PAUL SCHERRER INSTITUT

PSI-FELLOW-III-3i PROGRAM

Form A_05

Guidelines for applicants

General information

The Paul Scherrer Institute (PSI) invites experienced researchers (Postdocs) from all over the world to submit their applications for research positions which are part of our new postdoctoral program (acronym: PSI-FELLOW-III-3i). The "3i or triple i" postdoctoral program offers unique opportunities for scientific and career development with **international**, **interdisciplinary** and **inter-sectoral** training prospects.

The PSI is active in condensed matter physics, material sciences, particle physics, life sciences and medicine, nuclear and non-nuclear energy research and energy-related ecology. The selected postdocs (PSI-Fellows) will benefit from the outstanding research infrastructure at the PSI, including access to our world leading large-scale facilities such as the Swiss Light Source (SLS), the X-ray free electron laser facility (SwissFEL), the Spallation Neutron Source (SINQ), the Swiss Muon Source (SmμS) or the proton accelerator. In addition to the highly innovative scientific environment, the current international Fellow program will provide excellent opportunities for continuous education and training in areas such as project management, presentation techniques, language skill development, scientific writing, career planning and management.

The program will contribute to the scientific and personal development of the selected researchers, the efficient dissemination of scientific knowledge and to sustainable scientific excellence of the host institute by creating a new generation of highly qualified researchers.

The PSI-Fellow postdocs are offered a PSI employment contract for two years. Over the project period of 60 months, a total of 60 PSI-Fellows will be selected. The PSI-FELLOW-III-3i program is a Horizon 2020 Marie Skłodowska-Curie COFUND action and is the 3rd program in a row since 2012 (the 1st program run under Marie Curie COFUND FP7 during the period of 2012 to 2016).

The current call is open as of **1 September 2022 with** the deadline for applications on **30 November 2022 (24:00 CET)**.

Eligibility Criteria

In order to be eligible to apply, it is essential for all applicants to meet the eligibility criteria in terms of mobility and scientific/educational requirements of the PSI-FELLOW-III-3i Program.

Candidates must not have obtained their PhD degree later than 5 years prior to the application deadline (30.11.2022).

1. Mobility rules

(a) Standard as defined in the latest MSCA Guide for Applicants (v1.0, 4 April 2019): Applicants 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. Compulsory national service and/or short stays, such as holidays, are not taken into account;

(b) The Career Restart mobility rule will be applied in cases of well-documented career breaks in research. To qualify for the career restart scheme, applicants must not have been active in research for a continuous period of at least 12 months within the 18 months immediately prior to the deadline for submission, and they may not have resided or carried out their main activity (work, studies, etc.) in Switzerland for more than 3 years in the 5 years immediately prior to the application deadline.

2. Educational background

PhD degree to be awarded not later than **April 30, 2023**.

Publication record at the time of application, which shows at least one original accepted publication in press or published in a peer-reviewed journal. If the applicant is not the first author of the publication a confirmation of the first author or supervisor needs to be provided stating that the applicant's contribution to the scientific content was highly relevant.

Application

The written application dossier consists of the following four parts:

- Personal information to be completed in template; Form **A_01**
- Curriculum vitae (including competence profile of 120 – 150 words); Form **A_02**
- Research proposal; Form **A_03**
- Ethical self-assessment; Form **A_04**

After the submission of the written application dossier, the evaluation process consists of three main steps by various evaluation committees:

- Eligibility check and ethical issue check (performed immediately after the application deadline – only candidates meeting all criteria will be subject to further evaluation)
- Evaluation of written application dossier (CV and research proposal)
- Up to a maximum of 60 candidates with a score above the threshold value of the written application will be invited for an interview which will take place via teleconferencing (e.g. ZOOM, Skype etc.)

Scientific reviewers will evaluate two main aspects (below) of the candidate's written application dossiers.

- Scientific excellence and expert knowledge
- Willingness to become involved in interdisciplinary and inter-sectoral components of the program

1. Personal information form (Form **A_01) and Curriculum vitae** (Form **A_02**)

For each of these main evaluation areas, different criteria have been defined and the meaning of these so-called selection criteria is explained throughout the document.

The Curriculum vitae (CV) serves to summarize your career history (including academic qualifications) and should help evaluators to develop a picture of your current and future potential. It is the first information that our Program Management Unit will receive about you, so please pay attention to its presentation and complete the template (Form A_02) provided for this purpose in a consistent style.

It is important to be accurate when describing your career development (in chronological order). In the case of a career break due to various reasons (e.g., family commitments, disease, disability, travel) you should provide explanatory details for those periods (section "Additional Information", Form A_02)). Provisions in our merit-based evaluation system will ensure that candidates with career breaks will not be penalized since the overall aim of our evaluation process is to select the best candidates - a diversified and creative group of PSI-III-3i Fellows.

