



**PHYSICS  
FOR  
FUTURE**

**PHYSICS FOR FUTURE (P4F)  
TERMS AND CONDITIONS**

**FIRST CALL  
FOR POSTDOCTORAL FELLOWSHIPS**

## Version history

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P4F has received funding from the European Union's Horizon Europe programme under the Marie Skłodowska-Curie Actions - Co-funding of Regional, National and International Programmes (COFUND) Grant Agreement No 101081515 and is subject to its terms and conditions.

FZU reserves the right to amend this document.

## List of acronyms

**AI** – Artificial intelligence

**ELI** – ELI Beamlines

**FAQ** – Frequently asked questions

**FTE** – Full-time equivalent

**FZU** – Institute of Physics of the Czech Academy of Sciences (abbreviation of the name in Czech: Fyzikální ústav AV ČR, v. v. i.)

**MSCA** – Marie Skłodowska-Curie Actions, European Union's programme aiming at developing talents and advancing research

**PCDP** – Personalized career development plan

**P4F** – Physics for Future, co-funded under MSCA COFUND, a postdoctoral programme of fellowships for postdoctoral researchers, coordinated by FZU

**PM** – Programme manager, a person responsible for management of P4F

**SC** – Selection committee, a P4F body responsible for overseeing the organisation of the selection process of the fellows

## List of commonly used terms

**Data management plan** – Plan describing the data management life cycle for the data to be collected, processed and/or generated by a project in accordance with FAIR principles, findability, accessibility, interoperability, and reusability

**Communication** - Informing, promoting and communicating activities and results to non-scientific audience - citizens, stakeholders, and the media

**Dissemination** - Sharing and promoting of research results with the scientific community, commercial organisations, and policymakers

**Ethics committee** – An expert committee for assessing project ethics

**Exploitation** – The use of project results within the scientific community and beyond, i.e., including industry, public authorities, policymakers

**FZU training and development programme** – A set of training and courses designed to enhance the competencies and skills of researchers

**Horizon Europe** – The European Union's key funding programme for research and innovation

**IPR** - Intellectual property rights

**MSCA COFUND** – The COFUND action provides funding for regional, national and international programmes for training and career development, through co-funding mechanisms

**MSCA COFUND postdoctoral programme** – MSCA COFUND Postdoctoral programmes fund individual advanced research training and career development fellowships for postdoctoral researchers

**MSCA - Marie Skłodowska-Curie Actions** – European Union’s programme aiming at developing talents and advancing research

**Open access** - Practice of providing on-line access to scientific information that is free of charge to the reader

**Open science** – An approach based on systematic sharing of knowledge and tools as early and widely as possible. The mandatory and recommended principles are described in Chapter 16 of the Horizon Europe programme guide [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide\\_horizon\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf)

**P4F fellow** – The applicant awarded the P4F fellowship

**Secondment** – A mandatory temporary assignment of the fellow to another institution

**Supervisor** – A person responsible for supporting the fellow in the implementation of their research project and career development

## Table of contents

1	ABOUT P4F.....	5
2	APPLICATIONS .....	6
2.1	Timeline of the first open call.....	6
2.2	Applicant eligibility.....	6
2.2.1	Mobility rules.....	6
2.2.2	Educational background .....	6
2.3	Application requirements.....	7
2.3.1	Research areas.....	7
2.3.1.1	Materials for society .....	7
2.3.1.2	Matter under extreme conditions .....	7
2.3.1.3	Emerging tools .....	7
2.3.2	Supervisors.....	8
2.3.3	Secondments .....	8
2.4	Applying for a fellowship .....	8
3	EVALUATION AND SELECTION PROCESS .....	9
3.1	Eligibility check and ethics assessment.....	9
3.2	Evaluation of the proposals .....	10
3.2.1	Evaluation criteria.....	11
3.2.2	Redress procedure .....	11
4	FELLOWSHIPS .....	12
4.1	Supervision.....	12
4.2	Courses and trainings.....	12
5	EMPLOYMENT CONDITIONS.....	12
5.1	Accepting a fellowship .....	12
5.2	Appointment conditions.....	12
5.3	Fellowship obligations .....	13
6	ETHICS AND GENDER ASPECTS .....	14

