EMPAPOSTDOCS-II: GUIDE FOR APPLICANTS

GENERAL INFORMATION

What is it?

EMPAPOSTDOCS-II is a postdoctoral fellowship programme. It is **individual-driven, follows a bottom-up approach and offers incoming and re-integrating international mobile researchers a 2-year research and career advancing fellowship.** It allows **experienced researchers** from all over the world to set up and implement a research project and get the opportunity to work on their own research idea at one of the 30 research laboratories of Empa. The application has to be made together with a senior scientist at Empa, who will act as the **fellow's mentor**. Empa's five research focus areas and three locations within Switzerland offer a **large degree of freedom** of research topic and destination for the fellows.

What does it offer?

The EMPAPOSTDOCS-II fellows are offered a full employment contract with Empa for 24 months with a competitive salary. The fellows will have the opportunity to improve their management skills by leading their research projects. Being an EMPAPOSTDOCS-II fellow constitutes a good preparation for science and engineering management positions in the industry and for an employment in start-ups. The support schemes and career development tools, which include training in scientific and non-scientific skills, will insure that the stay of the fellows at Empa is beneficial for the development of their career.

When are the calls for proposals?

The first call opens in June 2017, the second in June 2018 and the third call in June 2019. All calls open on June 1st and close on August 31st of the respective year.

The EMPAPOSTDOCS-II programme is co-funded by the Horizon 2020 Marie Skłodowska-Curie action COFUND.

HOW TO APPLY?

For a potential fellow, **the first step of the application process is to develop an idea for a research project and to find a mentor**, a senior scientist at Empa who will support and supervise the fellow and his or her research project.

On the [programme portal](), a list of potential mentors with their fields of expertise and their research interests is displayed to help the applicants find a suitable mentor. The applicant must establish contact with a potential mentor and convince her/him to participate in the project **prior to the application.** It is also possible to request help to find a mentor if this is needed (via the programme manager).

Once an applicant and a mentor have agreed to work together on a project idea, the **mentor** registers online on the project application tool of the [programme portal](). The online application forms have to be filled out and signed by the mentor, the laboratory and the department leader, Then they can be uploaded (after scanning) and submitted, together with the "EMPAPOSTDOCS-II proposal form". For more information about the application process, see the "Short instruction for EMPAPOSTDOCS-II applications".

ELIGIBILITY CRITERIA AND MOBILITY SCHEMES

There are two mobility schemes in the EMPAPOSTDOCS-II programme, the **incoming mobility** scheme and the **re-integration** scheme. Regardless of the mobility scheme, the main **eligibility criteria** for the Empa Postdocs programme are the following:

The applicant must

- **Be an experienced researcher**: at the time of the application deadline be in possession of a doctoral degree, irrespective of the time taken to acquire it.

- **Not have finished her/his PhD more than six years before.**

For the **incoming mobility** scheme, a specific eligibility criterion is that the applicant must not have resided or carried out their main activity (work, studies, etc) in Switzerland for more than 12 months in the 3 years immediately prior to the application deadline. Short stays, such as holidays, are not taken into account.

For the **re-integration** scheme, the specific eligibility criteria are:

- The researcher originates from the EU-27 or Associated Countries[1];

- The researcher has been active in research in a third country[2] for at least three years and in the last 12 months immediately prior to the application deadline.

For each call, 15 to 20 fellowships will be available. Each fellowship will last two years.