In Form A_02 (CV, page 6), there is a section called "competence profile". There you explain how your scientific experiences and scientific and personal competences might be relevant for the position you are applying for. Your ability to construct a self-evaluation in a concise, but very informative way is a central part of the evaluation. It is important to take your time for this section and to reflect on your scientific/technical competences and personal effectiveness as researcher. Examples of these skills are many, such as analytic approach, creativity, out-of-box thinking, scientific curiosity, data analysis expert, structured approach, good "teacher" to others and flair for project management. Furthermore, please add your involvement in industrial projects, highlight projects with an interdisciplinary interface, teaching experiences, leadership roles, etc. Key achievements and awards shall not be forgotten either. Form A_02 will be examined by evaluators using the following set of selection criteria:

- Scientific excellence (scientific capability and research potential)
- Expert knowledge (quantity and quality of past scientific work)
- Willingness to become involved in multi-disciplinary research (studied or experienced in a different field outside of the PhD)

2. Research Proposal (Form **A_03**)

On the PSI-FELLOW website https://www.psi.ch/de/psi-fellow/list-of-principle-investigators-and-themes you will find a list with all the open research themes for which a written application can be submitted. After finding a suitable theme, you will then contact the corresponding PSI scientist (Principle Investigator) in order to get information about available resources, instruments and already available knowledge at PSI in the particular field. The exchange of information will allow the applicant to develop a project idea that will be summarized in the research proposal. Each theme has a proposal ID-Number listed on the earlier mentioned website. Please add this ID-No. on top of all forms in the corresponding field.

The research proposal is a description of the research project (with a total length of six pages) with the following layout:

- **Abstract** (250 words, 0.5 pages) that summarizes the goals and anticipated outcomes.
- **Project description** (including a work plan) in which research objectives, suitable experimental approaches, feasibility analysis of the project are described (2 pages).
- **Involvement in inter-/multi-disciplinarity and/or inter-sectoral activities.** In this chapter the experiences in former research activities and the planned engagement in inter-/multi-disciplinarity and/or inter-sectorial activities in this program is described (0.5 pages).
- **Literature citations/references** (0.5 pages)*.
- **PI's/Supervisor's Addendum** provides a short description how the applicant will be supported, and which resources will be attributed to the project (0.5 pages).
- **Project Management table** (Table 1, 1 page) that schedules the milestones and main tasks along a timeline (see below for example)**.
- **One-pager Project Overview** (Figure 1, 1 page) One-pager with sections: Aim, Outcome and Future Perspective to summarize "Impact"***.

***** Relevant **literature references** need to be listed and the cited literature should be understood as foundational in the field (that is, key references) for the research domain in which you submit a research proposal. Minimum 7 and not more than 10 references should be listed.

****Table 1.** An example of an overview table to support the project and time management of the

research project is given below. This can be prepared as an Excel table and copy-pasted into the application templates as a graphical image (to be rotated with 90 degrees) fitting an A4 page in a landscape view (1 page).

The task for this table is to identify at least 3 milestones and 2 tasks per milestone. Use color coding as well to indicate that the project will progress in different phases by performing the tasks and achieving the milestones in a successive manner.

Goal:						
	Project month					
	0-4	**5-8**	**9-12**	**13-16**	**17-20**	**21-24**
Milestone 1						
Task 1						
Task 2 (- Task X)						
Milestone 2						
Task 1						
Task 2 (- Task X)						
Milestone 3 (- Milestone X)						
Task 1						
Task 2 (- Task X)						

In terms of more specific **SELECTION CRITERIA** that evaluators will use to review your **RESEARCH PROPOSAL** for the previously mentioned main aspects, the following list is relevant:

- Scientific excellence (originality and scientific viability of the project, research potential and impact of the research)
- Expert knowledge (match of proposed work with previous work experience)
- Willingness to become involved in multi-disciplinary research (desire to conduct multi-disciplinary research, ability to explain the advantage of these opportunities for future career)

The important aspect to answer with regard to **scientific excellence** is to reflect on the originality and scientific viability of the research proposal in the project description (or work plan). A careful consideration of this point is the most critical to address and the section in bold below serves as guidance in formulating this aspect.

Your research questions should be formulated clearly, starting with the goal (primary question) of the project followed by a critical and analytical discussion of next questions and why they are relevant for the project. You should be specific and not generic in your discussion.

You should keep in mind that a Project Management table (with

milestones and tasks) must be submitted as well. Milestones should be viewed as major progress points along the project timeline that must be reached to achieve success.

