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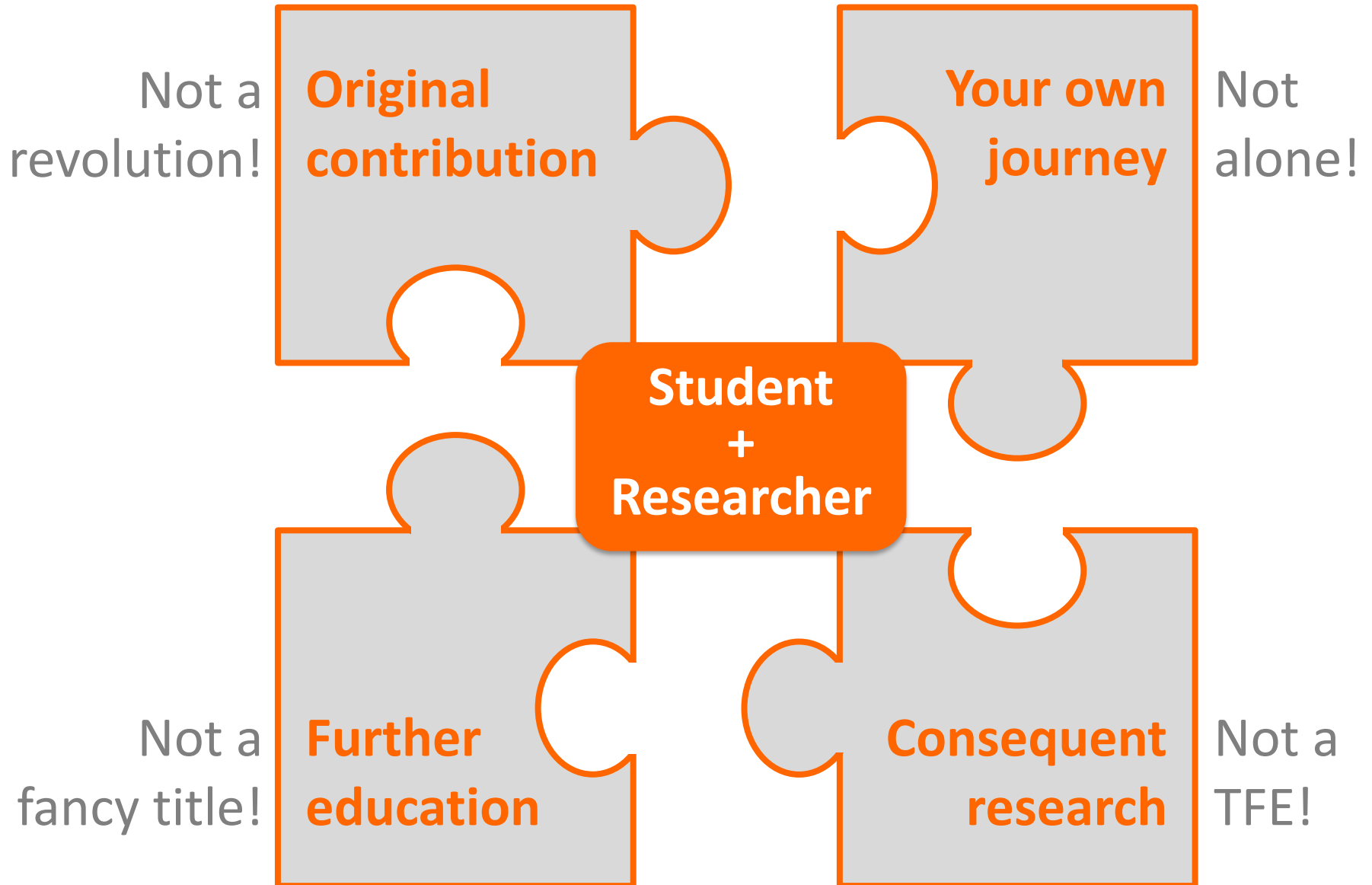
Information session on the PhD

November 24, 2021

Outline

- **The PhD in general**
 - Practical aspects about the PhD
 - Testimony from the industry
 - Informal discussion

What is a PhD?




What is specific to a PhD?