# 1 ABOUT P4F

[Marie Skłodowska-Curie Actions](#), as a part of [Horizon Europe](#), the EU's key funding programme for research and innovation, are the EU's programmes aiming at developing talents and advancing research. **Physics for Future (P4F)**, co-funded under the [Marie Skłodowska-Curie COFUND](#) and coordinated by the Institute of Physics of the Czech Academy of Sciences - [FZU](#), is a **postdoctoral fellowship programme** for researchers to execute their own **bottom-up research project over two years** at the [FZU](#) or [ELI](#) Beamlines (ELI) facilities in the Czech Republic.

P4F will hire approximately 60 postdoctoral fellows for 24 months in an **open, transparent, and merit-based selection process** divided into two calls. The first call opens on 1 September 2023, at 0:00 CEST and closes on 10 November 2023, at 23:59 CET. **Thirty fellows are expected to be recruited in this first call.** Please note, that additional calls may be published if any fellowships remain unfilled.

Fellows will be guided by experienced **supervisors** in the following **research domains**: [astronomy, astrophysics and cosmology](#); [atomic, molecular and chemical physics](#); [biophysics](#); [condensed matter physics](#); [fluids and plasma physics \(including surface physics\)](#); [high energy physics](#); [nano materials](#); [nuclear physics](#); [optics](#); [pure mathematics, applied mathematics, statistical physics](#).

Applications will be accepted from researchers holding a Ph.D. degree before the call deadline, provided that they comply with further eligibility criteria. The selection process will be **anonymous** during the first round of evaluations. The evaluation will be performed by **three independent external evaluators**.

Successful applicants will be offered a **two-year employment contract** (see [Chapter 5](#)) at [FZU](#) or [ELI](#), and enjoy the benefits of:

- top class equipment;
- work with experts in their fields and opportunities to expand their professional networks;
- training in field-specific and transferable skills;
- an active community of postdoctoral researchers with a growing number of MSCA fellows;
- a wide network of more than 70 partners from academia and industry.

Fellows will also benefit from the support of **two dedicated supervisors** at the host institution and one at the place of secondment (see [Chapter 4](#)).

## 2 APPLICATIONS

### 2.1 Timeline of the first open call

Call opening	Call deadline	Eligibility check	Evaluation and results	Interviews	Indicative start of the fellowship
1 September 2023, 00:00 CEST	<b>10 November 2023, 23:59 CET</b>	November 2023	December 2023 – March 2024	February 2024	April – November 2024

### 2.2 Applicant eligibility

The P4F fellowship programme is open to all researchers who satisfy the following criteria.

Applicants may be of any nationality.

Applicants must have working proficiency in English. Applicants whose first language is not English may be required to provide evidence of their English proficiency.

Applicants must agree to the P4F's Terms and Conditions. By submitting their application, applicants agree to these P4F's Terms and Conditions.

#### 2.2.1 Mobility rules

Recruited researchers **must not have resided or carried out their main activity** (work, studies, etc.) **in the Czech Republic for more than 12 months in the 36 months** immediately before the call deadline, i.e., before 10 November 2023.

Compulsory national service, short stays such as holidays and time spent as part of a procedure for obtaining refugee status under the Geneva Convention **does not count towards the mobility rule.**

Permanent employees of FZU or ELI (i.e., holding a contract of indefinite term) are not eligible to apply to the P4F programme.

#### 2.2.2 Educational background

All applicants must have successfully defended their Ph.D. thesis by the call deadline (a statement from their university is required if Ph.D. certificate is not available by the call deadline) and have no more than **8 years full-time equivalent (FTE) experience in research** since they obtained their Ph.D. degree.

Any research **career gaps and/or unconventional paths** must be clearly **specified** in the CV section of the application.

