Guide for Applicants

EMPOwER

Entrepreneurial Multidisciplinary Scientists Forging Pathways Onto Clean Water, Sustainable Energy and Resources

wetsus
european centre of *excellence*
for sustainable *water technology*

Supported by the academic partners

WAGENINGEN
UNIVERSITY & RESEARCH

university of groningen

UNIVERSITY OF TWENTE.

MARIE CURIE ACTIONS

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1   Introduction

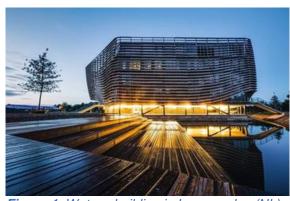## 1.1   The EMPOWER doctoral programme

EMPOWER is a doctoral programme co-funded by the European Commission through a Marie Skłodowska-Curie Action (MSCA) (Co-funding of regional, national and international programmes (COFUND)[1]).

EMPOWER is an innovative doctoral training programme aiming to encourage the entrepreneurship in research. The objective is to create a highly demanded type of professional in STEM (Science, Technology, Engineering and Mathematics), with the skillset to operate between academic chairs, established knowledge-intensive companies, start-ups, public authorities and the general public, to develop and realize solutions for the challenges of the 21st century in the field of water. The resulting **next-generation PhD** will be a scientific entrepreneur that fosters the commercialization of scientific discoveries, generates a clear communication channel between industry and university and creates pathways for their coexistence.

Overall, the doctoral training programme consists of **four main, interconnected parts**, which are dedicated to developing different skills: research, multidisciplinary expertise, entrepreneurship and personal development. In particular, Early Stage Researchers (ESRs) enrolling in EMPOWER are asked to integrate their PhD path with an **integrated business-oriented training (MBA)**, which allows for a dual degree. This dual training is fundamental to prepare STEM PhD students for careers in entrepreneurship. The MBA comprises a business secondment, related to the research project of the ESR, at one industry/company.

1.2   Wetsus and the university partners

Wetsus, European centre of excellence for sustainable water technology, is a research centre located in the city of Leeuwarden, province of Friesland in the Netherlands (**Figure 1**). From its foundation in 2004, Wetsus has created a unique multidisciplinary research environment, becoming a hub where intersectoral cooperation between companies, universities and research institutes takes place. Wetsus scientific programme consists of multiple **multidisciplinary dedicated PhD projects**, supported by a broad range of

Figure 1. Wetsus building in Leeuwarden (NL).

laboratory' facilities and researchers' expertise in the fields of engineering, biotechnology, chemistry, microbiology and physics. The excellence quality of research of the Wetsus doctoral programme is reflected by the increasing number of high-impact scientific publications, with to date 90 granted patents, 36 spin-off companies, and 110 graduated doctors, most of which are now successful entrepreneurs or academics. The current network includes 110 companies and 50 professors from 16 universities. Wetsus is the main beneficiary and project coordinator, and the research projects will be conducted together with three

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[1] More information at https://ec.europa.eu/research/mariecurieactions/actions/co-funding-programmes_en

university partners **Wageningen University (WUR), University of Groningen (RUG), and University of Twente (UT)**.

Considering the Academic Ranking of world universities 2020 per subject, WUR classifies 2nd for "Food Science and technology" and 13th for "Biotechnology", UT rates within 51-75th for the subject of "water resources", while RUG has "Chemistry" (with the Nobel prize Ben Feringa) as one of its main expertise already for more than 10 years (51-75th from 2009 until 2020). With the new doctoral programme EMPOWER, Wetsus and the partner universities aim to fulfil the current need to encourage the entrepreneurship in research, and to create a brand new model of doctoral training where **science and marketing speak the same language**.

2   Application to EMPOWER ESR Vacancies

2.1   Eligibility criteria

To be eligible, at the deadline of the call, the candidate must fulfil the following mandatory criteria, according to **the early-stage and mobility MSCA criteria**:

- Hold an **MSc degree** in the discipline associated with the research topic.
- The candidate's **full-time equivalent research experience must be less than four years**, measured from the date when the candidate obtained the degree entitling them to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the candidate is recruited, even if a doctorate was never started or envisaged.
- The candidate **may not have resided** or carried out their main activity (work, studies, etc.) **in the Netherlands** for more than 12 months in the 3 years immediately before the deadline of the call. Time spent as part of a procedure for obtaining refugee status under the Geneva Convention, compulsory national service and/or short stays such as holidays are not taken into account.
- The candidate **must not hold a doctoral degree**.