International exposure

- Collaborations
- Research stays
- Conferences

Publications

- Journals
- Conferences

- 
- Visibility
 - Feedback
 - Professional network

What will I learn?

To become a scientist

- **Expert** in your field
- **Independent** and **creative** researcher
- **Analytical** and **critical** thinker
- Good **communicator**
- **Collaborator** with other research teams

... and an innovator

- Drive **innovation** (condition for survival in the future)
- Understand **complex** topics
- Tackle **new** problems
- Work **internationally**
- **Lead** research teams

Am I cut for a PhD?



✓ Motivated?



✓ Curious?



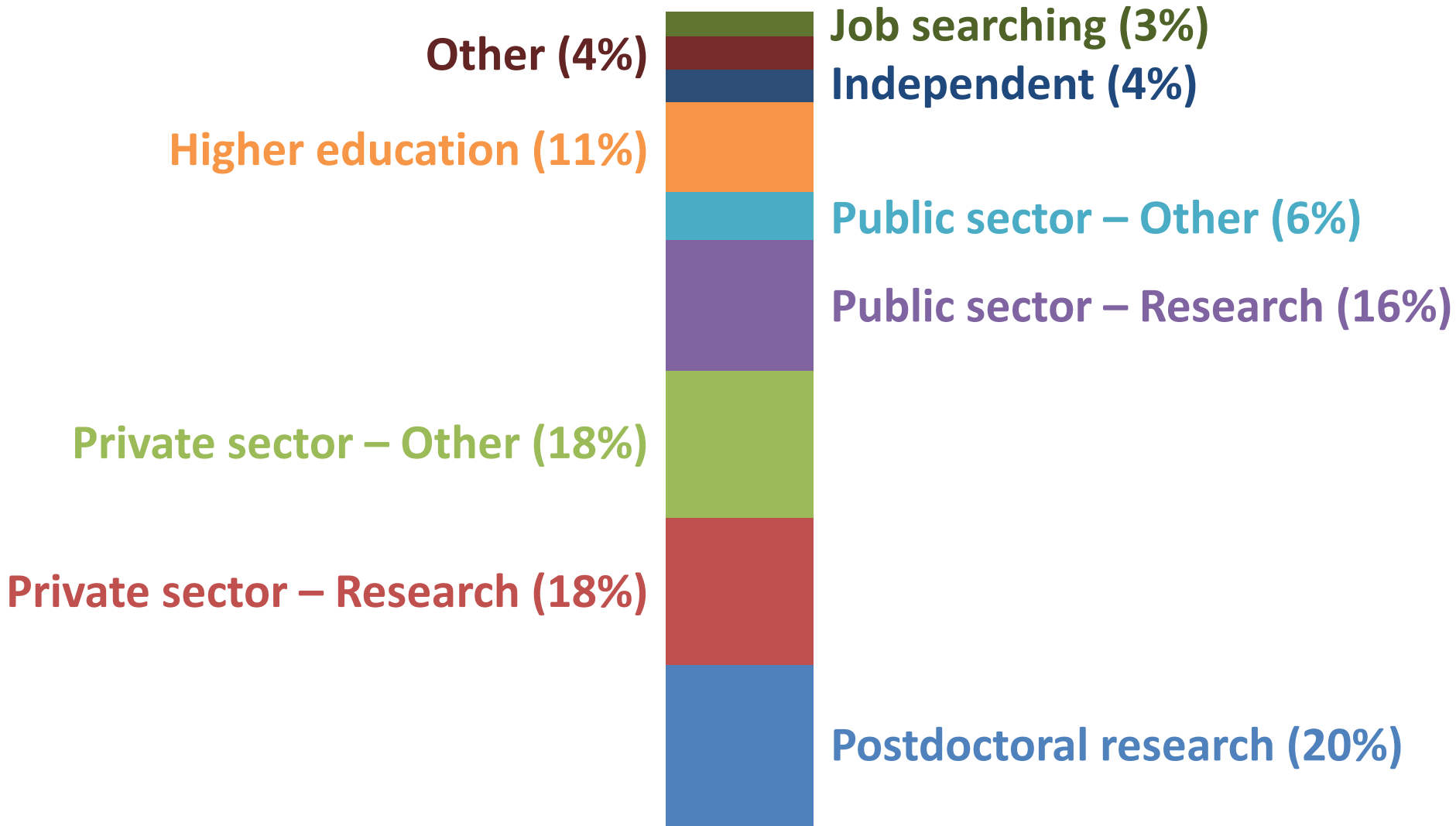
✓ Independent?

