GUIDE FOR APPLICANTS
MathInParis2020
H2020-MSCA-COFUND2019


This is a 2-year call for applications for 40 PhD fellowships in Mathematical Sciences and theoretical Computer Science in Paris.

Second call timetable (20 fellowships).

<table>
<thead>
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<tr>
<td>April 22nd, 2022</td>
<td>Deadline for Step 2: only for pre-selected candidates</td>
</tr>
</tbody>
</table>

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1 The Essentials

What are the ‘International Doctoral Training in Mathematical Sciences in Paris MathInParis2020’ COFUND actions?
The International Doctoral Training in Mathematical Science in Paris “MathInParis2020” Cofunded by Marie Skłodowska-Curie Actions offers 40 PhD fellowships in the framework of the European Horizon 2020 programme “Marie Skłodowska-Curie Co-funding of Regional, National and International Programmes”. This offer is spread over 2 calls in 2020-21 and 2021-22. PhD projects will be hosted in one of the laboratories in the FSMP network in Paris and fellows will enrol in one of the three Doctoral Schools (see Annex 1 and 2). The PhD project can also be in partnership with industry.

Who can apply?
There is no nationality or age criteria but the applicants must:
- **(mobility rule)** not have resided or carried out their main activity (work, studies, etc.) in France for more than 12 months in the three years immediately before the deadline of the co-funded program's call.
- **(Early-stage researchers)** have a master’s degree or an equivalent diploma at the time of their enrolment and must be in the first four years (full-time equivalent research experience) of their research careers. Moreover, they must not have been awarded a doctoral degree.

Which research topics are supported?
All domains of research in pure and applied mathematics and/or theoretical computer science are eligible.

How does it work?
Candidates have to apply online within the specified deadlines by submitting the required documents. All eligible proposals will be evaluated in the selection Step 1. Selected candidates must submit a PhD project that will be supported and supervised by at least one researcher based in one of the laboratories in the FSMP network. The MathInParis2020 Scientific Committee will interview the around 60 selected candidates. A final list of around 20 fellows will be established.

What kind of contract will fellows have?
Selected fellows will have a “doctoral contract” with one of the Universities of the FSMP. They will receive 2790€ as monthly gross salary including employer costs, for exactly 36 months, provided that the registration is confirmed every year.

Second Call: Timing and selection procedure.
- **December 1st, 2021**: opening of the first call for 20 fellowships.
- **February 13th, 2022**: deadline for submitting application. Candidates have to provide: CV; Motivation letter; Recommendation letters; Master full grades certificate and/or diploma; A scientific document where they describe their own research interests, their ideas for PhD projects and links with the FSMP network.
- **March 1st, 2022**: A short list of around 60 selected candidates is produced.
- **April 22nd, 2022**: Deadline for the selected candidates to produce: Detailed scientific project signed by the PhD potential advisor; Potential advisors’ documents (CV, list of publications, list of current PhD candidates under their supervision, and an official letter of consent for advising the applicant); Letter of consent from the director of the host laboratory and the director of the doctoral school in which the selected candidate would undertake his PhD Ethic form completed.
- **May 9th to May 13th 2022**: Interviews by the MathInParis2020 scientific committee.
- **Around May 15th 2022**: Final results.
2 About MathInParis2020 COFUND

2.1 General aspects
The fundamental goal of the program is to train students in mathematics and their applications in all aspects of their career development. Paris is a fantastic place not only in terms of formal research training with seminars, workshops, visits of foreign researchers, but also in terms of non-academic opportunities of training personal and professional management skills. However, MathInParis2020 programme has the ambition of going well beyond the training of excellent mathematicians. Indeed, we aim at impacting not only the academic sector but reaching out to society and non-academic sectors by putting a strong emphasis on training in non-research oriented transferable skills (through learning by doing actions, participation in seminars and daily practice). Moreover, the mandatory mobility period of at least two months, can be conducted either in a laboratory from another field (interdisciplinarity mobility), in a non-academic context (intersectorality mobility), or in a research experience abroad (transnational mobility). MathInParis2020 Doctoral program will highlight the wide range of possible careers and develop abilities to lead, manage and transmit projects.