Moreover, other criteria for the candidates are:

- During their academic path, have shown research excellence either through high grades and/or an outstanding thesis.
- Being able to work in a multidisciplinary team in an international environment, and also to work independently.
- Have excellent English communication skills, both verbally and in scientific writing.
- Suitability for scientific entrepreneurship and to potentially develop business related skills.

Wetsus is committed to equality of opportunity, to eliminating discrimination and to creating an inclusive working environment for all. Wetsus is committed to providing the best possible support for all employees and students. Our HR team understand that each person's disability or impairment can affect them in different ways and therefore the support offered is flexible and tailored. Employment conditions in the Netherlands are appealing and supportive to female researchers. Additionally, Wetsus works predominantly on STEM topics with 48% female researchers in the programme, which shows a high degree of gender balance. Attention will be given to candidates holding the refugee status, which definition includes candidates who are either at risk in their origin countries (due to discrimination, persecution, suffering

and/or violence), or are seeking refuge out of these reasons or have recently found refuge in Europe.

We therefore encourage candidates to apply irrespective of age, disability, marriage or civil partnership status, race, religion and belief, gender identity, sex, or sexual orientation.

2.2   How to apply?

The application documents have to be upload via the web-based application form on the specific webpage of the research project of choice. Research projects are available online at https://phdpositionswetsus.eu/. Candidates **can only apply to one research project** and indicate their second and third preferences on the application form.
Please **do not send** your application to the email address of the listed academic and Wetsus supervisors. Only complete applications received via the official application form will be considered for evaluation.
Multiple applications for different research projects posted in the website will result in the candidate's disqualification.

2.3   List of documents to apply

To apply, candidates need to submit the following documents via the online application form on the webpage:

1. A **motivation letter**, which can be submitted either in a writing format with max of 1 page or a video format of the duration of max 2 min with max size of 100 MB.
2. **An up-to-date** *curriculum vitae* (CV), including the following information: complete name, date of birth, current location, education, list internships and thesis (subject, name supervisor, grade, etc.), publications (if applicable), work experience (if applicable), scientific interests, complementary qualifications, achievements and other relevant information with max of 2 pages in total.
3. **A copy of MSc diploma(s)** (or a letter from university stating the expected graduation date) and **grades** (with explanation of the grading system).
4. **At least one/two signed recommendation letter(s),** dated no longer than 1 year before the application deadline, with contact information of the referee(s). If your referee(s) is only able to give a reference letter just under request by Wetsus, please contact us beforehand at phdpositions@wetsus.nl.

Please compile all the application documents in one single PDF file (except the motivation video), named with first and last name of the candidate. Additionally, see section 6 for the application documents checklist.

Only applications that are complete, in English, complied with the application rules, and submitted via the application webpage before the deadline, will be considered eligible.

2.4   Deadline

The deadline of the application is on **the 9th of May 2022 at 15.00 CEST**.

2.5   Non-research ethics and personal data

To comply with General Data Protection Regulation (GDPR), each applicant formally consents at the moment of submission of their application to EMPOWER ESR vacancies that during the selection and evaluation phase, different members inside and outside the host organization will evaluate her/his personal data.

All of the information collected at the application stage is necessary and relevant to the performance of the position applied for. Wetsus will use the information provided by the applicant, by the referees provided, and the educational institutions with whom we may undertake to verify the applicant qualifications with, for recruitment purposes only. Wetsus will treat all personal information with the utmost confidentiality and in line with current data protection legislation.

2.6   Research ethics

When enrolled at Wetsus as researchers, candidates will be requested to uphold the research ethics outlined in the Charter of Fundamental Rights of the European Union and by the European Code of Conduct for Research Integrity, under penalty of exclusion from the doctoral program.