▶ **Good PhD candidate**

No need to be a genius!!!

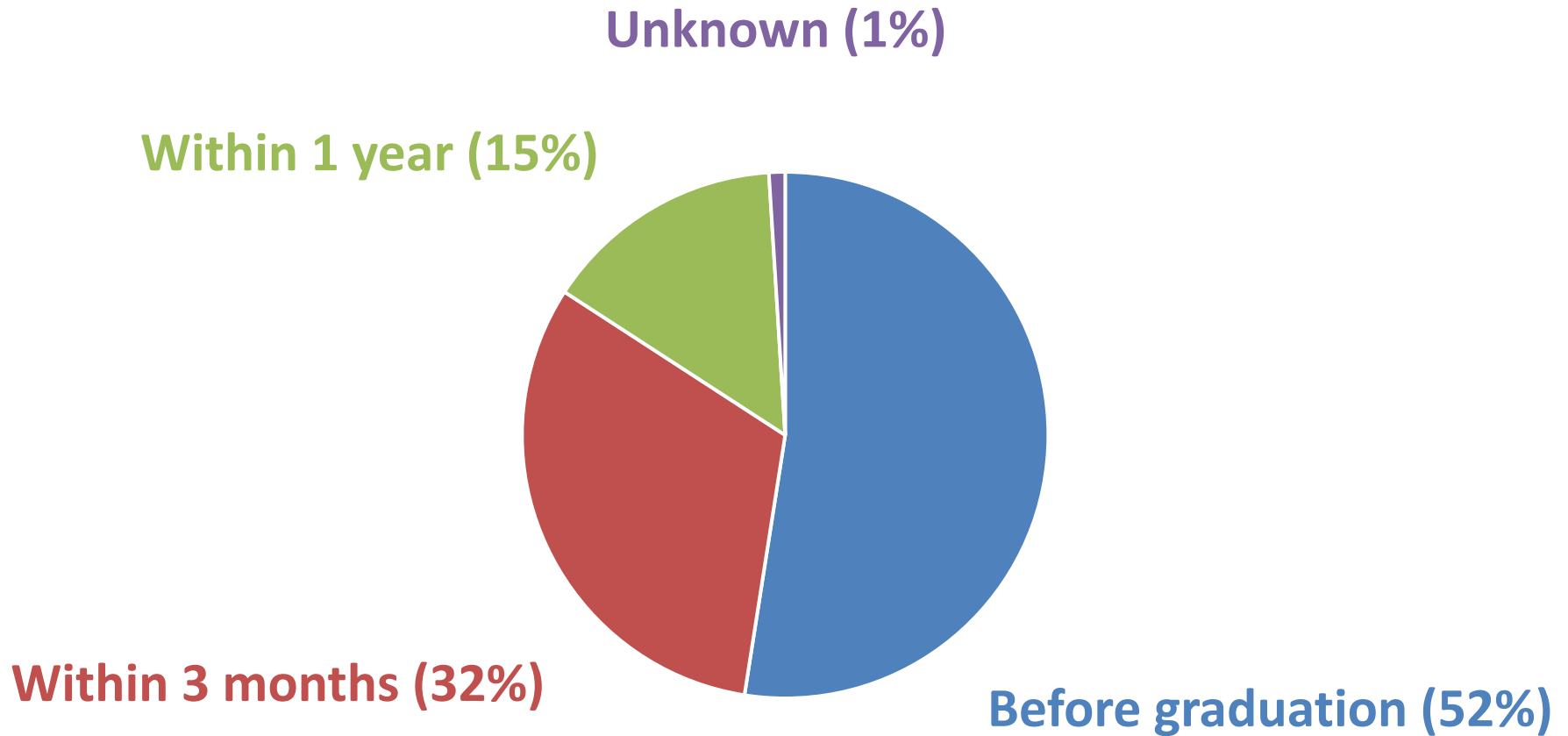
What could I do after a PhD?