The rule of the 8 years full-time equivalent experience in research after the Ph.D. can be extended for the following reasons (must be well officially documented):

- Maternity leave (extends by 2 years for each maternity leave per child, reduced proportionally if the applicant had a partial employment during that time)
- Paternity leave (extends by the duration of the documented time of parental leave, provided it is taken before the call deadline and after the Ph.D. award date,

- for a maximum of 2 years, reduced proportionally if the applicant had a partial employment during that time)
- Career breaks (must be detailed in the CV section) The applicant must provide P4F PM with documents that clearly and verifiably quantify the applicant's career breaks.
  - Compulsory national service
  - Long term sick leave (for periods longer than 30 days)

## 2.3 Application requirements

### 2.3.1 Research areas

P4F invites applicants to **pursue a topic of their choice** within the following three **broadly defined research areas**:

#### 2.3.1.1 Materials for society

The Materials for society topic includes research spanning a vast array of **advanced materials** targeted to deal with urgent **environmental and economic challenges**, such as ever-increasing energy consumption, the need for a faster communication, precision medical and industrial diagnostics, and biocompatibility. The main fields involved include spintronics, molecular electronics, clean energy, optoelectronics, biomedicine and functional materials for sensors and actuators.

The mix of theoretical work, design and simulation, novel synthesis techniques, broad-scale experimental characterization, and application-focused tests allows fundamental research to be quickly transformed into tailored applications.

#### 2.3.1.2 Matter under extreme conditions

The Matter under extreme conditions topic involves research on **extreme states of matter** in different time and space scales. It is focused on sub-elementary and elementary particles, but also on objects millions of light years away in **astrophysics** and **cosmology**. The topics include for example the fundamental building blocks of nature, the fundamental forces, and the evolution and structure of the universe on a large scale.

This fundamental research plays a substantial role in the emergence of new technologies. It also includes the "far from equilibrium" and novel matter states created in terrestrial conditions at accelerators, using plasmatic technologies or ultra-intense lasers. FZU's and ELI Beamlines' excellent advanced laser infrastructures and top plasmatic technologies provide a solid in-house platform for the preparation and study of ultra-excited matter.

#### 2.3.1.3 Emerging tools

The Emerging tools topic encompasses research involving the development and usage of cutting-edge experimental techniques such AI, machine learning, and 3D printing and theoretical approaches across a wide range of disciplines. It extends over the whole cycle of materials research consisting of Design & Simulation – Preparation – Characterization – Application stages.

In addition to dedicated laboratories, large research infrastructures are available for this type of research, e.g. [HiLASE](#) or [ELI Beamlines](#) for unique laser experiments, and cutting-edge research infrastructures such as [CzechNanoLab](#) or [MGML](#) enabling unique analyses and

experimental characterization techniques, as well as novel material syntheses. In all of them there are also novel technologies and equipment available to enhance product functionalities beyond the state-of-the-art, linked also to industrial needs.

### 2.3.2 Supervisors

Applicants will **select a preferred supervisor** during the application stage. Depending on this choice, a second supervisor will be allocated according to the project's research area.

### 2.3.3 Secondments

Fellows are required to take one **mandatory secondment**. It is expected that secondments will last from one (minimum total duration) to three months and may be split into several parts if it suits project implementation.

Applicants must indicate a preferred secondment at the submission stage. The secondment choice must be properly justified in the applicant's project proposal. P4F strongly advises applicants to choose a secondment from the list of possible secondments suggested by their preferred supervisor, available at <https://p4f.fzu.cz/our-supervisors/>. The applicant may propose a secondment at an institution of their choice, but it must be approved by the PM before the application is submitted.

## 2.4 Applying for a fellowship

To be considered for the P4F fellowship, applicants are required to complete all steps of the application process via the **online application portal** on the P4F [website](#).

Before submitting their application, applicants must receive an endorsement from a P4F supervisor. Applicants may contact the selected supervisor directly while keeping [p4f@fzu.cz](mailto:p4f@fzu.cz) in copy of the communication or via the programme management team ([p4f@fzu.cz](mailto:p4f@fzu.cz)).

