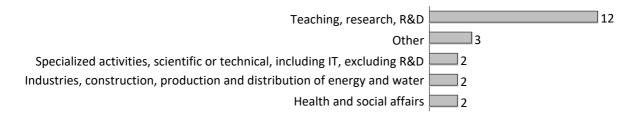
#### Functions held at current job



Response rate: 95%



#### **Employment by activity sector**

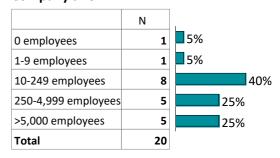


Response rate: 100%

#### **Company categories**

|   | N  | %    |
|---|----|------|
| Private company   | 9  | 45%  |
| Civil service   | 9  | 45%  |
| A non-profit association or organization                | 2  | 10%  |
| Your own  | -  | 0%   |
| Other   | -  | 0%   |
| Public company  | -  | 0%   |
| International organization or non-EU organization       | -  | 0%   |
| Individual with an accredited or independent profession | -  | 0%   |
| Total   | 20 | 100% |

#### **Company size**



Response rate: 95%

Response rate: 95%

#### **Employment status**

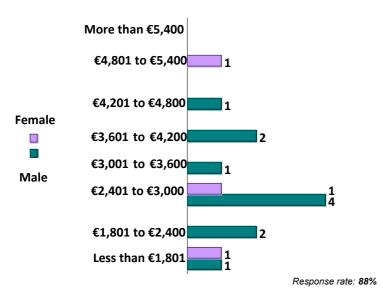
|  | Female | Male | Total |
|--|--------|------|-------|
| Higher education teacher, scientific profession        | 1      | 5    | 6     |
| Secondary school teacher                               | 1      | 1    | 2     |
| School teacher, instructor, or equivalent              | -      | -    | 0     |
| Category A civil servant                               | -      | -    | 0     |
| Company head, retailer, or equivalent                  | 1      | -    | 1     |
| Engineer or company technical cadre                    | 2      | 7    | 9     |
| Administrative or commercial cadre                     | -      | -    | 0     |
| Accredited profession, legal and technical             | -      | -    | 0     |
| Accredited profession, medical                         | -      | -    | 0     |
| Salaried employee                                      | 1      | 1    | 2     |
| Information, arts and entertainment profession         | -      | -    | 0     |
| Intermediate profession, administrative and commercial | 1      | -    | 1     |
| Total  | 7      | 14   | 21    |

Response rate: 100%



#### Salaries of PhD holders (excluding bonuses)

78% of doctors were satisfied with their salary.



|         | Female | Male 1 | otal   |
|---------|--------|--------|--------|
| Average | €3,153 | €2,898 | €2,952 |
| Min     | €1,586 | €1,722 | €1,586 |
| Max     | €4,920 | €4,428 | €4,920 |
| Median  | €2,952 | €2,706 | €2,768 |

The gross monthly salary of PhD holders (excluding bonuses) varied between €1,586 and €4,920. The median gross salary was €2,768\*.

Salaries are calculated based on full-time employment. The salaries of PhD holders working abroad were not taken into account.

#### **Bonuses**

**3** PhD holders specified the annual gross amount of the bonuses they received. These bonuses varied between **€800** and **€3,000**, with the median amount being **€2,000**.

#### **Location of employment**

**Numbers** 

# >= 15 10 - 15 5 - 10 3 - 5 < 3

#### Geographical distribution of jobs

| Auvergne-Rhône-Alpes                | 6 | 29% |
|-------------------------------------|---|-----|
| Ile-de-France                       | 4 | 19% |
| Other department in mainland France | 6 | 29% |
| Overseas France                     | 0 | 0%  |
| Abroad:                             | 5 | 24% |

| Belgium    | 1 |
|------------|---|
| Canada     | 1 |
| Finland    | 1 |
| Luxembourg | 1 |
| Poland     | 1 |

Response rate: 100%

### List of jobs occupied

|                      |   | Female | Male | Total |
|----------------------|---|--------|------|-------|
| <i>Cadre</i> job     | Researcher                                  | 1      | 3    | 4     |
|                      | Secondary School Teacher                    | 1      | 2    | 3     |
|                      | University Official                         | 0      | 1    | 1     |
|                      | Partnership and Social Innovation Assistant | 1      | 0    | 1     |
|                      | Financing and Innovation Consulant          | 1      | 0    | 1     |
|                      | Scientific Developer                        | 0      | 1    | 1     |
|                      | University Lecturer and Researcher          | 0      | 1    | 1     |
|                      | Developent Engineer                         | 1      | 0    | 1     |
|                      | Research Engineer                           | 0      | 1    | 1     |
|                      | Research and Development Engineer           | 0      | 1    | 1     |
|                      | Research and Development Engineer           | 0      | 1    | 1     |
|                      | Medical Physician                           | 0      | 1    | 1     |
|                      | Metrology Technician                        | 0      | 1    | 1     |
| Non <i>cadre</i> job | Building and Architecture Draftsman         | 1      | 0    | 1     |
|                      | Software Developer                          | 0      | 1    | 1     |
|                      | Process Methods Engineers                   | 1      | 0    | 1     |
| Total                |   | 7      | 14   | 21    |