Employment after PhD of FSA graduates (2013-2017)



What could I do after a PhD?

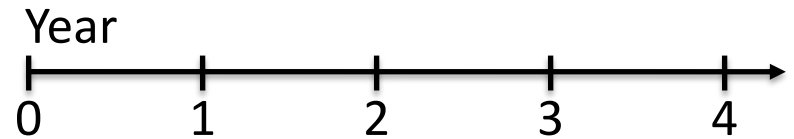
Time to employment of FSA PhD graduates (2013-2017)



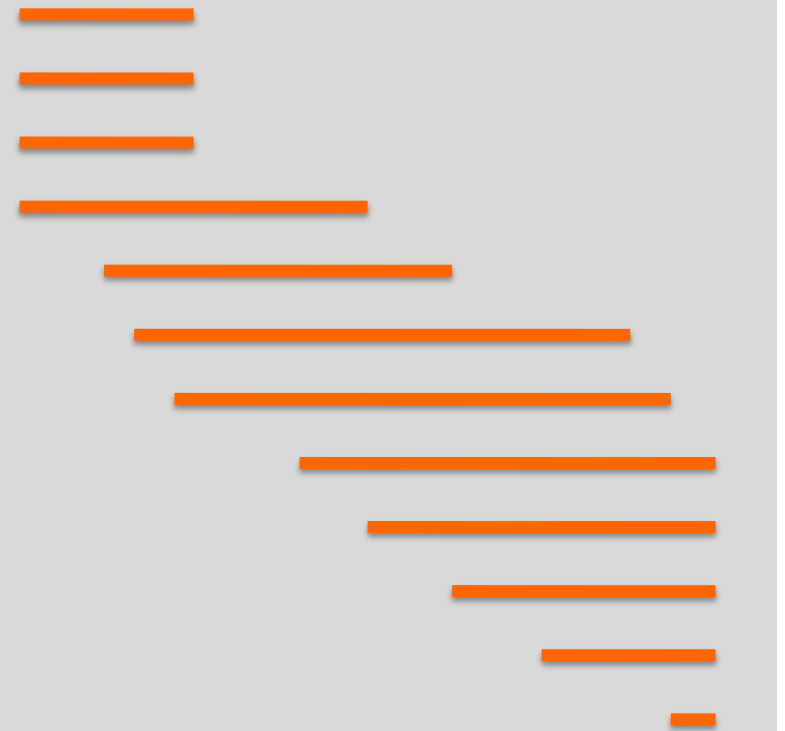
So, how does it work?

Tasks

Approx. timeline



- Familiarization with subject
- Literature review
- Research definition and structure
- Advance courses
- Tools/experiments development
- Measurements/simulations/...
- Results analysis
- Conference presentations
- Papers publications
- Refinements and optimization
- **Written thesis**
- **Oral defense**



What is the role of the advisor?

Advisor = Mentor

A guide to help you ...

- defining and **structuring** your project
- identifying potential issues and **solutions**
- developing your scientific **network**

An evaluator who will ...

- provide **feedback**
- follow your advancement
- **assess** your results

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What are the requirements?

To start a PhD

- Master degree (300 credits)
- Adequate grades (one prior “Distinction”)
- A research topic
- An advisor and adequate funding

To complete a PhD

- Minimum 3 years
- 60 credits of **doctoral training**
- Written **thesis**
- Oral **defense**

What is the doctoral training?

Thematic training

- 3rd cycle courses
- Topical seminars
- Specialized courses
- ...

Min. 15 credits

Generic (soft) skills

- Language / communication courses
- Teaching assistantship / supervision
- Research stays abroad
- ...

Min. 10 credits

Scientific production

- Conferences and seminars
- Articles in peer-reviewed journals (min. 1)
- ...

Min. 25 credits

Min. 60 credits

How can I finance my PhD at ULiege?

Funding source	Topic	Deadlines
FNRS Fellowship	Free	~ Feb. 2022
FRIA Fellowship	Free (“industrial”)	~ Aug. 2022
Teaching Assistantship	Free	~ Jun. 2022
Research project	Imposed by project	Case dependent
PhD in Company (Win4Doc)	Imposed by company (in Walloon strategic domains of innovation)	~ Sep. 2022 -> Jun. 2023
Other (own funding...)	Free	Case dependent

How does it work abroad?