2.2 Eligibility criteria
There is no nationality nor age criteria. However, in agreement with MSCA mobility standards, eligible candidates must fulfil the following criteria (in case of doubt, please do not hesitate to contact the MathInParis2020 helpdesk for checking):

- **(Mobility rule)** Candidates must show transactional mobility by having not resided or carried out their main activity (work, studies, etc.) in France for more than 12 months in the three years immediately before the deadline of the co-funded program's call. Compulsory national service, short stays such as holidays and time spent as part of a procedure for obtaining refugee status under the Geneva Convention are not taken into account.

- **(Early-stage researchers (ESR))**, Candidates must have a master’s degree or an equivalent diploma at the time of their enrolment and must be in the first four years (full-time equivalent research experience) of their research careers. Moreover, they must not have been awarded a doctoral degree. The full-time equivalent research experience is measured from the date when a researcher obtained the degree entitling him or her to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the researcher is recruited, even if a doctorate was never started nor considered.

Please note that candidates have to provide hard evidence that they fulfil the eligibility criteria: copies of previous employments, university grades, utility bills, entry/exit stamps in passport, etc. MathInParis2020 administrative team takes care of checking the authenticity of the documents and detecting frauds. They can issue warnings to the applicants before the closing date of the call, when the application is incomplete, or when documents provide insufficient information or cannot be clearly identified as official documents emanating from Higher Education establishments.

2.3 Working and employment conditions
MathInParis2020 fellows have a contract with one of the FSMP Universities and are employed under the French “Contrat doctoral” terms, as defined by the “Décret du 23 avril 2009-46”. Hence, they will benefit from:

- Social security coverage for the applicants and its accompanying family members (including children, husband/wife/partner if unemployed).
- Maternity and paternity leaves (with potential contract extension on request), unemployment and retirement rights.

Fellows receive a financial support for a period of exactly 36 months. They receive 2790 € as monthly gross salary, including employer cost. After standard deductions, this amounts to a net salary of around 1500€ (a typical gross salary after deduction of employer costs is around 1900€). Note that all above conditions can change depending on the specific university laws and conditions.
Please be aware that registration fees may be asked to fellows to enroll in Ecole Doctorale: the amount is established by the French government and today is 380€ per year. ([https://www.service-public.fr/particuliers/vosdroits/F2865](https://www.service-public.fr/particuliers/vosdroits/F2865)).

As an employee of the university assigned to a research laboratory, MathInParis2020 fellows have access to the scientific library, to an office with a dedicated desk and a personal computer, and to the cafeteria.

In addition, the laboratory gives them financial resources to travel (research visits and participation to conferences/workshops) and for additional equipment if needed.

In case of necessity MathInParis2020 administrative team helps the PhD fellows to prepare their arrival in Paris: accommodation advice, support for administrative issues including visas, health, bank, etc.

### 2.4 Training, supervision and career guidance: typical activities of fellows.

The objective of the MathInParis2020 training is twofold: on the one hand, we really want to focus on solid scientific learning in all its aspects and, on the other hand, we do not want to forget the importance of interdisciplinarity, intersectorality and transnational mobility research options and training in soft skills. The following schema summarizes the fellows’ supervision and training, activities to be detailed below.

<table>
<thead>
<tr>
<th>Month</th>
<th>1st year</th>
<th>2nd year</th>
<th>3rd Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit research declaration</td>
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<tr>
<td>Yearly report and PCDP update</td>
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<tr>
<td>Specific mid-term questionnaire</td>
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<tr>
<td>One-to-one meeting</td>
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<td>Mid-term presentation</td>
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<tr>
<td>Training on research</td>
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<tr>
<td>Research Communication</td>
<td></td>
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<tr>
<td>PhD manuscript and defense</td>
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<tr>
<td>MathInParis2020 Conference</td>
<td></td>
<td></td>
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<tr>
<td>MathInParis2020 soft skills</td>
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<tr>
<td>Training on soft skills</td>
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<td></td>
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<tr>
<td>Mandatory mobility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning by doing experience / Daily learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between 2 and 12 months</td>
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</table>

In Paris, fellows will have access to an exceptional ecosystem that will allow them to train through contact with scientific experts (first of all the thesis advisor and the other members of his/her research team) and by attending high-level courses, regular seminars or, more occasionally, seminars given by eminent speakers in prestigious places (Collège de France, Bibliothèque François Mitterrand, etc.).

**More specifically**, fellows will have free access to local training opportunities such as **Master 2 courses offered in doctoral schools**, **Research Seminars**, **Scientific events** organized by FSMP and **Research schools**. (Fellows must participate in at least one research school per year in France or abroad).