#### Job Satisfaction

**83**% of doctors were satisfied with their job in general.

|  | Very<br>satisfied | Satisfied | Dissatisfied | Very<br>dissatisfied |
|--|-------------------|-----------|--------------|----------------------|
| General satisfaction with current professional situation       | 7                 | 8         | 2            | 1                    |
| Satisfaction with prospective career development opportunities | 6                 | 7         | 4            | 1                    |
| Satisfaction with salary                                       | 5                 | 9         | 2            | 2                    |
| Satisfaction with avenues opened by job                        | 6                 | 8         | 2            | 2                    |
| Satisfaction with appropriateness of job to PhD                | 7                 | 4         | 4            | 3                    |
| General satisfaction with current professional situation       | 39%               |           | 44%          | 11% 6%               |
| Satisfaction with prospective career development opportunities | 33%               |           | 39%          | 22% 6%               |
| Satisfaction with salary                                       | 28%               |           | 50%          | 11% 11%              |
| Satisfaction with avenues opened by job                        | 33%               |           | 44%          | 11% 11%              |
| Satisfaction with appropriateness of job to PhD                | 39%               | 22        | % 22%        | 17%                  |

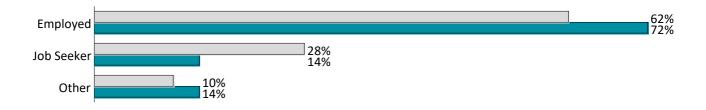
Response rate: 86%

**53%** of doctors declared that a PhD was required to perform their current job and **61%** of doctors were satisfied with the appropriateness of the job to the PhD.

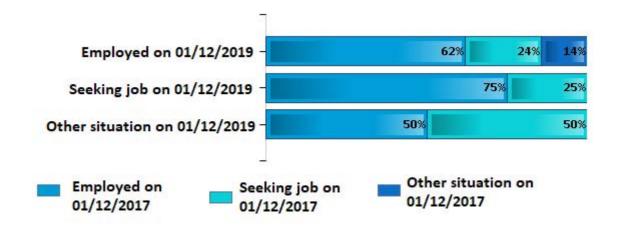
# 5 - Developments in doctors' situations 1 year and 3 years after receiving their degree

#### Situations on December 1st 2017 and 2019

|                         | Employed |     | Job<br>Seeker |     | Other |     | Total |      |
|-------------------------|----------|-----|---------------|-----|-------|-----|-------|------|
|                         | N        | %   | N             | %   | N     | %   | N     | %    |
| Situation on 01/12/2017 | 18       | 62% | 8             | 28% | 3     | 10% | 29    | 100% |
| Situation on 01/12/2019 | 21       | 72% | 4             | 14% | 4     | 14% | 29    | 100% |



#### ▶ Development in doctors' situations after 1 year and after 3 years



62% of doctors employed on 01/12/2019 were already employed on 01/12/2017.

**75**% of the doctors seeking work on 01/12/2019 had already held a job between receiving their PhD and 01/12/2019.

#### **GLOSSARY**

**ATER:** Attaché Temporaire d'Enseignement et de Recherche (Temporary teaching and research assistant)

**CNU:** National Council of Universities to become an associate or full professor

**CIFRE:** Work placement agreement placing a PhD student in a company

**Dual-Degree Thesis Program:** A dual-degree thesis is a program to promote global engagement for PhD students and to develop scientific collaboration between foreign and French research teams.

**Doctoral contract:** The doctoral contract is the main type of funding granted to PhD students. The doctoral contract is open to all PhD students who have been enrolled for less than six months in their first year, with no age requirement.

**Post-doctoral contract:** A post-doctoral contract is a temporary work contract in the public and private research sphere, in France or abroad.

**PhD degree:** The PhD is the highest degree in higher education, training students for research by conducting research. In this respect, it is considered a professional research experience. It leads to the creation of new knowledge.

ED: Doctoral school

**ED LSHS:** Doctoral School of LITERATURE, HUMAN AND SOCIAL SCIENCES

**ED SVSAE:** Doctoral School of LIFE, HEALTH, AGRONOMY, AND ENVIRONMENTAL SCIENCES

**ED SEJPG:** Doctoral School of ECONOMIC, LAW, POLITICAL AND MANAGEMENT SCIENCES

**ED SF:** Doctoral School of FUNDAMENTAL SCIENCES

**ED SPI:** Doctoral School of ENGINEERING SCIENCES

**MCU:** Maitre de Conférence Universitaire (Associate Professor)