In addition, scientific rigor and reproducibility will be evaluated and thus, suitable research methodologies and statistical approaches to be implemented will be another critical element to consider.

The feasibility of the research proposal should be addressed: it must be original, realistic and include reference to potential delays, resource limitations, networking, etc. during the project time period of 2 years.

The **impact of the research** should be well-described, and the benefits must be clear in terms of your future professional development and in terms of strengthening the research capacity at PSI. In case it is foreseen that intellectual property will arise from the research project, it will be appropriate to discuss this potential outcome.

In terms of **research potential** and **expert knowledge**, scholarly competence should be reflected by a viable work plan (milestones, tasks, suitable methodologies and statistical approaches, feasibility considerations) and by showing that the scientific and technical competences you developed during previous educational and work experience are needed for the successful execution of the research project. Possible linkages to interdisciplinary and multi-disciplinary approaches could be discussed in the research proposal and reference to those will be considered as an intention to develop solutions that cross scientific boundaries. Thus, important is to mention the key stakeholders as well and the network partners of the project.

The overall project should also be summarized in one page (**Figure 1**) with the following three sections:

- **Aim (The aim is …)**
- **Outcome (This leads to …)**
- **Future Perspective (The vision is that …)**

The total number of words for the three sections should not be more than 60 and should include as well a picture, photo, diagram, etc. that could serve as a visual attraction to your research project. You should be able to explain your project in 3 minutes with this one-pager (as PowerPoint slide) during the interview phase.

***Figure 1**: One-pager for **Project Overview** with sections: **Aim**, **Outcome** and **Future Perspective** to summarize project. This can be prepared as a PowerPoint slide and copy-pasted into the application templates as an image that could be rotated (with 90 degrees) that fits an A4 page in landscape view (1 page).

Name:
Title

Area for picture
(Figure, Diagram, Photo, etc.)

The **aim** is ……

This **leads** to …….

The **vision** is that …….

Important
Only written applications containing all required documents will be subject to further scientific evaluation by the program's reviewing panel.

Ethical issues guidelines (Form **A_04**)

Since the PSI-FELLOW-III-3i program will follow the ethical principles as set out in the Horizon 2020 Research Framework, PSI will ensure that all accepted postdoctoral research projects will respect ethical values and rights for research as described by the European Commission. The ethical issues guidelines need to be read and the ethical self-assessment must be filled out, signed and submitted as an essential part of the written application dossier.

Evaluation

In a first step all applications will be screened by the Program Management Unit for the fulfillment of the eligibility conditions and for the correct submission of the ethical self-assessment form (**Form A_04**). In case of not meeting the eligibility requirements or that the submitted research proposal includes research activities excluded from funding under the Horizon 2020 program or contravening with Swiss Federal ethical regulations, the application will be qualified as ineligible and the applicant will be informed accordingly.

The evaluation of the written application dossier and oral evaluation (known as "interviews) will be performed by external and internal scientific experts. The oral evaluation committee consist of both external and internal scientific evaluators and personnel from the Human Resources division

of PSI. After passing the screening of eligibility and ethical issues, the applications are forwarded to the appropriate selection committee. Each written application dossier will be evaluated by one expert of the internal selection committee as well as by two external scientific experts. Great care will be taken to appoint the best possible set of reviewers in terms of expertise for each individual research proposal. The applications will be evaluated according to the criteria described under "**Application**" (see above).

Table 2 summarizes the grading system and the meaning of each assessment for all criteria. Values vary between 1 and 5. Grading is performed with one decimal point. All criteria and sub-criteria will be scored with this assessment grid.

Score	Meaning of assessment
5.0	**Excellent** The criterion is addressed in an outstanding manner that represents world-leading standards while shortcomings are minor. High priority for funding.
4.0 – 4.9	**Good** The criterion is addressed well and with aspects of excellence and should be funded if possible.
3.0 – 3.9	**Acceptable** The criterion is addressed in a manner that deserves merit and is suitable for funding, but in a competitive context not.
2.0 – 2.9	**Moderate** The criterion is addressed, but not very effectively and has difficulty to be recommended for funding.
1.0 – 1.9	**Poor** The criterion is addressed in an unsatisfactory manner and is not suitable for funding.

The scores are calculated as follows:

- The written application will be given a weighting of 70% and the interviews will be given a weighting of 30%.
- Within the written application only: *Scientific excellence and Expert knowledge* will be given a weighting of 70% while the second aspect: *Willingness to become involved in multi-disciplinary and inter-sectoral components of the program* will be given an importance of 30%.

Finally, all applicants with an overall average score above a minimum threshold value (70% of the total weighted average score) will be invited for an interview.