Enrolled ESR must complete a **research ethics checklist** as part of their research proposal. The research **projects** are permitted, if only they:

- do not perform research on Human Embryonic Stem Cells (hESCs) or human embryos (hE),
- do not involve human participants in the research,
- do not involve human cells or tissues,
- do not involve processing of personal data,
- do not involve animals,
- do not perform research in non-EU countries, and/ or the research related activities undertaken in these countries do not raise potential ethics issues,
- do not perform research on dual use items, technologies or solutions,
- have an exclusive focus on civil applications, and
- have no potential for misuse of research results.

3   Selection Process

The EMPOWER selection procedure consists of three rounds. It is a lengthy rigorous process, which will take several months to complete:

Round 1 – *Eligibility check and assessment of application material.* The application documents received per each candidate will be evaluated by internal evaluators (from Wetsus and academia), together with external experts and the HR department. Evaluation will be carried out according to eligibility criteria evaluating each candidate for different skills such as basic knowledge, communication approach, teamwork, problem solving, management of research and innovation, public awareness activities, etc. Particular attention will be paid to the suitability for the interaction with industries, and for patents or inventions development. Among all the

eligible applicants, maximum of 15 CVs applicants (with score ≥ 70) will be selected for a video interview.

Round 2 – *Video interview.* The interview panel will be composed by the Wetsus and academic supervisors. The interview will have a duration of 35-60 min. A maximum of 4 applicants (with score ≥ 80) will be selected for Round 3.

Round 3 – *Recruitment challenge.* The best candidates are invited to Wetsus for a full recruiting day. Travel and accommodation costs will be covered by Wetsus, to avoid any social or income-related bias in the selection process. During the challenge, the candidates will be assessed for:

1. Giving a short *presentation*, focussing on the key findings and discussions from their MSc thesis work.
2. Write a short *project proposal*, related to the topic of the PhD position applied. More information about the modality will follow for the candidates admitted to the Round 3.
3. Short *face-to-face* interviews with the academic and Wetsus supervisor, and one external evaluator.

In case of travel ban related to the SARS-CoV2 pandemic or similar international emergency-related issues, the recruitment challenge will take place online in video conference modality. All candidates will be informed of the final score, and the best candidates per each PhD position (with score ≥ 90) will be offered an employment as doctoral candidate at Wetsus as the host organization.

3.1   Scoring system

In the selection process, the suitability of the applicant is assessed using a scoring system. In each round, the evaluators will take into consideration the whole range of experience of the candidates, focusing on their potential as researchers, but also assess the candidate considering their creativity and level of independence. To ensure this, the evaluation process will consider a wide range of skills which are grouped under five main evaluation criteria. The criteria and their maximum scores are listed as below:

1. Motivation and affinity for the proposed topic (15 points)
2. Research skills and basic knowledge (40 points)
3. Affinity for personal development and business oriented training (15 points)
4. Initiative and independency (15 points)
5. Communication skills (15 points)

These criteria evaluate each candidate for different skills such as basic knowledge, communication approach, teamwork, problem solving, management of research and innovation, public awareness activities, etc. Particular attention will be paid to the suitability for the interaction with industries, and for patents or inventions development.

3.2   Transparency and feedback

Within one month after the application deadline, all the applications will be evaluated and the candidates will be informed whether her/his submission meets the requirements to be invited for the video interview (Round 2). The video interview will take place as soon as possible and ultimately within one month after a positive evaluation in the first round. After the video

interview, all the candidates to be invited for the EMPOWER recruitment challenge will be informed at the latest 4 weeks before the recruitment challenge, to guarantee enough time for the candidates to arrange a visa, when needed.

The EMPOWER programme aims for a fully transparent evaluation procedure for all the applicants by giving timely feedback. After each selection round, all the candidates will be informed by email about their score. After Round 2, the applicants will get personal feedback from the evaluators about strengths and weaknesses of their application and interview. This feedback aims to help the candidate with future applications and other career choices.

3.3   Appeal and redress

After each round, candidates can appeal within 2 weeks if they feel they are evaluated unjustly for one of the following reasons: relevant information was not taken into account; procedural errors; discrimination on the basis of gender, race, nationality, age, religion, creed, disability, sexual orientation, gender identity, or gender expression; or any other ethical issues. Appeal can be filed through email at: appeals_phdpositions@wetsus.eu.