SELECTION PROCESS AND EVALUATION CRITERIA

The applications will be evaluated by an internal and external selection committee of peer-reviewers according to strict selection criteria focusing on the applicants' professional, personal, social and leadership skills and his or her research potential.
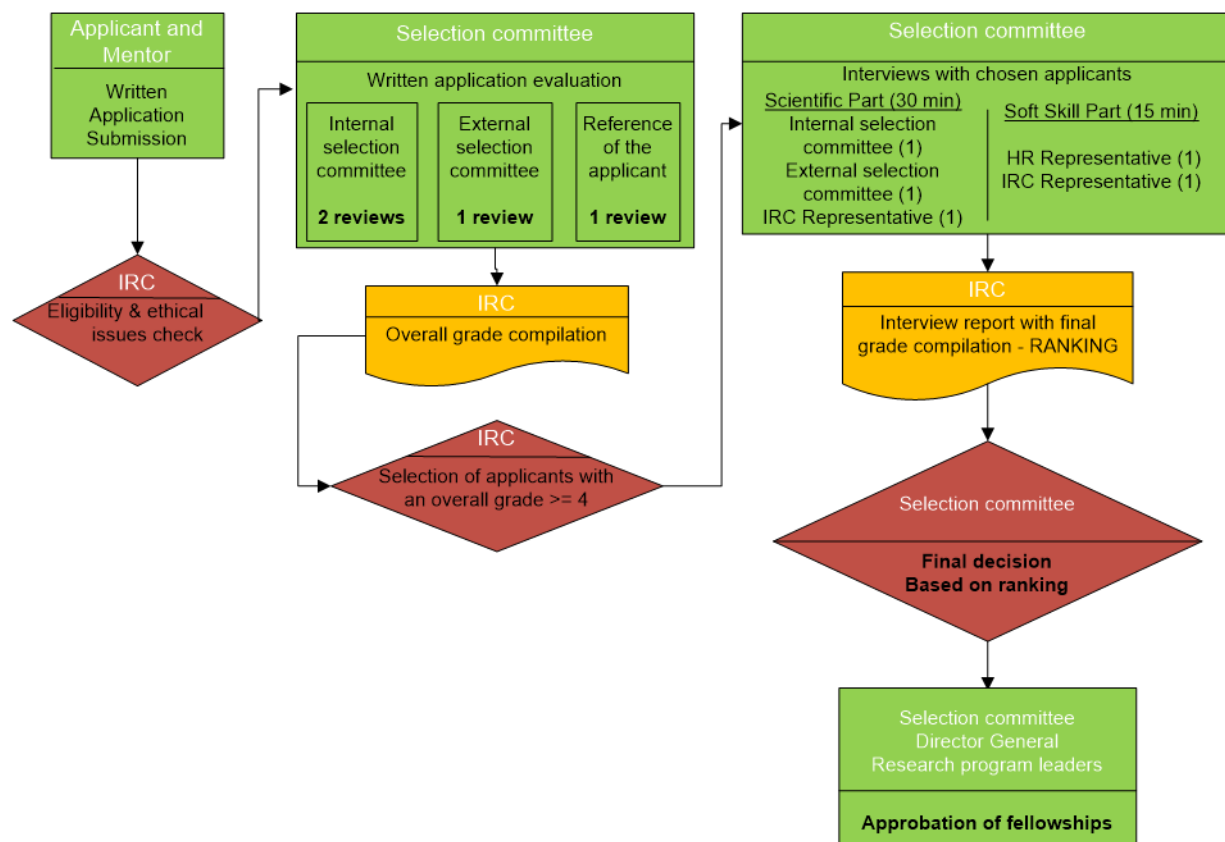

Figure 1: Selection Process

The eligibility of the fellows and their application is first verified during a **pre-evaluation phase**. During the pre-evaluation process, research projects will be evaluated by Empa's **Ethical Review Committee (ERC)** with respect to the ethical principles promoted by the [European Commission](#) and by the Swiss federal and cantonal legislation. Any applicant whose application contains a research project excluded from funding under Horizon2020 or contravening [Empa's ethical rules and regulations](#) will be noticed by the ERC in order to amend his/her application for the fellowship to start. If the research in question concerns topics raising ethical issues, the ERC will also impose the condition that all required permissions be obtained from the cantonal Ethics Commission. Projects that concern research not allowed by the ethical rules may be excluded at this stage.

Two evaluation tools, the written proposal and the interviews, allow the selection committee to judge the merit of the fellows. The written proposal consists of three parts: the **personal**, the **project description** and the **references** part.

The first part of the written proposal serves to evaluate the **scientific capability** of the applicant and also values traits such as participation to industrial research projects (including invention and patents), team projects, multi-disciplinary projects, management, teaching, supervision and funding application experience, as well as work in different countries, cultures, and sectorial environments. Provisions will be made such that the **merit-judging process is well balanced** and that **creative** and **diversified** individuals are as much favoured by the evaluation process as the more traditional scientific archetype focusing on grades and publication count. To this end, the following information will be requested from the applicant in the forms: academic background, relevant work experience, prizes and awards, previous applications for funding, summary of PhD thesis, list of publications and other contributions (including patents), prizes and awards, description of most important research projects and achievements, description of research experience and other relevant activities, and, finally, justification for career breaks and other special circumstances. If the applicant has taken a career break, it will not penalize her or his application if it can be appropriately justified.