Moreover, fellows must take part in the annual **MathInParis2020 Conference**. The aim of this mandatory annual conference is for new laureates of the programme to be welcomed and for all the others to present their achievements. Every fellow explains in a short presentation his/her academic career and the object of his/her research.

**Fellows have the obligation to complete at least 2 months of mobility during the 3 years of the thesis.** This mobility can be of three different kinds:

- **an interdisciplinary** mobility with a stay in a laboratory in another discipline, or
- **an intersectoral** mobility outside of academia, or
- **an international** mobility with a research stay in a laboratory abroad or participation in a thematic semester in an international research centre.

Of course, these mobilities can be combined or cumulated.

**In this programme fellows will acquire non-research oriented transferable skills in three ways:** through **learning by doing actions**, through **participation in seminars and training sessions** and **through daily practice**. This will be also complementary to the training provided by the three Institutes of Doctoral Training.
Learning by doing. Each fellow will be involved in one or more projects of a cumulative duration of at least 10 days (spread over the 3 years of the doctorate) and focusing on one of the following themes: mathematics and society, mathematics for development, innovative methods for mathematical communication. Fellows must finalise their projects before the end of the first year of the thesis and have it validated via the yearly report.

MathInParis2020 soft-skill sessions. Dedicated conferences and workshops will allow the fellows to be sensitized to important issues in scientific practice, on the one hand, and to prepare the post-thesis, on the other hand. Seminar on good scientific practices, workshops on thesis and post-thesis in academics and training sessions for professional insertion will be organised. The first block will take place in Fall while the second and third blocks will take place in Spring. Participation will be mandatory for fellows.

Daily learning. Through their daily research practice, assisted by their advisors and the FSMP team, fellows will comply with the principles set out in the European Code of Conduct for Research Integrity. Particular attention will be made in communication, training and respect of fellows to the highest standards of research integrity. This implies notably compliance with the following essential principles: honesty, reliability, objectivity, impartiality, open communication, duty of care, fairness and responsibility for future science generations. (See Section below for details on fellows’ obligations and ethic aspects.)

The supervision of the fellows will be naturally provided in one of the three doctoral schools and depending on the three Doctoral Training Institutes. In particular:

- The advisor provides the PhD thesis topic. He/she is involved at the earliest stage of the recruitment and is in charge of the daily monitoring of the fellow for the scientific progress of the thesis. He/she also provides advice for the career development.
- A tutor follows the fellow. The tutor is a researcher who may belong to the same university, but is independent of the advisor. He/she provides scientific advice as well, but his/her main role is to have an external vision of the thesis progress.
- An external scientific advisor will also be involved. The latter will be chosen, in consultation with the advisor, the fellow and the FSMP board, according to the type of mandatory mobility chosen: he/she will either come from another scientific discipline for interdisciplinary mobility, or from a non-academic sector for intersectoral mobility, or have a permanent position abroad for international mobility.

To help the fellows in their organisation, to monitor progress and prevent any possible difficulties an annual one-to-one meeting will be organised between the fellow and the Project Coordinator. A web platform will be set up where fellows, all along their PhD and with the help of the triplet advisor/tutor/external advisor, will

- Submit a research declaration within 20 days of the start of the research training activities with personal and fellowship information.
- Fill the Mobility Form, a template will be prepared in order to help fellows in the planning of their mandatory mobility.
- Submit a yearly report describing scientific evolution of the work, the learning by doing experience, as well as research and non-research oriented transferable skills already acquired and still to be acquired.
- Submit a yearly update of a Personal Career Development Plan (PCDP), following an official template prepared by the MathInParis2020 Board.
- Answer a specific mid-term questionnaire focusing on expected non-academic skills to gain and ethics issues.
- Do a mid-term presentation to a thesis committee according to the rules of the doctoral schools.

2.5 Fellows obligations on open access and ethical issues.
Following the Horizon 2020 rules fellows must guarantee open access to scientific publication and information on EU funding precisely:
• **Open access to scientific publications.** The fellow must ensure open access (free of charge online access for any user) to all peer reviewed scientific publications relating to their results. In particular, they must as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications.

• **Information on EU funding.** Any dissemination of results (in any form, including electronic) must display the EU emblem and include the following text: “This project has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 945332”.