4   After The Recruitment

After Round 3, the selected candidate will be offered the PhD position and the project timing will be determined in accordance with all the supervision panel and the university. The availability of the candidate will be taken into account.

4.1   Wetsus' offer

Salary and working conditions are according to the collective labor agreement of the Cooperative Association of Dutch Universities (VSNU) for PhD students. Per 2022, the salary for a PhD student as determined by the collective labor agreement are (in Euros before tax per year): €34202 (year 1), €39844 (year 2), €41706 (year 3) and €43708 (year 4). PhD students are appointed by one of the three cooperating universities, but research is conducted at the Wetsus laboratory in Leeuwarden.

4.2   Procedure of visa

For the candidates selected for the Round 3, the HRM of Wetsus will organize their visa application. Depending on the country where the applicant is travelling from, HRM supports the candidate by applying for the right visa.

At the procedure of enrolment as a PhD researcher, either the designated universities or Wetsus will take care of the paperwork f.i., the labour contract, and applying for the residence permit (only applicable if the PhD researcher is non-European).

4.3   Researchers with disabilities

The Wetsus building (built in 2015) is fully equipped and accessible for persons with physical disabilities. The HR team will provide a tailored support for each specific case. The programme timeline can be adjusted accordingly, in terms of attendance of courses, laboratory work, and utilization of research facilities. Material facilities as special desks, customized chairs and

adaptation to the canteen space will be considered. Finally, a doctoral candidate counsellor and/or a "research buddy" will be provided when necessary.

Wetsus will also apply for the **MSCA Special Needs Allowance** to have financial support for the additional costs entailed recruiting researchers with disabilities whose long-term physical, mental, intellectual or sensory impairments.

4.4   Gender equality

Employment conditions in the Netherlands are appealing and supportive to female researchers (good secondary working conditions for women, such as paid maternity leave for 16 weeks and parental leave, flexible working hours and working from home facilitated). Wetsus works predominantly on STEM topics and with 48% female ESRs the current PhD programme shows a high degree of gender balance.

4.5   Research at risk

Attention will be given to candidates holding the refugee status, which definition includes candidates who are either at risk in their origin countries (due to discrimination, persecution, suffering and/or violence), or are seeking refuge out of these reasons or have recently found refuge in Europe. In this regard, all the EMPOWER ESR positions will be advertised via EURAXXES as 'refugee-welcoming' jobs, within the 'Science4Refugees' initiative of the EC.

5   Further Information

Experiences from Wetsus' PhD students: https://phdpositionswetsus.eu/experiences/ and https://phdpositionswetsus.eu/videos/

Research at Wetsus: https://www.wetsus.nl/wetsus-research/

Wetsus laboratory facilities: https://www.wetsus.nl/https-wetsus-nl-research-facilities/

Wageningen University and Research: https://www.wur.nl/en/wageningen-university.htm

University of Groningen: https://www.rug.nl/

University of Twente: https://www.utwente.nl/en/

Information about Leeuwarden: https://www.friesland.nl/en/discover/eleven-cities-and-villages/leeuwarden

6   Application Documents Checklist

☐ A **motivation letter** (max 1 page) or **motivation video** (max 2 min) *(MANDATORY)*

☐ **An up-to-date *curriculum vitae*** (CV, max 2 pages) *(MANDATORY)*

☐   **A copy of MSc diploma(s)** (or a letter from university stating the expected graduation date) and **grades** (with explanation of the grading system) *(MANDATORY)*

☐ **At least one/two signed recommendation letters** *(MANDATORY)*

☐ **Contact of additional referees** *(if applicable)*

☐ **English proficiency certificate** *(if applicable)*

☐ **Abstract of one of the papers published** *(if applicable)*

NOTE: All the documents **must be merged and uploaded as one PDF file**, except the motivation video which has its own video upload slot. The PDF file **must be named with first and last name of the candidate.** To make a merged PDF with all your application files, you can use the following online resources:

https://www.ilovepdf.com/merge_pdf

https://combinepdf.com/

https://www.pdf-merge.com/