The second part of the proposal concerns the **research project** itself. It includes a three page research project description (including state of the art, approach, objectives, methodology, milestones, deliverables and relevance), an ethical issues table, and a justification of the location of research, a description of the relationship of the project with the applicant's activities and of the project and the mentor's activities, and how the mentor will support the applicant. The research project will be evaluated according to **originality**, **viability** of the scientific/technical approach, **feasibility** given the available skills, equipment and attributed resources, and value for the [European Research Area](#).

The third part of the proposal will cover the **references** of the candidate. The applicant must send the forms "REFERENCE REPORT ON THE APPLICANT" to two of his or her referees from the

academic, public or industrial sectors with whom the applicant has worked before. The references will in turn fill the reference report, sign it and send it to the mentor electronically **prior to the application deadline.**

Each of the three parts of the written proposal will be given a grade of 1 to 5 (1 = mediocre, 2 = average, 3 = good, 4 = very good, 5 = excellent) with the following weight: **45 % for the applicant's part, 40 % for the research project's part, and 15 % for the references part.** An overall grade is then computed from the grades given by the evaluators. **The applications with a written proposal overall grade superior or equal to four (=> 4) will be invited for an interview** (Travel and accommodation expenses paid by Empa). Table 1 summarises the selection criteria, weightings and thresholds for the whole selection process:

Table 1: Selection process criteria and method of judging merit

	Written proposal		
	Project	**Applicant**	
		Selection committee	**Reference**
Criteria	- Originality - Viability of the scientific/technical approach - Feasibility - Projected impact - Value for the European Research Area	- Scientific capability - Research potential - Writing abilities - Quality and quantity of past scientific work - Applicant experience/project match	- Scientific capability - Research potential - Written and oral communication abilities - Interpersonal and leadership abilities - Match with research environment
Weighting	0.40	0.45	0.15
Threshold	Overall grade > 4 / 5		
	Interview		
	Science	**Soft skills**	
Criteria	- Ability to present the project clearly - Ability to present his/her career and relate it to the project - Ability to partake in a scientific discussion - Independent thinking - General scientific culture	- Overall confidence and ease to present - English proficiency - Justification for participation in the project and programme, for coming at Empa - Ability to sell him/herself based on past experiences - Ability to present career goals and how the fellowship fits in	
Weighting	0.67	0.33	
	Final Grade		
	Written proposal	**Interview**	
Weighting	0.40	0.60	

In the first part of the interview, a 30-minute long **scientific interview** with members of the internal and external selection committee, the ability of the applicant to explain the project, his scientific career and to take an active part in a scientific discussion will be evaluated. Likewise, the applicant will be asked to describe how, according to him/her, he/she is **best suited to successfully carry out the project** by showing his/her ability to work independently in a predefined direction, to develop hypotheses and make sure that they can be investigated, and to bring inputs to discussions related to other scientific topics. In the second part of the interview, lasting 15 minutes, the applicant is given a chance to describe, in a broader sense, how participating in the programme is a logical development in his/her career and will help reaching his/her **career goals**. Finally, it will be asked of the applicants to explain why they have chosen Empa to accomplish their project. The way the candidate explains this is **open** to him/her so as to avoid any possible cultural biases. This second part will help to assess the applicant's **soft skills** and will serve to "seal the deal" and obtain a **complete portrait** of the applicant. Each interview will be given a 1 to 5 grade by the evaluators. A final overall grade will be calculated by giving **40 % weighting to the written application** and **60 % weighting to the interview** results. **This overall grade will be used to assign the fellowships in the final decision meeting, based on a final ranking of the applications.** Once selected, the fellows will be given one week to accept the fellowship. If a selected fellow refuses the fellowship, the next applicant in the final ranking will be offered the fellowship. This constitutes a reserve list of applicants.

