PAUL SCHERRER INSTITUT

PSI-FELLOW-II-3i PROGRAM

Form A_06

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 that are part of our new postdoctoral program (acronym: PSI-FELLOW-II-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 also to sustainable scientific excellence of the host institute by enabling a new generation of highly qualified researchers.

The PSI-Fellow postdocs will be offered a PSI employment contract for two years and the Program will select a total of 60 PSI-Fellows over the project period of 60 months. The PSI-FELLOW-II-3i Program is a Horizon 2020 Marie Skłodowska-Curie COFUND action and is a follow-up of our previous successful Marie Curie COFUND FP7 postdoctoral program during the period of 2012 to 2016.

The announcement for the second call is **1 September 2018** and the deadline of applications is on **30 November 2018**.

Eligibility Criteria

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

1. Transnational mobility

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 recruitment date (i.e., start of the employment contract). Compulsory national service and/or short stays, such as

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holidays, are not taken into account.

2. Educational background

Doctorate holder at the time of the recruitment date; that is, at the start of the employment contract.

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 five 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**
- 2 Reference letters; Form **A_04**
- Ethical self-assessment; Form **A_05**

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 submitted written application dossier (CV, research proposal and reference letters)
- Oral evaluation (interview) of selected candidates with a score above the threshold value for the written application. The oral interview is performed on a remote basis (e.g., Skype).

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

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

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

The Curriculum vitae (CV) serves to summarize your career history, including academic qualifications, and should help evaluators to develop a picture of your 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 accurately describe your career development in a chronological order and in the case of a career break/pause in the CV as a result of various reasons (e.g., family commitments, disease, disability, travel) the candidate should attempt to provide explanatory details for these time periods (to be completed in the section for Additional Information in the CV). However, it is important to highlight that provisions in our merit-based evaluation system will ensure that candidates are not penalized since the overall aim of our evaluation process is to select the best candidates - a diversified and creative group of PSI-II-3i Fellows.

One part of the CV is a section in which you have to write down how your scientific experiences and scientific and personal competences might be relevant for the position you are applying for. The section is called the **Competence Profile** and 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 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 should also be listed in the CV. The complete CV 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 (study or experience in a different field outside of the PhD)

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

On the PSI-FELLOW website https://www.psi.ch/psi-fellow/list-of-principle-investigators-and-themes candidates will find a list with all the open research themes for which a written application can be submitted. The candidate will then contact the corresponding PSI scientist (Principle Investigator) in order to get information about available resources, instruments and already available knowledge at the 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-No.** listed on the mentioned website above. **Please add this number on top of all forms in the corresponding field**.

The research proposal is a description of the research project (with a total length of five 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)
- ***Literature citations/references** (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** should be given 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 that could be rotated (with 90 degrees) that fits an A4 page in a landscape view.

The task for this table is to identify at least 3 milestones and 2 tasks per milestone. Use as well color coding 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	(blue)	(blue)	(blue)			
Task 1	(red)	(red)				
Task 2 (- Task X)		(green)	(green)			
Milestone 2		(blue)	(blue)	(blue)		
Task 1		(red)				
Task 2 (- Task X)			(green)	(green)		
Milestone 3 (- Milestone X)				(blue)	(blue)	(blue)
Task 1				(red)	(red)	
Task 2 (- Task X)					(green)	(green)

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.

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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 of research capacity at the 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 as well the key stakeholders 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

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the application templates as an image that could be rotated (with 90 degrees) that fits an A4 page in landscape view.

<div style="border:1px solid">

Name:
Title

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

The **aim** is ………

This **leads** to …….

The **vision** is that …….

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3. Reference letters (Form **A_04**)

The applicant must choose 2 referees who are willing to participate as reference persons to reflect on the scientific and personal competences of the applicant. In addition, referees should have high reputability in their scientific fields of expertise. The applicant should provide the referees with the appropriate template (**Form A_04**) for this purpose. In addition, the applicant should explain to the referee his/her intended research plans at the PSI.

The applicant should make sure to receive the completed reference templates from the referees in a timely manner. The reference letters must be submitted together with the rest of the documentation of the written application by the **application deadline of 30 November 2018**.

In case the reference letters reach the applicants after this deadline, an exception could be granted and the reference letters should be sent directly by email to: psifellow@psi.ch. The heading of such an email should read: Reference letter followed by the surname of referee and in brackets your surname [e.g., Reference letter: Johnston (Miles)]. Applicants should identify suitable referees early on during the application process and contact them as soon as possible.

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_05**)

Since the PSI-FELLOW-II-3i program will follow the ethical principles as set out in the Horizon 2020 Research Framework, the 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 should be filled out,

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signed and submitted as an essential part of the written application dossier.

Evaluation

In a first step all the applications will be checked 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_05**). In case it is found that a candidate does not meet 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 that he/she was not successful.

The evaluation of the written application dossier and oral evaluation (known as "Interviews) will be performed by external and internal scientific experts while the oral evaluation committees consist of both external and internal scientific evaluators and reviewing personnel from the Human Resources division at the PSI. After passing the checks for 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.

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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 the interview phase.

Interviews

The interview phase (herein referred to as "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 at the 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 the candidate's ability to outline his/her 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 prepared as part of your research proposal submission. 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 the applicant's soft skills and to obtain a complete portrait of the applicant. Evaluation criteria of relevance during the interview phase 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 50% for the scientific- and the HR-interview, respectively. 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 = 4.4 (87% of the total average score) / Minimum Threshold 70%

Interview
a) Scientific interview: 4.5 (weight 50%)
b) HR interview: 3.5 (weight 50%)
Total weighted average score: (4.5 + 3.5)/2 = 4.0 (80% of the total average score) / Minimum Threshold 70%

Total score
Written Application: 4.4 (70%)
Interview: 4.0 (30%)
Total weighted average score: 4.4x0.7 + 4.0x0.30 = 4.28 (85.6% 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.

Appointment conditions of the selected PSI-FELLOW-II-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/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:

https://www.psi.ch/pa/stellenangebote/1843 (REFLINE)

The instructions for the upload of completed templates in our online application tool (Refline) are as follows:

- Where it says "upload application letter", please upload for the position as a Postdoctoral Fellow the following forms: Form A01 (personal data), Form A02 (CV

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template) and Form A04 (two reference letters) compiled as **one single PDF document**.

- Where it says "upload resume", please upload Form A03 (proposal template) and Form A05 (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.**

The deadline of applications is **30 November 2018**.

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	
September 1, 2018	Call of application
November 30, 2018/ 24:00 CET	**Application deadline**
February 25 – March 8, 2019	Interviews (Skype)
March 31, 2019	Final results available for announcement of fellowships
May - September 2019	Implementation phase of PSI-FELLOW-II-3i Program with **latest** starting date for PSI-Fellows on September 1, 2019.

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