Belgium

Same as ULiege

Abroad

- Often similar to Belgium
- Master thesis is a good entrance door
- Check university website
- Contact potential advisor for availability
- Talk to faculty members at ULiege



USA

- Start application **1 year before** PhD start (deadline in the Fall)
- Need TOEFL + GRE
- Application fee
- Qualification exam (“quals”)

What are the next steps?

1. **Talk** to faculty members and other PhD students about **opportunities** and experiences
2. **Identify** potential **topics** that interest you and an **advisor** with whom you would like to work
3. **Discuss** directly with your future advisor about concrete steps to take and funding options

Where can I find more information?

ULiege

- Réseau des doctorants ULiege (www.red.uliege.be)
- PhD at ULiege (https://www.enseignement.uliege.be/cms/c_9096635/en/doctorate)
- PhD in the Faculty of Applied Sciences (https://www.facsa.uliege.be/cms/c_3230106/en/facsa-doctorat)
- Pars-en-thèse (www.ulg.ac.be/books/pars-en-these)

Belgium

- FNRS (www.frs-fnrs.be)
- Walloon region PhD in a company (Win4Doc) (<https://recherche.wallonie.be/win4doc>)
- FWO (www.fwo.be/en/)

Abroad

- Wallonie - Bruxelles International (www.wbi.be)
- The Belgian American Educational Foundation (www.baef.be)
- Euraxess (www.euraxess.be)
- Fulbright commission (www.fulbright.be)
- Agence universitaire de la francophonie (www.auf.org)
- phdportal (www.phdportal.eu)
- FindAPhD (www.findaphd.com)

Fun

- PhD comics (www.phdcomics.com)

Questions?



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Testimony



Agathe DEFOURNY

- PhD in company (2022)
- Bru-Chevron – ULiege
- Compréhension et caractérisation des eaux carbogazeuses



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BACKUP

Doctoral colleges

Architecture, Civil engineering and Geology

President: Benjamin DEWALS

Vice-President: Serge BROUYERE

Art of building and urban planning

President: Sylvie JANCART

Vice-President: Shady ATTIA

Aerospace Engineering and Mechanics

President: Jean-Philippe PONTHOT

Vice-President: Ludovic NOELS

Chemical Engineering

President: Grégoire LEONARD

Vice-President: Stéphanie LAMBERT

Electricity, Electronics and Computer science

President: Benoît VANDERHEYDEN

Vice-President: Bernard BOIGELOT

FNRS fellowship

Duration

2 years, renewable for 2 more years

Topic

Free to chose with advisor agreement

Requirements

Very good track record and very good project

Decision criteria

Application (grades, recommendation, project)

Deadline

~ Feb. 2022 (start Oct. 2022)

FRIA fellowship

Duration

27 months, renewable for 21 more months (total of 4 years)

Topic

Free topic (industrial/agricultural application) (letter of support from industry helpful)

Requirements

- Master in Sciences or Engineering
- Good track record and project

Decision criteria

- Application (grades, recommendation, project)
- Oral presentation and interview

Deadline

~ End of Aug. 2022 (start Oct. 2022, but decision announced Dec. 2022)

Teaching assistantship

Duration

2 years, renewable twice (total of 6 years)

Topic

Free to choose with advisor agreement

Requirements

- Good track record
- PhD advisor support

- **2/3 research**
- **1/3 course assistant**

Decision criteria

Application (grades, recommendation, topic, letter of motivation, needs)

Deadline

~ Jun. 2022 (start mid-Sep. 2022)

Research project

Duration

Project dependent

Topic

Imposed by project (some freedom)

Requirements

PhD advisor support + project available

Decision criteria

PhD advisor agreement

Deadline

None (start depends on project)

PhD in a company (Win4Doc)

Duration

4 years (2 x 24 months)

Topic

Imposed by company but should be in one of the Walloon strategic domains of innovation

Requirements

Be hired by Walloon company

Decision criteria

Project approval by Walloon region

Deadline

~ Sep. 2022 -> letter of intention
~ Dec. 2022 -> proposal
~ Jun. 2023 -> start