Researches funded by the MathInParis2020 Cofund are engaged to the **highest standards of research integrity** and must fulfil the **ethical procedure of H2020 as detailed in the ethical Questionnaire** (see Annex 3 for details). It takes into account the specificities of mathematics with interaction (including Biology), the intellectual properties and confidentiality rights. The main points are:

- Funding will not be granted for activities carried out outside the EU if they are prohibited in all Member States.
- Funding will not be granted for activities that destroy human embryos (for example, for obtaining stem cells).
- The research project must have an exclusive focus on civil applications.

Regarding all other possible contract obligations or rights (such as pregnancy, childbirth, illness lasting more than a month, etc…) fellows have to follows the rules of their employer university. However, they have the obligation to keep informed the MathInParis2020 Board.

### 3 How to apply

Before submitting, please check that you fulfil the eligibility criteria (see point 2.2) and be aware that this program will support only PhD projects with an advisor that belongs to the FSMP network (See Annex 1 & 2). In case of any additional questions, the applicant will have the possibility to contact the helpdesk of the MathInParis2020 team by email (mathinparis@fsmp.fr) or by phone in French and/or English (+33(0)1 44 27 68 03 (or 67 72)).

#### 3.1 Selection: proposal submission for Step 1

Candidates fill the online application on the website of MathInParis2020 programme with the following documents:

- **CV** (with particular attention to eligibility conditions);
- **Motivation letter**;
- **Recommendation letters**;
- **Master full grades certificate and/or diploma**;
- **A scientific document** where they describe their own research interests, their ideas for PhD projects and links with FSMP network.

Candidates have also to declare online that they fulfill the eligibility conditions (see point 2.2). More precisely:

**MSCA mobility standards:** I declare that I have not resided or carried out my main activity in France for more that 12 months in the last 3 years before the end of the call. If selected in Step 1, I will provide hard evidence before the end of the second phase selection: copies of previous employments, university grades, utility bills, entry/exit stamps in passport, etc.

I am aware that if these documents are not provided my application will be automatically rejected.

**Early-stage researchers (ESR).** I declare that I do not have a doctoral degree and I am in the first four years of my research career. This means that I will have obtained my Master degree (or equivalent) in the last 4 years before the date of my enrolment and that my research experience pro-rata is no more
than four years. If selected in Step1, I will provide hard evidence before the end of the second phase selection (copies of previous employment, university grades, etc.). I am aware that if these documents are not provided my application will be automatically rejected.

Please, be aware that your personal data are collected and processed by the Research Executive Agency and/or the European Commission.

### 3.2 Selection: proposal submission for Step 2

If selected in Step 1, applicants then have time to define their research project and find an advisor. Note that only advisors that are members of a FSMP laboratory can be accepted. Additional information can be found on the web page: [https://www.sciencesmaths-paris.fr/fr/how-to-find-an-phd-advisor-or-a-post-doc-supervisor-931.htm](https://www.sciencesmaths-paris.fr/fr/how-to-find-an-phd-advisor-or-a-post-doc-supervisor-931.htm).

Before the end of Selection Step 2 they have to provide:

- Detailed **scientific project** signed by the PhD potential advisor;
- **Potential advisors’ documents** (CV, list of recent publications, list of current PhD candidates under their supervision, and an official letter of consent for advising the applicant);
- **Letter of consent** from the director of the host laboratory and the director of the doctoral school in case the candidate is selected;
- **Ethic form** completed.

Candidates selected in Step 1 that fully completed the application are invited in Paris for an interview. If necessary, their travel expenses are covered on a flat-rate. Moreover, if candidates prefer, interviews can be done by video-conference.

### 4 Timetable and specific information for Call 2

#### 4.1 Timetable

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</tr>
<tr>
<td>Around May 15th, 2022</td>
<td>Final results</td>
</tr>
<tr>
<td>October, 1st, 2022</td>
<td>Start of the three-year work contract</td>
</tr>
</tbody>
</table>

#### 4.2 Composition of committees

**MathInParis2020 Board:**
1. FSMP director: Isabelle Gallagher
2. FSMP deputy director: Muriel Livernet.
3. FSMP deputy director: Guillaume Chapuy.