APPOINTMENT CONDITIONS OF EMPA POSTDOC FELLOWS

The fellows will be given an **employment contract** and effectively become **Empa full time employees** for the duration of their fellowship. Empa is an attractive and progressive employer. As members of the Empa staff, the fellows will benefit from an **outstanding research infrastructure**, working in a fascinating **multicultural working environment** with **strong professional networks**, and a transparent, modern staff policy, which rewards achievements and supports a **fair work-family balance**. Empa supports staff personal development, is committed to equal opportunities (the «Together» committee), allows free room to shape individual professional development and offers interesting opportunities for further education (the Empa Academy).

The general employment conditions at Empa are governed by the Swiss Federal Personnel Law of March 24th 2000 and the ETH Domain Personnel Regulations of March 15th 2001[2]. The working time for a full time employee is of 41 hours per week with a flexible working hour model. Part time work is also possible for employees seeking to effectively balance family and work time. Empa applies a **trust-based working hours system**. This means that Empa attaches primary importance

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[2] ETH: Eidgenössische Technische Hochschulen ETH – Swiss Federal Technical Institutes. EMPA is an annex institute of the ETH.

to – and rewards – performance rather than attendance. As a result, employees have significant freedom to structure the way they work. However, they must also assume personal responsibility for planning their work and organizing their time. The fellows will have 25 days of holidays per year with the possibility to compensate excess working hours as free time.

Salary at Empa is defined based on function, experience and performance according to the **ETH-domain salary system**. According to 2017 figures, the living allowances of postdoctoral fellows are CHF 85'000 during the first fellowship year and CHF 88'000 during the second fellowship year. Moreover, each year, the ETH Board defines adjustments to the salary scale and social security coverage as part of the General ETH Domain remuneration policy. The living allowances of the fellows will be adjusted accordingly.

Part of the **extensive social security benefits** available to Empa employees include 100 % of the salary for a maximum of 730 days in case of inability to work due to illness or accident, family allowances (child and education), old age, invalidity, unemployment and accident insurance, and a pension scheme with the Federal Pension Fund Publica (ETH collective pension plan). Additional benefits include training, subsidised language courses, free half-fare travel card, subsidised prices at the staff restaurant, savings account with the Federal Employees' Savings Bank, and subsidised children day-care centre. Various services are available to the new Empa employees, such as guest houses, a welcome guide in English, and German language courses. All the additional services ensure a **smooth integration of international newcomers** in the working and social environment of Empa.

IMPORTANT DATES

01.06.2018:	Call 2 for applications starts
31.08.2018:	Application deadline for call 2
29.10.2018:	Results of written application evaluation
19.11. – 10.12.2018:	Interviews
17.12.2018:	Final results and attribution of fellowships
24.12.2018:	Deadline for the acceptation of fellowships
01.03.2019 -28.02.2021:	Estimated period of Fellowship

FILLING THE APPLICATION (ONLINE REGISTRATION AND PROPOSAL FORMS)

ONLINE REGISTRATION

The mentor must fill in all details of the online registration.

An online help function is available. Should further help be required, contact the programme manager under postdocs@empa.ch

PROPOSAL FORMS

EMPAPOSTDOCS-II proposal forms can be downloaded on the programme portal.

ACADEMIC BACKGROUND

Specify the following information about all the applicant's current and past university degree programs, from most recent to earliest:

- Degree (Bachelor's, Master's, Doctorate,…)
- Degree name (M. Sc., Ph. D., D. Sc.,…)
- Discipline (as written on the diploma)
- Department
- Institution
- Country
- Supervisor's name
- Month and year started
- Month and year awarded/expected

ACADEMIC, RESEARCH AND OTHER RELEVANT WORK EXPERIENCE

Enter the following information about any relevant postsecondary academic and non-academic work experience of the applicant, from current to earliest position:

- Position held
- Nature of work
- Full time or part time
- Name and type (governmental, academia or industry) of organization
- Department
- Faculty/School
- Period (mm/yyyy-mm/yyyy)

SCHOLARSHIPS, FELLOWSHIPS AND OTHER RESEARCH AWARDS

Indicate here any scholarship, fellowship or other awards won by the applicant with the following information, from most recent to earliest:

- Name of award
- Project title related to the award
- Funding source or organization
- Level (institutional, regional, national, international)
- Type (academic, research, communication, leadership)
- Value (CHF)
- Period held (mm/yyyy-mm/yyyy)

PREVIOUS REQUESTED FUNDING

If the applicant has participated in the writing of funding applications in the past, describe here

- The applicant's role in this
- The title of the project or of the research programme created
- The funding source (organization name and type)
- The funding programme name
- The value of the requested funding
- The period during which the funding was held. If the application was not successful, write it here.