Applicants must submit a research proposal by filling in the P4F Research proposal template. It must be complete with all subsections.

Each applicant may submit only **one application per call**. If an applicant submits more than one application, they will be disqualified. The online application portal will be made accessible from the call start on Friday, 1 September 2023 00:00 CEST, for 10 weeks and until Friday, 10 November 2023, 23:59 CET.

The application and its documentation must be in English.

The applicants must familiarise themselves with the Open Science practices as described in Chapter 16 (particularly pages 40 - 42) of the Horizon Europe programme guide [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide\\_horizon\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf)

Confirmation of receipt of the application will be sent to the email address entered when registering. If the applicant does not receive an acknowledgement within 2 hours of submitting their application, they must contact P4F after checking the junk/spam folder in their email.



Applicants must fill in all the necessary information and upload all mandatory documents in English **directly to the application portal** before the call deadline.

Only complete applications using the template provided and which received endorsement by P4F supervisors will be assessed.

### 3 EVALUATION AND SELECTION PROCESS

P4F is committed to respect and implement the latest standards and guidelines during the recruitment and promotes open, merit-based and transparent recruitment as per [Recruitment standards, including Charter & Code](#).

Applicants may be required to provide further evidence of the qualifications listed on their application, proof of identity and any other relevant documentation, such as evidence of compliance with eligibility and mobility requirements. Where the information provided by the applicant is found to be incorrect or not true or cannot be verified if requested, P4F reserves the right to exclude the candidate from the selection process or revoke the fellowship award.

The figure below provides an overview of the evaluation and selection process.



#### 3.1 Eligibility check and ethics assessment

All applications will be checked for eligibility. Applicants, whose proposals are incomplete, will be notified by the PM. In the case of minor omissions, applicants will be given **three working days**, starting from the following day after the date stated in the notification, to rectify the application according to the instructions received. All ineligible applicants will be notified by email of the reasons for their ineligibility and given instructions for redress. The eligibility criteria are detailed in [Chapter 2](#).

Parallel to the eligibility check, the Ethics committee will perform the ethics assessment of the proposals. In case an issue is found, the applicants will be informed via e-mail with instructions how to proceed.

### 3.2 Evaluation of the proposals

The **anonymised project proposals** (without the CV) will be **reviewed by three independent external expert evaluators**, assigned by the Selection committee. Together with the Selection committee vice-chair, the expert evaluators will agree on a consensus report and will put a score to the proposals. The proposals will be ranked according to the score and a maximum 60 proposals, which pass the 70% threshold, will be invited for interview by the PM.

Those not proceeding to the interview stage, will be notified of the outcome, will receive the consensus report and the final score as feedback. They will also receive instructions for potential redress.

Applicants proceeding to the interview stage must be available to attend the interview on the date requested. Applicants are responsible for organising the necessary video conferencing facilities at their end.

Applicants passing to the second round of the evaluation will have a 45-minute **interview**, conducted remotely in English using a videoconferencing system.

Once the results of both the proposal evaluation and the interview are gathered, the final ranking will be established. The P4F Selection committee and the Supervisory board will validate this **final ranking**.

The PM will notify the applicants of the **final decision**, including the consensus report from the proposal evaluation, feedback from the interview and final score. Successful applicants will be given 2 weeks for accepting or rejecting the offer by sending a letter of acceptance to [p4f@fzu.cz](mailto:p4f@fzu.cz). The applicants must start their fellowship no later than 9 months after the acceptance of the fellowship. Applicants with scores above threshold but not high enough for funding will be placed on a ranked reserve list.

In case of equal total scores, the applications will be further ranked following the overall score from the Interview phase. If the scores are still equal, technical/scientific skills and then CV and non-scientific skills from the Interview phase will be taken into account.

Each supervisor states on their profile whether they can accept one or two fellows (see <https://p4f.fzu.cz/our-supervisors/>). In case there are more successful applicants than a supervisor can accept, the PM will first seek for a suitable substitute supervisor. If both the substitute supervisor and the applicant agree, the applicant will be offered a P4F fellowship. If no substitute supervisor is available, or the applicant refuses the offered substitute supervisor, the successful applicant will be put on reserve list for the originally requested supervisor.