Interviews

The interviews will be divided into 2 parts: a scientific interview with the internal and external scientific evaluators and an interview with a staff member from the Human Resources Division of PSI. Overall, the aim of the interviews is to evaluate the applicant's communication and soft skills.

During the scientific interview (30 minutes), scientific experts will evaluate your ability to outline your project in a 10 minutes oral presentation followed by a 20 minutes discussion. Part of your oral presentation should include the Project Overview One-pager. You should be able to explain your project in 3 minutes with this slide during the interviews.

The second part of the interview with the HR division (30 minutes assessment + 30 minutes information about PSI) will help to assess your soft skills and to obtain a complete portrait of the applicant. Evaluation criteria of relevance during the interview include the following: oral communication ability, presentation skills, interpersonal ability and leadership potential, independent thinking, practicing scientific integrity and scientific culture, ability to sell based on past experiences and ability to present career goals and how the fellowship fits in.

The scoring system as described earlier in this document will be used. Each criterion will be given a score between 1 and 5 and finally, both the scientific interview and the HR interview will be given a final score between 1 and 5 (to a decimal of 0.1). **The weighting of the scores will be 67% for the scientific- and 33% for the HR-interview. The contribution of the interviews to the final score will be 30%.**

All candidates will be informed about the outcome of the selection process. A request for redress may be submitted by the applicant if he/she feels that there has been a shortcoming in the way his/her proposal has been evaluated that may affect the final decision on the selection of the application.

Depending on the number of applicants and the outcome of the evaluation a selected number of top ranked successful applicants will receive an acceptance letter about their nomination as a PSI-FELLOW. The nomination needs to be accepted by the applicants within one month after receipt of this letter. In case some of the top-ranked applicants do not sign the contract within the given timeframe, the next applicant on the reserve list will be contacted for contractual negotiations. A proportion of applications ranked below the selected applicants are retained on a reserve list.

Example of the calculation of the scores

Applicant A

Written Application
a) Scientific excellence: 4.5 (weight 70%)
b) Willingness to become involved in multi-disciplinary and inter-sectoral components: 4.0 (weight 30%)
Total weighted average score: 4.5x0.7 + 4.0x0.3 = 4.35 (87% of the total average score) / Minimum Threshold 70%

Interview
a) Scientific interview: 4.5 (weight 67%)
b) HR interview: 3.5 (weight 33%)
Total weighted average score: 4.5x0.67 + 3.5x0.33 = 4.17 (83% of the total average score) / Minimum Threshold 70%

Total score
Written Application: 4.35 (70%)
Interview: 4.17 (30%)
Total weighted average score: 4.35x0.7 + 4.17x0.30 = 4.30 (86% of the total average score) / Minimum Threshold 70%

A total weighted average score above the minimum threshold doesn’t automatically lead to a nomination as a PSI-FELLOW.

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Appointment conditions of the selected PSI-FELLOW-III-3i postdocs

The fellow postdocs will be given an employment contract and become full time PSI employees for the 2 years duration of their fellowship. The general employment conditions at PSI are governed by the Swiss Federal Personnel Law of March 24, 2000 and the ETH Domain Personnel Regulations of March 15, 2001. The working time for a full-time employee is 41 hours per week with a flexible working hour model. For further information about employment conditions at the PSI, please visit the link: https://www.psi.ch/en/pa/employment-conditions

How to apply?

The written application dossier consists of various documents and templates to be completed (these are available for download) and upon completion, should be submitted electronically through our online application tool REFLINE:

https://www.psi.ch/en/pa/job-opportunities/38917-psi-fellow-iii-3i-postdoctoral-fellows-fmd

The instructions for the upload of completed templates in REFLINE are as follows:

- Where it says "upload application letter", please upload for the position as a Postdoctoral Fellow the following form (as a PDF document): Form A_01 (personal data) and Form A_02 (CV template) **compiled as one single PDF document.**
- Where it says "upload resume", please upload Form A_03 (proposal template) together with Form A_04 (ethical issues guidelines) compiled as **one single PDF document**.
- Where is says "upload additional documents", any other documents such as certificates and diplomas could be uploaded. **Please upload your PhD certificate here.**

Deadline for applications: November 30, 2022 (24:00 CET).

For further information about our program, please contact the Program Management Unit of the PSI-FELLOW-II-3i program by email: **psifellow@psi.ch**.

Important dates to remember

Call start:	**September 1st, 2022**
Deadline for applications:	**November 30, 2022**
Interview period at PSI:	**February 20 – March 3, 2023**
Final results available and to be communicated:	**As of March 31, 2023**
Beginning of employments:	**May 1st, 2023 – latest Sep. 1st, 2023**