**MathInParis2020 Steering Committee**
1. FSMP director: Isabelle Gallagher
2. FSMP deputy director: Guillaume Chapuy.
3. FSMP deputy director: Muriel Livernet.
4. École Doctorale de Science Mathématiques de Paris Centre, (ED 386) director: Elisha Falbel.
5. École Doctorale de Dauphine, Université Paris-Dauphine (ED 543) director: Béatrice De Tilière.
6. École Doctorale Galilée, Université Paris Nord (ED 146) director: Francis Nier.

MathInParis2020 Scientific Committee and complementary list of experts:

MathInParis2020 Redress Committee

5 Evaluation criteria and selection procedure

5.1 General
The main criteria for the selection of the application are the quality of the candidate and the quality of the research project. However, the motivation, in particular with respect to the idea of becoming a “citizen mathematician”, and the quality of the advising will also be evaluated.

Each criterion will be graded from 0 to 5 with the following guideline:

0 – The application fails to address the criterion or cannot be assessed due to missing or incomplete information.
1 – Poor. The criterion is inadequately addressed, or there are serious inherent weaknesses.
2 – Fair. The application broadly addresses the criterion, but there are significant weaknesses.
3 – Good. The application addresses the criterion well, but a number of shortcomings are present.
4 – Very good. The application addresses the criterion very well, but a small number of shortcomings are present.
5 – Excellent. The application successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.

The selection procedure goes in six steps:

Step 0 – Opening submission: Candidates fill the online application on the website of MathInParis2020 programme with the documents specified in Section 3.1.

Step 1 – Selection: 1st phase: The aim of this step is to produce a list of at least 3 times the number of PhD fellowship offered, to be interviewed in Step 4.

Step 1bis – Redress procedure: Once they received the feedback, candidates have a 10 days period to ask for a redress procedure. The Redress Board will examine the cases and readmit candidates if it wishes. This decision is under its sole responsibility.

Step 2 – Finding an advisor, defining a research project: During this period, selected candidates have time to define their research project and find an advisor (note that only advisors that are members of a FSMP laboratory can be accepted). Before the end of this period, the application will be completed online by adding the document listed in Section 3.2.

Step 3 – Scientific evaluation: Each application selected in Step 1 and completed in Step 2 will be reviewed by the Scientific Committee.

Step 4 – Interview: Candidates are invited for an interview.

Step 5 – Final scoring and ranking: At the end of the interview, the Scientific Committee, give a global grade on candidates to produce a ranked list of laureates.

Step 6 – Feedback and redress procedure if necessary: At the end of the selection process, candidates will receive feedback summarising the strengths and weaknesses identified by the Scientific Committee. If needed, the Redress Board will examine the cases.

MathInParis2020 administrative team takes care of checking the authenticity of the documents and detecting frauds. They can issue warnings to the applicants before the closing date of call, when the application is incomplete, or when documents provide insufficient information or cannot be clearly identified as official documents emanating from Higher Education establishments.
5.2 Selection Step 1: evaluation criteria and procedure
First eligibility is checked by the Steering Committee, then all eligible candidates are evaluated via an online platform by 2 members of the Steering Committees and 1 independent expert. The criteria of this step are: quality of the applicant, motivation and possible match between the candidate’s project and FSMP network. Details are given in the following table:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Scoring (over 100)</th>
<th>Threshold</th>
<th>Priority (in case of ex-æquo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of the candidate</td>
<td>60</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Personal motivation</td>
<td>20</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Match between the candidate’s project and FSMP network</td>
<td>20</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Based on the marks of the 3 experts, the Steering Committee will produce a list of around 60 candidates that will be invited to complete the selection Step 2. All candidates will receive a personalised feedback by email.

5.3 Scientific evaluation, Interviews and final scoring and ranking: evaluation criteria and procedure

**Scientific evaluation.** Each preselected application will be reviewed by 3 members of the Scientific Committee of which at least 2 independent experts. This scientific evaluation is done on an individual basis and the reviewers are blind to each other’s review. The evaluator will have to score each proposal according to the different evaluation criteria (see below).

**Interview.** Candidates will: meet in person their prospective research team, advisor and members of the corresponding doctoral school; attend a presentation of their host laboratories and of the organisation of the local research; be interviewed in French or in English, by a fixed subset of at least 6 members of the Scientific Committee, on their motivation and professional career development plan. Questions are required to focus mainly on past experiences, but a significant knowledge of the project is naturally expected and will be evaluated. After each interview, each member of the committee grades individually the interview, and these grades are aggregated together.