If a successful applicant does not notify their acceptance of a fellowship within two weeks after the publication of results, the fellowship will be offered to another applicant in the descending order of the reserve list.

### 3.2.1 Evaluation criteria

Each criterion of the proposal and interview will be scored 0–5.

**Table 1: Evaluation criteria**

	Criterion	Weight	Priority	Description
<b>Proposal</b> Font 11pt Max. 8 pages (main)  Weight: 70%	Excellence	50%	1	Quality, novelty, methodology and feasibility of the project Interdisciplinary, intersectoral and innovative aspects of the project Gender dimension and other diversity aspects of the research (if applicable) Quality of the two-way transfer of knowledge and training Quality of past scientific achievements given their career stage Scientific relevance of the choice of supervisor Appropriateness of the secondment
	Impact	25%	2	Fellowship's impact on the applicant's career Quality and feasibility of proposed measures to disseminate, communicate, or exploit the project results, including different target groups
	Implementation	25%	3	Quality and feasibility of the work plan Appropriateness of the allocated resources (scientific and other), overall management, risk assessment Appropriateness of infrastructure and equipment for the successful execution of the project.
Pass to interview stage: Top 60 applicants with a minimum 70% threshold after proposal evaluation				
<b>Interview</b>  Weight: 30%	Technical/scientific skills	50%	1	Presentation of the research project Applicant's scientific vision for their field Addressing of strengths and weaknesses
	CV	30%	2	Quality of the applicant given their career stage Quality of past scientific work
	Non-scientific skills	20%	3	Applicant's career vision and expectations Independent thinking Social skills and leadership potential

### 3.2.2 Redress procedure

Upon receiving the decision following each of the three steps: 1. eligibility check, 2. proposal evaluation, and 3. final decision about the award of the fellowships, the applicants will be given **one week to redress** starting from the day following the date on the notice. The instructions of how to proceed, together with the redress template, will be available on the P4F website. Redress requests can only be made **on formal grounds**, such as procedural issues or perceived incorrect application of eligibility criteria. The scientific expert evaluations will not be called into judgement.

The redress will be assessed by the Ethics committee, whose task is to judge the reasons for redress of the applicant on formal grounds. The Ethics committee will have **five working days** starting from the day after receiving the notice to assess whether there is sufficient ground for redress and if it is judged positively, the Selection committee chair will send the proposal or parts of it for re-evaluation by new independent expert evaluators. The result will be passed back to the Selection committee for checking and confirmation. Applicants will be

notified of the redress result within **15 working days**, or if a final response cannot be given at that stage, when the final decision is expected to be reached. Proposals, whose scores become sufficient for passing to the next stage after redress, will be accordingly evaluated. No further redress will be possible.

## 4 FELLOWSHIPS

### 4.1 Supervision

At P4F, fellows will benefit from the support of **two dedicated supervisors**, who will work with them to provide the best possible guidance. In addition, the fellow will have a **secondment supervisor** from their secondment partner.

### 4.2 Courses and trainings

During the implementation phase, in cooperation with their supervisors, P4F fellows will prepare a **Personalized career development plan (PCDP)** to address their individual needs in terms of research and complementary skills development. The PCDP will also set individual development goals and progress monitoring.

The fellows will be required to take part in training and career development opportunities.

## 5 EMPLOYMENT CONDITIONS

### 5.1 Accepting a fellowship

If selected for a P4F fellowship, the applicant must formally accept the offer by email at [p4f@fzu.cz](mailto:p4f@fzu.cz) within two weeks of notification. The applicant must start their fellowship within 9 months of notifying their acceptance.

Applicants must familiarise themselves with and respect the [European Charter for Researchers](#) and the [Code of Conduct for the Recruitment of Researchers](#).