THESIS COMPLETED OR IN PROGRESS

The applicant should enter here the following information about his/her PhD thesis:

- Degree
- Name of supervisor
- Date completed or expected
- Title of thesis
- Summary of thesis (250 words max, font 11 or 12, in plain language, do not use thesis abstract)

SHORT DESCRIPTION OF RESEARCH PROJECT

Enter here

- Title of project
- Key words (up to 10)
- Mentor name
- Department (number)
- Laboratory (number)
- Project summary (125 words max, font 11 or 12)

CONTRIBUTIONS AND STATEMENTS

Write a text of a **maximum** of four A4 pages, font 11 or 12, containing:

1. List of publications and other contributions

    a. Articles published or accepted in refereed journals

    b. Articles submitted to refereed journals (provide submission number)

    c. Other refereed contributions (e.g., communications, papers in refereed conference proceedings, posters)

    d. Non-refereed contributions (e.g., specialized publications, technical reports, conference presentations, posters)

    e. Patents and copyrights awarded (e.g., software, but excluding publications)

    f. Patents and copyrights submitted

    g. Technology transfer

    h. Contributions resulting from your participation in industrially relevant R&D activities

2. Most important research projects and achievements: describe 2 contributions in detail

3. Applicant's statement

    a. Description of research experience (scientific and engineering abilities gained through experience)

    b. Description of relevant activities (Professional and extracurricular activities that most demonstrate communication, interpersonal, and leadership skills)

4. Career breaks and special circumstances

If applicable, explain here of gaps in experience chronology or other delays in disseminating the applicant's research.

PROJECT DESCRIPTION

Write a text of **maximum** three A4 pages, font 11 or 12, containing:

- Issues addressed by the project (context)
- State of the art of the scientific field
- Theoretical approach and preliminary results if available
- Objectives and underlying hypothesis
- Methodology
    - material, methods, procedures
    - schedule of planned work with detailed activities
- Milestones and deliverables
- Relevance of the research project and potential scientific contribution

ETHICAL ISSUES TABLE

Fill the table according to the nature of the research project.

MENTOR EVALUATION AND STATEMENT

The mentor must write three short texts:
- **Evaluation of the applicant**
  Justification of the mentor for choosing the applicant in terms of experience, realizations, and relationship of the project with the past and current professional activities of the applicant (250 words max).
- **Relationship of the project with the mentor's activities**
  Relationship of the project with the past, current and future professional activities of the applicant (125 words max).
- **Mentor support**
  Description by the mentor of how the applicant will be supported and which resources will be attributed to the project (125 words max).

REFERENCE REPORTS ON THE APPLICANT

Send the two forms to two referees. The filled and signed forms must be sent electronically to the mentor for uploading with the project application! (Deadline!).

SUBMITTING THE APPLICATION

1: EMPAPOSTDOCS-II proposal form:

Open the "EMPAPOSTDOCS-II proposal form" (word-file on the programme portal)

Step 1:

- Fill in all required information (Mentor and Applicant together)

Step 2:

- Send the two forms "REFERENCE REPORT ON THE APPLICANT" (page 16 and 17 of the "EMPAPOSTDOCS-II proposal form") to two references

2: Online project application:

- After registration on project.empa.ch, create a new application and fill out the online application form; press the "Help" button to open the step-by-step guidance

- Finally generate the pdf-file as described in the "Help"-function. The pdf-file will be uploaded automatically (Empa Project Application form)

- Print out this file and give it to all relevant persons for signing

- Upload the filled in and signed "Empa Project Application form" in your online application onto the project database (project.empa.ch)

- Upload the filled in "EMPAPOSTDOCS-II application forms" in your online application onto the project database (project.empa.ch)

- Upload both filled in and signed "REFERENCE REPORT ON THE APPLICANT" forms in your online application onto the project database (project.empa.ch)

Submission:

- After uploading all relevant documents, submit the complete online application electronically, latest by the application deadline (August 31st).

CONTACT INFORMATION

For questions regarding EMPAPOSTDOCS-II programme, please consult the programme portal containing all relevant information, including "Short instruction for EMPAPOSTDOCS-II applications".

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