**Final scoring and ranking.** At the end of the interview week, the Scientific Committee, based on the 3 independent expert evaluations’ grades in Step 3, give a global grade on the application. Then, the committee takes into consideration the interviews of the candidates: the grades of the interview and of the written application are then summed with respective weights of 0.3 and 0.7, and used to produce a ranked list of laureates. A short additional list is also established in case of discontinuance.

**Criteria and sub criteria** are described in the next table, along with scoring and thresholds.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Scoring (over 100)</th>
<th>Threshold</th>
<th>Priority (in case of ex-æquo)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 3 – Scientific evaluation</strong></td>
<td><strong>Quality of the candidature:</strong></td>
<td></td>
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</tr>
<tr>
<td>(a) Training and skills of the candidate [10];</td>
<td>30</td>
<td>20</td>
<td>1</td>
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<tr>
<td>(b) Academic record [10];</td>
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<tr>
<td>(c) Personal motivation and career plan [5];</td>
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<tr>
<td>(d) Adequacy between the research area and the candidate’s skills [5].</td>
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</tbody>
</table>


5.4 Redress procedure
Possibility of redress/appeal is given, both in Step 1 and after the final ranking is given. Once they received the feedback, candidates have a 10 days period to ask for a redress procedure by contacting the MathInParis2020 Board by e-mail at mathinparis@fsmp.fr with copy at contact@fsmp.fr. In this email they will have to motivate their request and specify the point they would like to be addressed by the Redress Committee. The Redress Committee will examine the cases. Their conclusions are under its sole responsibility and will be transmitted to the president of the Scientific Committee who will be in charge of treating the appeal and making the decisions, after having consulted the Board in order to consider other possibilities and possibly propose alternative opportunities to the applicant.
Annex 1: Laboratories of the FSMP network

- **ASD**: Astronomie et Système Dynamiques, team of Institut de mécanique céleste et de calcul des éphémérides, (UMR 8028, CNRS, Observatoire de Paris).
- **CAMS**: Centre d'Analyse et de Mathématiques Sociales, (UMR 8557, CNRS, EHESS).
- **CAS**: Centre Automatique et systèmes, Mines Paris Tech.
- **CEREMADE**, Centre De Recherche en Mathématiques de la Décision (UMR 7534, CNRS, Université Paris-Dauphine).
- **Collège de France**.
- **DMA**: Département de Mathématiques et Applications de l’Ecole Normale Supérieure (UMR 8553, CNRS, ENS).
- **DI-ENS**: Département d'Informatique de l'Ecole Normale Supérieure (UMR 8548, CNRS, ENS).
- **IMJ-PRG**: Institut de Mathématiques de Jussieu - Paris Rive Gauche (UMR 7586, CNRS, UPMC, UP7D).
- **IRIF**: Institut de Recherche en Informatique Fondamental (UMR 8243, CNRS, UP7D).
- **LAGA**: Laboratoire de Probabilités et Modèles Aléatoires (UMR 7599, CNRS, UPMC, UP7D).
- **LJLL**: Laboratoire Jacques-Louis Lions (UMR 7598, CNRS, UPMC, UP7D).
- **LPSM**: Laboratoire de Probabilités, Statistiques et Modélisation (UMR 8001, CNRS, UPMC, UP7D).
- **MAP5**: Laboratoire de Mathématiques Appliquées à Paris 5 (UMR 8145, Université Paris Descartes).
- **SAMM**: L'Equipe de Statistique, Analyse, Modélisation Multidisciplinaire (EA 4543, Université Paris 1).
- **INRIA teams**: ALPINE, ANGE, ANTIQUE, ARAMIS, CAGE, CASCADE, COMMEDIA, DYOGENE, GALLIUM, GANG, MAMBA, MATHRISK, MATHERIALS, MOKAPLAN, OURAGAN, PARKAS, PI.R2, PROSECCO, QUANTIC, SECRET, SERENA, SIERRA, SIERRA, VALDA and WILLOW.