### 5.2 Appointment conditions

Successful candidates will be offered an employment contract which includes health and social insurance at FZU or ELI Beamlines (depending on the selected research area and supervisor). The work contract will be concluded in accordance with the Czech labour law in Czech and English language. The term of employment is 24 months.

The Fellow's monthly salary will be paid in CZK to a local bank account. The salary will consist of three parts - the Living allowance, the Mobility allowance, and the Family allowance if relevant.

The Mobility and Family allowances are provided to compensate for the cost of the required personal and household relocation of the fellow and their dependents.

The Family allowance is provided to a fellow who proves the existence of family obligations. Family obligations may also be acquired during the fellowship duration. Family obligations are defined by having persons linked to the researcher by

- marriage, or
- a relationship with equivalent status to a marriage recognised by the legislation of the country or region where this relationship was formalised, or
- dependent children who are being maintained by the researcher.

Any allowances received by the fellow, the Living allowance, the Mobility allowance, and the Family allowance if relevant, will be subject to standard taxes and other deductions such as health and social insurance paid by both the employer and employee.

Mandatory contributions are calculated from the individual's gross remuneration. Contribution rates for the employer are currently the following: 24,8 % for social security, 9 % for health insurance and 2 % for social or benefit fund.

All deductions will be detailed on the fellow's monthly pay slip.

<b>Table 2: Allowances and gross salary overview</b>	
Living allowance	EUR 4305 per month
Mobility allowance	EUR 85 per month
Family allowance	EUR 250 per month
Total allowances without Family allowance	EUR 4390 per month
Total allowances with Family allowance	EUR 4640 per month
Total gross salary without Family allowance	EUR 3232 per month
Total gross salary with Family allowance	EUR 3416 per month

### **5.3 Fellowship obligations**

Fellows will be required to disseminate the results of their research through suitable methods, including scientific publications. Fellows will be required to deliver at least one scientific presentation at the P4F annual colloquium and to give at least one lecture at a partner institution and two talks at chosen conferences or seminars. Moreover, the fellow will have to take part in two outreach events.

The fellow shall have regular and sufficiently frequent contact with their supervisor (at least bi-weekly). Fellows must be fully devoted to the research and training activities of their fellowship.

The fellows will report directly to their supervisors.

The fellows will be required to provide progress updates to the P4F PM, including research outputs, training and career development activities and education and public engagement activities completed.

If the fellow plans to seek additional funding from another source, they must inform their supervisor. The fellow will be responsible for addressing any tax-related matters that may arise from supplementary activities.

The fellow will inform the PM and supervisor immediately about any events or circumstances that could affect the implementation of the fellowship.

Any form of public exposure, such as lectures, interviews, documents, publications, online content, media releases, television and radio promotions, websites, videos, and audio recordings, linked to or resulting from the fellow's research during the tenure of the P4F fellowship, must include recognition of financial support from the European Commission and its flag and the P4F logo.

The fellows must comply with the Open Science practices as described in Chapter 16 of the Horizon Europe programme guide [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide\\_horizon\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf) and with [Open Science standards, including open access and FAIR data management and IPR policies](#).

## 6 ETHICS AND GENDER ASPECTS

P4F is committed to ethical standards, specifically [Responsible Research and Innovation and the European Code of Conduct for Research Integrity](#).

Applicants must complete an Ethics Issues Table as part of the application process. If they answer "Yes" to any of the questions, they complete the Ethics self-assessment.

Research proposals involving the use of Human Embryonic Stem Cells (hESCs) or human embryos (hE) will be automatically provided to the Research Executive Agency (REA) of the European Commission for an Ethics Review. Such research may not start without approval of the European ethics review completed by the communication of the explicit approval in writing from REA to the fellow and of the P4F Ethics committee. If the fellow breaches any of its obligations regarding selected research proposals involving the use of human embryonic stem cells (hESC) or human embryos (hE), the grant may be reduced or terminated.

Applicants and fellows are recommended to utilize the [Toolkit Gender in EU-funded research](#), designed to equip the research community with tools to integrate gender aspects into their research.