Annex 2: Doctoral School of the FSMP network

- **École Doctorale de Science Mathématiques de Paris Centre**, Université Pierre et Marie Curie, Université Paris-Diderot, ENS, Université Paris Descartes (ED 386).
- **École Doctorale de Dauphine (EDD)**, Université Paris-Dauphine (ED 543).
- **École Doctorale Galilée**, Université Paris Nord (ED 146).
Annex 3: Ethical Issues

Fellows funded by the MathInParis2020 Cofund are engaged to the highest standards of research integrity, this means in particularly that researchers will be advised, trained and engaged to:

- Present their research goals and intentions in an honest and transparent manner.
- Design their research carefully and conduct it in a reliable fashion, taking its societal impact into account.
- Use appropriate techniques and methodologies (including data collection and management).
- Exercise due care for research subjects, may they be human beings, animals, environment or cultural objects.
- Ensure objectivity, accuracy and impartiality when disseminating the results.
- Allow as much as possible and considering the legitimate interest of the student access to research data, in order to enable research to be reproduced.
- Make the necessary references to their work and that of other researchers.
- Refrain from practicing any form of plagiarism, data falsification or fabrication.
- Avoid double funding, conflicts of interest and misrepresentation of credentials or other research misconduct.

Researches funded by the MathInParis2020 Cofund must fulfill the ethical procedure of H2020 as detailed in the following ethical Questionnaire.

Ethical Issues Questionnaire

This questionnaire summarizes potential ethics issues that your research proposal could raise following the intentional, EU and French laws as specified in the Grant Agreement N°945332 – MathInParis2020 H2020-MSCA-COFUND-2019 between the Research Executive Agency of the European Commission and the FONDATION SCIENCES MATHEMATIQUES DE PARIS (FSMP).

<table>
<thead>
<tr>
<th>Name of applicant:</th>
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Please answer all questions. If one of the issues applies to your proposal be aware that documents must be provided to confirm the possibility of funding your research. Moreover, in case the funding is confirmed you also have to account for your ethical considerations in the proposal and all along your PhD thesis. If you have any doubt do not hesitate to contact the MathInParis2020 administrative team for further information.

<table>
<thead>
<tr>
<th>1. HUMAN EMBRYOS/FOETUSES</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your research involve Human Embryonic Stem Cells (hESCs)?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Does your research involve the use of human embryos?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Does your research involve the use of human foetal tissues / cells?</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>2. HUMANS</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your research involve human participants?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Does your research involve physical interventions on the study participants?</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

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<tr>
<th>3. HUMAN CELLS / TISSUES</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your research involve human cells or tissues (other than from Human Embryos/foetuses, i.e. Section 1)?</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. PERSONAL DATA</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>
Does your research involve personal data collection and/or processing? ☐ ☐
Does your research involve further processing of previously collected personal data ("secondary use")? (including use of pre-existing data sets or sources, merging existing data sets, sharing data with non-EU member states)? ☐ ☐

5. ANIMALS
Does your research involve animals? ☐ ☐

6. THIRD COUNTRIES
In case non-EU countries are involved, do the research related activities undertaken in these countries raise potential ethics issues? ☐ ☐
Do you plan to use local resources (e.g. animal and/or human tissue samples, genetic material, live animals, human remains, materials of historical value, endangered fauna or flora samples, etc.)? ☐ ☐
Do you plan to import any material-including personal data- from non-EU countries into the EU? ☐ ☐
Do you plan to export any material -including personal data- from EU to non-EU countries? ☐ ☐
If your research involves low and/or lower middle-income countries, are benefits-sharing measures foreseen? ☐ ☐
Could the situation in the country put the individuals taking part in the research at risk? ☐ ☐

7. ENVIRONMENT & HEALTH and SAFETY
Does your research involve the use of elements that may cause harm to the environment, to animals or plants? ☐ ☐
Does your research deal with endangered fauna and/or flora and/or protected areas? ☐ ☐
Does your research involve the use of elements that may cause harm to humans, including research staff? ☐ ☐

8. DUAL USE
Does your research involve dual-use items in the sense of Regulation 428/2009, or other items for which an authorization is required? ☐ ☐

9. EXCLUSIVE FOCUS ON CIVIL APPLICATIONS
Could your research raise concerns regarding the exclusive focus on civil applications? ☐ ☐

10. MISUSE
Does your research have the potential for misuse of research results? ☐ ☐

11. OTHER ETHICS ISSUES
Are there any other ethics issues that should be taken into consideration? Please specify: ☐ ☐

By checking the box, I confirm that I have taken into account all ethics issues described above and that, if any ethics issues apply, I will complete the ethics self-assessment and attach the required documents.

Signature of applicants: