

Istituto Nazionale di Alta Matematica “F. Severi”

GUIDE FOR APPLICANTS

INdAM-DP-COFUND-2015

“INdAM Doctoral Programme in Mathematics and/or Applications Cofunded by Marie Skłodowska-Curie Actions” (INdAM DP)

This Guide explains the principles of INdAM Doctoral Programme in Mathematics and/or Applications Cofunded by Marie Skłodowska-Curie Actions”- **INdAM-DP-COFUND-2015**, hereafter quoted also as **INdAM-DP**

Disclaimer: the Guide has no legal value in itself, and thus does not supersede the Call Announcement (“Bando”).

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Chapter 1 The essentials

What are the INdAM Doctoral Programme fellowships in Mathematics and/or Applications Cofunded by Marie Skłodowska-Curie Actions?

They are fellowships offered by INdAM in the framework of the European Horizon 2020 programme “**Marie Skłodowska-Curie Co-funding of Regional, National and International Programmes**”. These fellowships offer to researchers from all over the world the opportunity to enter a PhD School in Italy.

Who can apply?

The target group of final beneficiaries to be supported under INdAM-DP-COFUND-2015 are early stage researchers (ESR). That is, on the date of the relevant deadline for the submission of

proposals, applicants to the fellowship programme must be in the first four years (full-time equivalent research experience) of their career, and must not have been awarded a doctoral degree yet. They must also be in possession of a degree, which formally entitles them to enroll in a Doctorate in Italy.

All fellowships will be of type Incoming: applicants must be nationals of a EU Member State (MS) different from Italy, or of an Associated Country (AC) or of a Third Country, who at the deadline for submission of proposals, have not resided or carried out their main activity (work, studies, etc.) in Italy for more than 12 months in the 3 years immediately prior to the Call deadline. Short stays such as holidays are not taken into account.

Italian nationals having legally resided or having carried out their main activity (work, studies, etc.) outside Italy for at least three of the four years immediately prior to the deadline for the submission of proposals, are treated as Italian non-nationals. Short stays such as holidays are not taken into account.

Which research topics are supported?

All domains of research in mathematics and/or its applications are eligible.

How does it work?

Proposals are submitted to INdAM by the individual researcher within the specified deadlines. All eligible proposals will be evaluated by independent referees and by the Panel in charge of the final decision, against a series of predetermined criteria. Financial support will be provided to the selected proposals for a period of 36 months.

What does the funding cover?

Funding includes a salary for the researcher, travel allowances, a contribution towards research-related costs, expenses for supporting secondments of the fellow.

Duration

Each fellowship will last exactly 36 months.

How much funding is involved per fellowship?

The average funding will be € 3.094,6 per month, including a living allowance, a mobility allowance, a travel allowance, a research cost contribution, and expenses for secondment periods, according to the following scheme:

! a living allowance:

it amounts to € 2.200 /month for fellows with family, and € 2.000 /month for fellows without family. - In this context, according to Horizon 2020 Work Programme 2014-15, family is defined as “persons linked to the researcher by (i) marriage, or (ii) a relationship with equivalent status to a marriage recognised by the national legislation of Italy or by the legislation of the country where this relationship was formalised; or (iii) dependent children who are actually being maintained by the researcher.”

! a mobility allowance:

this is a payment of a fixed amount to cover expenses related to the mobility (relocation, family expenses, language courses, etc).

The mobility allowance amounts to € 600/month;

! a travel allowance: this is an allowance paid upon taking up employment and yearly thereafter. Six trips will be covered, up to 1000 EUR each, between the origin location of the fellow and the Partner institution in Italy, two for each year of the fellowship.

! A research cost contribution (RCC): the RCC will be paid by INdAM directly to the fellow as reimbursement of expenses for the direct purchase of any material (excluding hardware) or consumable goods needed for his research, and of travel and living expenses for research periods

spent at foreign Universities and Institutes, or participation to scientific events, including events organized by INdAM. -

The RCC contribution amounts to € 2664 per year.

! **Expenses for supporting fellows:** INdAM will pay a monthly contribution of 500€ + VAT to each non-academic partner organization which hosts a fellow for a secondment period related to her/his career development plan, for a maximum of four months. -

The amount of each fellowship is shown in the following table.

!

Cost categories	EUR /person-month)
Living allowance	2.050,00 (*)
Mobility allowance	600,00
Travel allowance	167,00 (*)
Living+mobility+travel allowances	2.817,00 (*)
RCC: Research cost contribution for the fellow	222,00 (*)
Expenses for supporting secondment periods of fellows	55,60 (*)
Total	3.094,60

(*) This is an average amount

How to apply?

Proposals must be submitted using a special web-based service before a strictly-enforced deadline.

This Guide contains the essential information for you to prepare and submit a proposal. You should also consult the relevant legal document (Call announcement) in order to better understand the evaluation process, rules of participation, contractual and financial issues, etc. Proposals are submitted electronically.

Detailed instructions are available in this Guide.

The Panel in charge of the selection evaluates all eligible proposals in order to identify those whose quality is sufficiently high for funding.

-The evaluation is carried out by independent experts and by the Panel. The successful candidates are those who enter within the number of offered fellowships.

Chapter 2 About the INdAM Doctoral Programme in Mathematics and/or Applications Cofunded by Marie Skłodowska-Curie Actions (INDAM DP)

2.1 General aspects

Purpose

The specific objectives of the INDAM DP can be described as follows.

The main feature of the Programme is to create a large network, coordinated by INdAM, of Academic partner organisations (Universities) with their PhD Schools, and non-academic organisations, especially industries and enterprises, in order to build a multicultural and stimulating environment where excellence, interdisciplinarity, international and intersectoral exposure can offer to the fellows top-level training, research and working conditions.

The features of the programme match all the objectives of the European Charter for Researchers and the Code of Conduct for their recruitment, in terms of research freedom, non-discrimination and gender balance, career development, value of mobility, access to research training and continuous development, recruitment (transparency, judging merit, recognition of mobility experience, recognition of qualifications).

The programme complies also with the principles of Innovative Doctoral Training:

-*Research Excellence*, offering to the fellows a large choice of PhD schools and excellent research teams in all domains of mathematics and its applications;

-Attractive Institutional Environment, offering fellows constant interaction and support with INdAM's national and international scientific structures, and a suitable induction to the chosen partner organization, with the possibility of interacting with other partner organizations and prestigious foreign organizations;

-Interdisciplinary Research Options; the programme is open to every aspect of current research including the most applied and interdisciplinary aspects of Mathematics. Each possible interconnection between the research and the private sector will be kept in the highest regard.

-Exposure to Industry and other relevant employment sector, achieved by the participation of a large number of companies, as well as by involving experts from the non-academic sector to training activities.

-International networking. Provided by several elements, namely: the existing international networks of INdAM and of the partner Universities; the contacts with visiting professors, both at INdAM and at INdAM National Research Groups; the participation to International INdAM Conferences and INdAM Workshops, international collaborations with foreign top-level universities and institutes;

-Transferrable skills training, Provided by collateral training and secondment periods at the partner organisations and at the enterprises and industries involved in the Programme.

-Quality assurance. Transparent procedures for the selection and the award of fellowships, including appropriate redress procedures. Quality assurance for the PhD schools themselves, including procedures for any intermediate milestones, and for awarding the final title, as implemented in each partner school, are checked by ANVUR (the Italian Committee for Evaluation of Research).

The programme consists of two calls. The duration of the programme is 60 months. The total number of fellowships: 20. The total number of fellow-month: 720.

Size

The project proposals are presented by researchers who meet the eligibility criteria. Proposals for INDAM DP involve one of the Universities which are Partner Organisations of the Programme. Precisely, the candidate must choose, from the list in Annex 1, the University and the Doctorate programme where the fellowship will be spent.

Duration

The fellowships have a duration of 36 months.

The topic of the Project

All domains of research in Mathematics and/or its applications are eligible for funding.

2.2 Eligible researchers

To be able to participate in INDAM DP, a number of eligibility criteria must be fulfilled at the time of the deadline for proposal submission. After the deadline, submitted proposals will be checked for eligibility. Those proposals that do not meet the criteria will not undergo scientific evaluation and will be rejected.

These eligibility criteria will be checked based on the information given by the applicant in the proposal. If at a later stage, an eligibility criterion is found not to be fulfilled (for example, due to incorrect or misleading information contained in the proposal or because the applicant has not been awarded his or her PhD or has insufficient post-graduate research experience), the proposal will be immediately rejected.

Level of Experience and nationality conditions

INDAM DP fellowships are directed exclusively at early stage researchers (ESR). That is, on the date of the relevant deadline for the submission of proposals, applicants to the fellowship

programme must be in the first four years (full-time equivalent research experience) of their career and must not have been awarded a doctoral degree yet. They must also be in possession of a degree, which formally entitles them to embark in a Doctorate in Italy.

All fellowships will be of type **Incoming**: applicants must be nationals of a EU Member State (MS) different from Italy, or of an Associated Country (AC) or of a Third Country, who at the deadline for submission of proposals, have not resided or carried out their main activity (work, studies, etc.) in Italy for more than 12 months in the 3 years immediately prior to the Call deadline. Short stays such as holidays are not taken into account.

Italy nationals having legally resided or having had their main activity (work, studies, etc.) outside Italy for at least three out of the last four years, measured at the submission deadline for proposals, are treated as Italian non-nationals (concept of assimilated nationality). Short stays such as holidays are not taken into account.

The time limit to fulfil the above conditions is the date of the relevant call deadline, with the only exception of the possession of the degree, which formally entitles the applicant to embark in a Doctorate in Italy, for which a later deadline is established.

Incompatibility

The fellowships are not cumulative with any other salary or income of any form. Fellowship holders may not under any circumstances receive income or expenses from INdAM other than what prescribed by Allegato 2 of the Call and by the regulations of the chosen Doctorate.

Candidates who, either on the deadline for the submission of proposals or on the date when the fellowship is accepted are researchers (“ricercatori”), associate or full professors in Italian universities, research workers of State research institutions, or permanently employed professors of foreign universities (“tenured positions”), are all excluded from entering the competition.

Furthermore those who, at deadline of the call for applications, are enrolled in a Ph. D. program at an Italian University are also excluded from the competition

2.3 Typical Activities of a INdAM-DP Fellowship

Successful candidates are embarked in the chosen PhD programme at one of the Partner Organizations (the Host). The Board of Professors (Collegio dei Docenti) of the PhD programme appoints a Supervisor for the fellow, ordinarily among the members of the Board itself, in order to provide academic support to the fellow. The fellow, with the assistance of the Supervisor, will outline a *Personal Career development plan (hereafter: career plan)* including:

- A list of courses (especially during the first year), seminars, workshops, conferences, and other scientific activities and events organized inside the PhD programme to be attended.

- Intersectoral activities, e.g. the opportunity of spending some period at the premises of one of the non academic participants to the Programme, to carry out there some research activity related to their PhD thesis, deepen the applicative aspects of their studies, acquire specific sets of skills, improve the career perspectives, participate to courses given by experts or researchers from the industry or other non-academic sector (INdAM Programme “Visiting professors for the PhD”).

- Interdisciplinary activities and training; e.g. the participation of each fellow to courses in other disciplines than mathematics (e.g. Physics, Biology, Chemistry, Finance and Economics, applications to Computer Science, to Engineering, to Industry and Technology).

- Additional scientific training, both at the Host and at INdAM premises.

- Training in non-scientific skills.

- Potential of acquiring competencies during the fellowship to improve the prospects of reaching and/or reinforcing a position of professional maturity, diversity and independence, in particular through exposure to complementary skills training.

- The opportunity of spending part of their fellowship in the foreign prestigious Universities and Institutes collaborating with the PhD Schools involved in the programme.

At the beginning of the first year, the fellow, with the assistance of the supervisor, will choose a PhD research Director, who will assist the fellow in outlining an individual research project, which eventually will give rise to a PhD thesis. The research project will include research stays in foreign Universities and Institutes collaborating with the PhD Schools involved in the programme, and will desirably include activities to be performed at the premises of a non-academic organization, which cooperates to INdAM-DP-COFUND-2015 Programme.

The fellow, in addition to the research activity, will take part in seminars, conferences, schools, workshops, including activities oriented to the acquisition of complementary skills, at the Host premises.

The Host will provide appropriate research training for each fellow, according to the training objectives (“obiettivi formativi”) provided for by the PhD Programme, as listed in the dedicated website of the Ministero dell’Istruzione Università e Ricerca, and will ensure that each fellow is given appropriate working conditions, such as: office/lab space, access to equipment, material and consumables, laboratory facilities (in particular for scientific computing), access to libraries, access to seminars, conferences, workshops and other scientific activities and events organized inside the PhD programme.

2.4 Fellow obligations

The Fellow will be enrolled as a Doctoral Student (with fellowship) of the Doctorate chosen in his application, with full rights and without having to undergo any additional selection procedures. For serious and justified reasons of force majeure, and upon request by the Fellow, or with her/his explicit consent, the Consiglio di Amministrazione of INdAM may authorise the enrolment of the Fellow to a different Doctorate participating to INdAM-DP-COFUND-2015.

At the beginning of the first year, the fellow, with the assistance of the supervisor, will choose a PhD research Director, who will assist the fellow in outlining an Individual Research Project.

In addition to the above, the fellow:

- will start work at the Doctorate within the date indicated in the appointment letter;
- will enjoy the same rights as a funded Doctoral Student of the chosen Doctorate, with the exception of the right to a 50% increase of the amount of their fellowship during training periods in a different country;
- will fulfill all the duties and obligations to which funded Doctoral Student are bound, such as: attendance requirements, passing exams, next year admission, etc.
- will work regularly on the research project at the Doctorate, in particular regularly attending scientific events held there;
- will submit to the President of INdAM, within 13 and 25 months from the start of the fellowship, two reports on the research work performed respectively during the first and the second year of the fellowship.

The fellow, although expected to take part in some of the activities of the Istituto Nazionale di Alta Matematica, will be able to pursue their research work without fixed working hours and mainly on the premises of the cofinancing centre.

2.5 Degree/Diploma Verification

The validity of the degree/diploma which formally allows the applicant to enroll on the chosen Doctorate in Italy is established by the University hosting the administrative offices for that Doctorate, in accordance with the prevailing legislation in Italy and in the country where the degree was issued and with any international treaties or agreements for the recognition of degrees for the continuation of studies, and to the internal regulations of that University.

Successful applicants, on request by the chosen Doctorate, must also provide any document necessary for the enrolment procedure.

The outcome of the procedure establishing the validity of the degree/diploma is not subject to the redress procedure described in Chapter 4.

In many cases, the Universities require a “Diploma Supplement” (only for EU citizens) and/or a “Dichiarazione di Valore in loco (Statement of validity)”, when applicable. The applicants who can get into possession of this/these document(s) are advised to attach them in part D, or, after the deadline for part D, send them to INdAM, as attachment, to the address cofund@altamatematica.it

The Diploma Supplement accompanies a higher education diploma, providing an improvement in international “transparency” and a promotion of the academic and professional qualifications obtained (diploma, degrees, certificates, etc.). The Diploma Supplement must be issued by the same institution that issued the qualification. Further information at:

<http://www.cimea.it/en/services/services-recognition-of-qualifications/glossary.aspx>

The Statement of validity (Dichiarazione di Valore - DV) is an official document written in Italian that provides a short description of a given academic or professional qualification awarded by an institution located in a foreign country and belonging to an educational system different from the Italian one. A DV may also provide information about the validity of the qualification concerned in the awarding country. DVs are issued by the competent Italian diplomatic authorities abroad, i.e. the Italian Embassy/Consulate closest to the city or town where the awarding institution is located.

The nearest Italian Embassy or Consulate can be found at

<http://www.esteri.it/mae/en/ministero/laretediplomatica>

For further information:

<http://www.cimea.it/en/services/services-recognition-of-qualifications/glossary.aspx>

2.6 Non compliance and termination

In case of breaches to the duties or obligations envisaging, for Doctoral Students, the forfeiture or termination of their fellowship, the President of INdAM, after consulting the “Consiglio di Amministrazione”, will decree the early termination of the fellowship.

In other cases of non compliance by the fellow, or due to unauthorised absence from the workplace, the President of INdAM can issue a letter of warning, possibly accompanied by an administrative sanction not greater than one month of the fellowship. If non compliance persists after the first letter of warning, or in the event of severe non compliance, the President, after consulting the “Consiglio di Amministrazione”, can prematurely bring the fellowship to an end.

2.7 Project interruption or suspension

INdAM must be informed immediately of interruptions of fellows’ stays and appropriate justifications should be provided.

Upon request of the fellow, the fellowship may be temporarily suspended, should the fellow be absent as a result of pregnancy, childbirth, illness lasting more than a month or other serious reason.

2.8 Stays away from Partner institution

The project must take place at the premises of the chosen Doctorate.

Missions and off-site stays should normally be foreseen in the career development plan or in the individual research project providing adequate motivations, and must be authorized in advance by INdAM. The request can be considered authorized only after receipt of the written authorization from the President of the INDAM.

As an exception to this rule, there is no need to request permission from INdAM for short stays (maximum 10 working days per trip) such as conference attendance, training seminars etc. provided that they do not cumulatively exceed 10% of the duration of the project.

The fellow will also be bound by all the regulations of the University hosting the chosen Doctorate program regarding research trips.

Chapter 3 How to apply

3.1 Turning your idea into an effective proposal

Focusing your planned work

Refer to the description of the INDAM DP in Chapter 2 of this Guide to check the eligibility criteria and any other special conditions that apply.

Refer also to the evaluation criteria against which your proposal will be assessed. These are given in Chapter 4. Keep these in mind as you develop your proposal.

Other sources of help

A member of the administrative staff of INdAM will be available to answer to administrative and procedural questions regarding the application through an on-line help desk. A list of advisors will be made available to provide scientific assistance.

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Ethical principles

When choosing the research project as in chapter 2.3, the fellow will check that it complies with all the Ethical principles detailed below, and will compile an Ethical Issues form following the Horizon 2020 guidelines.

Ethical issues management. Compliance with the ethical principles of H2020.

INdAM is a public Institution, established as such by Italian law, and is subject to all ethical rules provided for by the Italian and European laws, including those reflected in the Charter of Fundamental Rights of the European Union and the relevant ethics rules of H2020. As a member of European Math. Society, INdAM has also approved and applies the “code of practice” of the EMS Ethics Committee (<http://www.euro-math-soc.eu/system/files/uploads/COP-approved.pdf>).

Past experience indicates that ethical issues are unlikely to arise in a research proposal in Mathematics and/or its applications. Should this be the case, the rules dictated by Italian laws, when applicable, and by EU Commission ethical principles for H2020, will be followed

The programme is devoted to support research in “Mathematics and/or its applications”; therefore proposals contemplating experiments on humans, animals, foetal issues/cells, human embryonic stem cells, human genetic material, human biological samples and human data collection are not included in the range of research themes of the programme. In case the proposed research needs experimental data to be processed, that should be acquired through scientific literature or scientific communications.

In any case the following fields of research shall not be financed (either directly or indirectly) under the INdAM-DP-COFUND-2015 Programme:

- proposals which contemplate experiments on humans, animals, foetal tissues/cells, human embryonic stem cells, human genetic material, human biological samples, human data collection;
- research activity aiming at human cloning for reproductive purposes;
- research activity intended to modify the genetic heritage of human beings, which could make such changes heritable;
- research activities intended to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer;
- research activities destroying human embryos, including for the procurement of stem cells;
- research activities involving personal data (e.g. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction);
- research activities involving tracking the location or observation of people;
- research having direct military use;
- research having the potential for terrorist abuse.

The corresponding proposals will be considered ineligible by the INdAM staff and ruled out.

In any case when submitting their proposals, all applicants are required to complete an Ethics Issues 2(EIT). Applicants who flag ethics issues in the Ethics Issues Table have to complete in addition a more in depth Ethics Self-Assessment. Both the EIT table and the Ethics Self-Assessment are to be filled according to H2020 Ethics Guidelines.

Moreover, each proposal must also comply with all ethical rules in force at the corresponding partner University.

Obligations regarding selected research proposals involving the use of human embryonic stem cells (hESC).

Notwithstanding the stipulations under Article 34.3 of the Grant Agreement, the beneficiary (INdAM) shall inform the Research Executive Agency (REA) in writing of any research project selected for funding that may involve the use of human embryonic stem cells (hESC). Such research may not start without the approvals of the EC ethics review and of the relevant Programme Committee completed by the communication of the explicit approval in writing from the REA to the beneficiary.

In the cases specified, the individual research project of the fellow will require explicit approval from the European Union's Research Executive Agency.

Presenting your proposal

A proposal has four parts:

Part A will contain the administrative information about the proposal. The information requested includes a brief description of the work, contact details and a few facts on previous research experiences of the applicant. This information will be encoded in a structured database for further computer processing to produce, for example, statistics, and evaluation reports. The information provided will also be used by INdAM staff and the Panel during the evaluation process.

The information in Part A is entered through a set of on-line forms.

Part B is a "template", or list of headings, rather than an administrative form (see Appendix B and Appendix E of this Guide). You should follow this structure when presenting the scientific and technical content of your proposal. The template is designed to highlight those aspects that will be assessed against the evaluation criteria. Only black and white copies are used for evaluation and you are strongly recommended, therefore, not to use colour in your document.

Part B of the proposal is uploaded by the applicant into the web space dedicated to her/his proposal.

Part B must contain:

- ! a curriculum vitae of the applicant
- ! copy of one or more certificates attesting university qualifications of the applicants, with the list of courses taken and their respective marks, the final grade (if any), the date in which the degree was obtained and the official duration of the course.
- ! a training and research project prepared by the candidate; the project aims to promulgate the candidate's research interests and their consistency with the training and research topics offered by the chosen doctorate. The candidate, if successful, will remain free to choose his doctoral path and his doctoral thesis regardless of the project presented.

Failure to provide any of the above information will result in exclusion from the competition of the applicant,

Furthemore the applicant may include

-a list of his scientific papers or otherwise significant papers (optional).

In Part C two academic experts chosen by the applicant will upload a scanned copy of their reference letters for the applicant, supporting her/his intellectual ability, academic achievement, motivation, and ability to work in groups. Letters without signature will not considered. The letters will not, under any circumstance, be visible to the applicant.

In Part D the applicant uploads a scanned copy of the official degree, which formally entitles the applicant to embark in a Doctorate in Italy, and other useful (optional) documents, such as diploma supplement, statement of validity, certified translations, further exams passed...

Proposal language

The working language of the expert evaluators is English and proposals must be prepared in English.

All documents must either be written in Italian or English, or be accompanied by a translation to Italian or English, cured by, and under the responsibility of, the applicant.

INdAM may ask successful applicants to provide the original version of any document.

3.2 Proposal submission

Proposals must be submitted electronically, using the INdAM website

<http://cofund.altamatematica.it>

and following the on-line instructions.

Proposals arriving at INdAM by any other means are regarded as “not submitted”, and will not be evaluated.

All the data that you upload is securely stored on a central server, and will not be examined by the panel or by any expert until the deadline for submission expires.

As an applicant you should:

- Send an e-mail to cofund@altamatematica.it to register your interest in submitting a proposal for this Call.
- Upload a complete proposal into the dedicated website whose credentials will be communicated in due course. This includes:
 - Filling all the forms in Part A, which contains: your own administrative details, a generic description of the proposal, contact details for two academic experts of your choice who will provide INdAM with a reference letter each.
 - Uploading the PDF document for Part B in the relevant section of the submission website
 - Waiting until the academic experts of your choice have uploaded their reference letters in Part C
 - For Part D, uploading a scanned copy of the official degree which formally entitles the applicant to embark in a Doctorate in Italy, and (optionally) other useful documents, such as diploma supplement, statement of validity, certified translations, further exams passed...
- Submit the proposal, once all the required parts are complete (Part A + Part B + Part C+ Part D), and in any case before the deadline for proposal submission.

If you are an EU citizen, you can submit Part D at a later deadline; in this case, remember that the relevant deadline for submission is the first; if you miss it, your application cannot be submitted later. Moreover, if you do not submit part D before the corresponding deadline, your submission will be ineligible. In any case you are advised to upload part D as soon as possible.

Submitting the proposal

Completing the Part A forms in the website and uploading Part B, Part C and Part D does not yet mean that your proposal is submitted. Once you are happy with the current version of the proposal, you must expressly submit it by selecting “Submit”.

There are restrictions to the names of the files uploaded in Part B, Part C and Part D: only use alphanumeric characters should be used. Special characters and spaces must be avoided.

When successfully submitted, the website displays a message indicating that the proposal has been submitted.

If “Submit” is never selected, INdAM considers that no proposal has been submitted.

The files for Part B, Part C and Part D of the proposal must use exclusively PDF (“portable document format”) format, compatible with Adobe version 3 or higher, with embedded fonts. Other file formats will not be accepted by the system.

INdAM does not accept responsibility in case any uploaded file is not readable with commonly available tools.

About the deadline(s)

Proposals must be submitted on or before the deadline specified in the Call announcement. For EU citizens a later deadline for part D is fixed; if part D will not be submitted before the corresponding deadline, the submission will be ineligible.

After the expiration of the deadline, it will be impossible to submit an application into the INdAM website.

Call deadlines are absolutely firm and are strictly enforced.

In the unlikely event of a failure of the INdAM web service due to breakdown of the server during the last 24 hours of this call, the deadline will be extended by a further 24 hours. This will be notified by e-mail to all the applicants who had registered for this call by the time of the original deadline, and also by a notice on the Call page.

Ancillary material

In part B and part D only a single PDF file can be uploaded. Unless otherwise specified in the call, any hyperlinks to other documents, embedded material, and any other documents (company brochures, supporting documentation, reports, audio, video, multimedia etc.) sent electronically or by post, will not be considered.

Chapter 4 What happens next

Shortly after the call deadline, the INdAM staff will send an acknowledgement of receipt to the e-mail address of the researcher given in the submitted proposal.

The sending of an acknowledgement of receipt does not imply that a proposal has been accepted as eligible for evaluation.

The INdAM staff will check eligibility criteria for each proposal before the evaluation begins, with the exception of the possession of a degree which formally entitles applicants to embark in a Doctorate in Italy, which will be checked by the Partner University of the chosen PhD programme, according to the regulations of the PhD School, and in accordance with the prevailing legislation in Italy and in the country where the degree was issued and with any international treaties or agreements for the recognition of degrees for the continuation of studies. The eligibility check of the possession of the degree is binding and non-negotiable,

Proposals which do not fulfil eligibility criteria will not be included in the evaluation.

If the candidate proposal is non-eligible, INdAM staff will send her/him a letter informing of the rejection of the proposal and containing the reasons for the decision.

All eligible proposals will be evaluated according the evaluation criteria and procedures are described later on (see chapter 6).

Soon after the completion of the evaluation by the referees, each applicant will receive a letter containing initial information on the results of the evaluation, including scores and comments from the referees.

The applicant will also be informed that a redress procedure is available. The redress procedure is concerned with the eligibility-checking process (with the exception of the eligibility check of the possession of the degree which formally entitles to embark in the chosen Doctorate) and how the referees handled the proposal; it is not an automatic re-evaluation, and the judgement of appropriately qualified experts is not called into question. The part of the evaluation procedure carried out by the Panel (see chapter 6) is not subject to the redress procedure, and the final judgement of merit determined by the Panel is binding and non-negotiable.

Once the applicant has received the letter containing initial information on the results of the eligibility checks, or showing the outcome of the evaluation by the referees of her/his proposal, he/she may submit a request for redress. The redress requests are examined by a Redress Committee appointed by the Consiglio di Amministrazione of INdAM. The committee's role is to ensure a coherent interpretation of such requests, and equal treatment of applicants.

In case the Redress Committee accepts a redress request, the Consiglio di Amministrazione may dispose that the Panel enacts a new evaluation procedure for all or part of the proposal; the candidate is promptly informed of its decision.

At the end of the evaluation procedure each applicant will receive a communication containing the final ranking and the comments of the Panel in charge of the final decision.

Official letters are then sent to successful candidates, informing them of the conditions, the rules and the obligations regarding the fellowships.

Chapter 5. Timetable and specific information for this call

10 February 2018	Publication of call
31 May 2018 5 pm Rome local time	Relevant deadline for submission of proposals
for EU Citizens: 5pm on 30 September 2018, Rome local time; for non-EU Citizens: 5pm on 31 May 2018, Rome local time.	Deadline for submission of part D
From 15 June 2018 to 30 August 2018	Evaluation of proposals
1 September 2018	Referees Evaluation Reports sent to the applicants
10 September 2018	Letter to applicants containing the final ranking and the comments of the Panel
20 September 2018	Appointment letters to successful applicants
From 1 October 2018 To 1 November 2018	Start of the fellowships

Chapter 6. Evaluation criteria and procedures to be applied for this call

6.1 General

The selection committee in charge of the final decision in each call is a Panel appointed by the Board of Directors (Consiglio di Amministrazione) of INdAM, according to the following guidelines:

- The composition of the Panel must ensure:
- A high level of expertise;
- An appropriate range of competencies in Mathematics and/or its applications;
- One or more experts from the private sector;
- Gender balance (at least one third);
- One or more non-national experts (and at least one third).
- Each Panel is in charge only for one call
- The composition of the Panel must avoid any possible conflict of interests

In constituting the Panel, the Consiglio di Amministrazione also takes account of their abilities to appreciate the industrial and/or societal dimension of the proposals. Members of the Panel must also have the appropriate language skills required for the proposals to be evaluated.

The Panel establishes a list of national and international experts (referees) sufficiently ample to cover all the fields of interest for the calls.

The list of the referees is drawn up by the Panel to ensure:

- A high level of expertise
- An appropriate range of competencies in mathematics and/or its applications
- A reasonable gender balance (at least one third)

- A reasonable balance of national and non-national experts
- An adequate participation of experts from the private sector
- Regular rotation of experts

In constituting the lists of referees, the Panel also takes account of their abilities to appreciate the industrial and/or societal dimension of the applicant proposals.

The evaluation procedure is composed by two parts.

In the first part, each proposal will be assessed independently by two referees, chosen by the Panel from the list of referees taking part in this evaluation. This part may be carried out on the premises of the experts concerned ("remotely"). The Panel on the evaluation procedure will brief referees on the responsibilities of the experts, and on any other relevant topic. Referees will evaluate proposals according to the pre-determined evaluation criteria detailed below. They perform evaluations on a personal basis, not as representatives of their employer, their country or any other entity

Referees are acting individually; they do not discuss the proposal with each other, nor with any third party. Referees record their individual opinions giving scores and also comments against the evaluation criteria.

When scoring proposals, referees will *only* apply the aforementioned evaluation criteria. Referees will assess and mark the proposal exactly as it is described and presented. They do not make any assumptions or interpretations about the project in addition to what is in the proposal. Concise but explicit justifications will be given for each score. Referees will also comment on strengths and weaknesses of the proposal under examination.

In order to avoid conflicts of interests, experts in the list of referees will be assigned to proposals excluding

- ! experts who are members of the partner institution chosen as a host institution in the proposals they are evaluating;
- ! experts who had relevant scientific collaborations with one of the candidates they are evaluating;
- ! experts who are research directors, administrators, managers, and/or owners, even with minority stakes, of foundations, public institutions or private companies which participate to the programme;
- ! experts having family or relative ties or connections with the candidates they are evaluating.
- !

In case of strongly different opinions between the two referees, the Panel can allocate the proposal to a third referee, in particular when the difference between the scores given by the two referees exceeds 30 per cent.

In the second part of the evaluation procedure, the Panel carries out a comparative evaluation of all proposals. Each proposal will be evaluated according to the pre-determined evaluation criteria for the Panel mentioned below.

The final score for each proposal is computed by averaging the scores of the two parts with weights respectively equal to 70% and 30%.

6.2 Before the evaluation

On receipt by the INdAM staff, proposals are registered and acknowledged and their contents entered into a database to support the evaluation process. Eligibility criteria for each proposal are also checked by the INdAM staff before the evaluation begins. Proposals which do not fulfil eligibility criteria will not be included in the evaluation.

For this call a proposal will only be considered eligible if it meets all of the following conditions:

- ! It is received by the INdAM before the deadline given in the call announcement
- ! It is complete (i.e. both the requested administrative forms and the proposal description are present)

! At the date of the Call deadline, the researcher fulfills all the eligibility criteria quoted in the Call.

Where a maximum number of pages has been indicated for a section of the proposal, or for the proposal as a whole, the experts will be instructed to disregard any excess pages.

6.3 Evaluation Criteria of proposals

Criteria for the Referees (weight: 70%)

- Match between the fellow's profile and the domain of Mathematics and/or its applications in which the fellow plans to work, as inferred from the training and research project (weight: 30 %);
- Scientific and teaching quality of university/ties attended by the applicants to obtain its academic titles (undergraduation, graduation, Master of Sciences...) (weight: 25 %);
- Results including research and other significant work, fellowships and awards obtained, etc. taking into account the level of experience (weight: 20 %);
- Scores of university-level classes/exams passed; score of graduation and other academic titles (weight: 25 %).

Criteria for the Panel (weight: 30%)

The Panel will score each proposal on the basis of the CV and of the two academic references, according to the following criteria:

- Match between the fellow's training and research project and the scientific and training objectives of the chosen PhD Programme (weight: 50 %);
- Intellectual ability, academic achievement, motivation, ability to work in a group (weight: 40 %);
- Potential for creating long term collaborations and mutually beneficial co-operation between Italy and the country of origin (weight: 10 %).

Scores and thresholds

Each criterion will be scored out of 5. Scores will be awarded with a resolution of one decimal place.

The scores indicate the following with respect to the criterion under examination:

0 – The proposal fails to address the criterion under examination or cannot be judged due to missing or incomplete information

1 – Very poor. The criterion is addressed in a cursory and unsatisfactory manner.

2 – Poor. There are serious inherent weaknesses in relation to the criterion in question.

3 – Fair. While the proposal broadly addresses the criterion, there are significant weaknesses that would need correcting.

4 – Good. The proposal addresses the criterion well, although certain improvements are possible.

5 – Excellent. The proposal successfully addresses all relevant aspects of the criterion in question. Any shortcomings are minor.

An overall threshold of 70% will be applied to the total weighted score.

In order to consider the **merit of reentries** in the scientific activity after career breaks, including parental leave, the overall scores of candidates who document career breaks in their curricula will be increased by 1% per each year of career break (and proportionally for fraction of year) up to 4 years (i.e. 4 % maximum increase of score).

6.4 Panel review

This is the final step of the evaluation.

The final task of the Panel is to prepare a final report, which establishes a ranked list of the proposals, which passed all evaluation thresholds. The tasks of the Panel will also include deciding a priority order for proposals with the same score.

The Panel final report should record:

- A list of proposals passing all thresholds, each one with the final score and the Panel priority order
- A list of proposals which fail one or more thresholds
- A list of proposals which have been found ineligible by the experts during the evaluation
- A summary of all deliberations of the Panel
- In case the percentage of successful candidates of a gender is less than one half of the percentage of the candidates of the same gender, the Panel will be asked to mention and if possible to give some explanation of such large difference in the final report.

The final judgement of merit determined by the Panel is binding and non-negotiable.

The successful candidates are those who enter within the number of offered fellowships.

In case for any reason one or more of the successful candidates withdraw, they are replaced by the candidates in a reserve list (the list of proposals having passed all thresholds), following the Panel priority order. Each call contains information about the time of validity of the reserve list.

The INdAM-DP-COFUND-2015 Programme includes one additional action towards Equal Opportunities: if the percentage of successful candidates of the gender with fewer candidates is less than two thirds of the ratio between the number of candidates of that gender who passed the threshold and the number of all candidates passing the threshold, then one additional fellowship, entirely funded by INdAM, will be made available for the candidate of that gender who passed threshold with the best score. For the computation of the above percentage, withdrawals of successful applicants are not taken into account.

Annex 1. list of the Universities and the Doctorate programmes where the fellowship will be spent.

University	Acronym	Doctorate
Università degli Studi dell'Aquila	UNIVAQ	PhD in "Matematica e Modelli"
Università degli Studi di Bari "Aldo Moro"	UNIBA	PhD in "Informatica e Matematica"
Alma Mater Studiorum – Università di Bologna	UNIBO	PhD in "Mathematics"
Università della Calabria	UNICAL	PhD in "Mathematics and Computer Science"
Università degli Studi di Palermo	UNIPA	PhD in "Matematica e Scienze Computazionali"
Università degli Studi di Firenze	UNIFI	PhD in "Informatica, Matematica, Statistica"
Università degli Studi di Genova	UNIGE	PhD in "Matematica e Applicazioni"
Università degli Studi dell'Insubria	UNINSUBRIA	PhD in "Computer Science and Computational Mathematics"
Politecnico di Milano	POLIMI	PhD in "Mathematical Models and Methods in Engineering"
Università degli Studi di Milano Bicocca	UNIMIB	PhD in "Matematica"
Università degli Studi di Milano	UNIMI	PhD in "Scienze Matematiche"
Università degli Studi di Modena	UNIMORE	PhD in "Mathematics"

e Reggio Emilia		
Università degli Studi di Napoli “Federico II”	UNINA	PhD in “Matematica e applicazioni”
Università degli Studi di Padova	UNIPD	Ph. D. in “Mathematical Sciences”
Università degli Studi di Pisa	UNIPI	PhD in “Matematica”
Scuola Normale Superiore di Pisa	SNS	PhD in “Matematica”
Università degli Studi “La Sapienza” di Roma	UNIROMA1	PhD in “Matematica”
Università degli Studi di Roma “Tor Vergata”	UNIROMA2	PhD in “Mathematics”
Università degli Studi Roma Tre	UNIROMA3	PhD in “Matematica”
Università degli Studi di Torino	UNITO	PhD in “Complex Systems in Life Sciences”
Università degli Studi di Torino	UNITO	PhD in “Pure and Applied Mathematics”
Università degli Studi di Trento	UNITN	PhD in “Matematica”
Università degli Studi di Udine	UNIUD	PhD in “Information Technology and Mathematical and Physical Science”

Appendix A Instructions for completing “part A” of the proposal

In Part A you will be asked to provide certain administrative details that will be used in processing and evaluating your proposal. Part A forms an integral part of your proposal. -

Section A1 gives an overview of your proposal, and section A2 includes details on the applicant.

How to complete the forms in Part A (Section A1 and A2)

The following notes are for information only. They should assist you in completing the A part of your proposal. On-line guidance will also be available.

Section A1

! **Proposal Title**

! The title should be no longer than 200 characters.

! **Proposal Acronym**

! The short title or acronym will be used to identify your proposal efficiently in this call. It should be of no more than 20 characters (use standard alphabet and numbers only; no symbols or special characters please).

The same acronym should appear on each page of part B of your proposal.

! **Keywords**

! Please enter a number of keywords that you consider sufficient to characterise the scope of your proposal. There is a limit of 200 characters.

! **Abstract**

! The abstract, essentially based on Part B document, should, at a glance, provide the reader with a clear understanding of the main features of the proposal. This summary will be used as the short description of the proposal in the evaluation process. It must therefore be short and precise and should not contain confidential information. Please use plain typed text, avoiding formulae and other special characters. There is a limit of 1000 characters.

! **Choice of the Doctorate programme where the fellowship will be spent.**

Select one academic institution from the list provided in Annex 1

Section A2 – Information on the Researcher

! **Nationality**

! The country of your nationality

! **Contact Address**

! Fill in only the fields forming your complete postal address.

If your address is specified by an indicator of location other than a street name and number, please insert this instead under the “street name” field and “N/A” under the “number” field.

! **E-mail address**

Insert your e-mail address

! **Passport or national ID**

Upload a scanned copy of the passport. If you are an EU citizen, you can upload a scanned copy of the national ID (valid to travel in Europe).

! **University Degree**

! Date of award of a degree which entitles the holder to embark on doctoral studies in the country in which the degree was obtained, without having to acquire any further qualifications. Use the format (YYYY-MM-DD). This will be the degree to submit to the University hosting the administrative offices of the chosen Doctorate for the purposes of paragraph 2.5

University degree expected before the deadline

! If you do not yet have a University degree as above and expect to have it before the deadline for Part D, please indicate

! **The expected date of award.**

Use the format (YYYY-MM-DD).

Indicate the following information on the Institution which delivered/will deliver the title:

! **Organisation (University) Legal name**

For Public Law Body, it is the official name under which the organisation is registered in the Resolution text, Law, Decree/Decision establishing the Public Entity, or in any other document established at the constitution of the Public Law Body;

For Private Law Body, it is the name under which the organisation is registered in the national Official Journal (or equivalent) or in the national company register.

! **Country**

It is the Country where the University is located

! **Legal address**

! It is the address of the entity’s Head Office.

If the address is specified by an indicator of location other than a street name and number, please insert this instead under the “street name” field and “N/A” under the “number” field.

! **Organisation (University): Website**

The official website of the University

! **Faculty/Departement: Name**

(Where the Course took place)

! **Faculty/Departement: Website**

The official website of the Faculty/departement

! **Degree: Official Name of the degree,**

(For example: Master in pure and applied mathematics)

! **Website(s)**

Any website describing the official format of the study programme

! **Official duration of the study programme**

Indicate the number of months. If the study programme consists of two steps (e.g. a Bachelor degree and a Master degree), indicate the total number of months of both steps.

! **Doctorate**

Please confirm that you are not in possession of a doctoral degree.

! **Place of activity/place of residence (previous 4 years)**

! Indicate the period(s) and the country/countries in which you have legally resided and/or had your main activity (work, studies) during the last 5 years up until the deadline for the submission of the proposal. Wrong or missing information may cause your proposal to be ineligible. Any additional information you wish to make known to the evaluators should be included in the Part B (proposal description/CV).

! **From / To**

! Indicate the starting date and the end date of each period using the format: YYYY-MM-DD, starting with the most recent period. The first date must be the call deadline. There must be no gaps between the periods.

! **Country**

! Indicate the name of the country where the place of activity or residence for each period is located.

! **Career break.**

Indicate career break periods such as: civil or military service, parenthood, unconventional research career paths, working periods not related to research activities, etc. Career breaks should be indicated only if they occurred after the award date of the higher education title that allows embarking on undergraduate studies, with the exception of career breaks related to parenthood which should be indicated in any case.

! **Reason of the break**

Indicate the reason of the career break

! **From / To**

! Indicate the starting date and the end date of each period using the format: YYYY-MM-DD, starting with the most recent period.

Information on the experts who will upload reference letters in part C

Provide the following information on each expert:

Expert 1

! **Family name*:**

! **First name*:**

! **Title/Position*:**

! **Institution***

! **Faculty:**

! **Department:**

! **E-mail address of the expert*:**

! **Telephone**

Expert 2

! **Family name*:**

! **First name*:**

! **Title/Position*:**

! **Institution***

! **Faculty:**

! **Department:**

! **E-mail address of the expert*:**

! **Telephone**

WARNING: As soon as the details regarding one expert are saved in Part A, INdAM will automatically send, from the address cofund@altamatematica.it, an invitation email to the expert indicating your details and asking them to upload a reference letter. We recommend that you get in touch with each expert, verify that they are willing to provide a reference

letter, before saving their details in Part A. INdAM staff will not check whether experts actually receive email invitations, nor send them any reminder; however, you can check whether one or both reference letters have been uploaded by viewing the dedicated page in your account.

Appendix B - Instructions for drafting “part B” of the proposal

This appendix provides guidelines for drafting Part B of your proposal. It will help you presenting important aspects of your planned work in a way that will enable the experts and the Panel to make an effective assessment against the awarding criteria.

Part B consists of a single PDF file, divided into two sections.

The maximum length of Part B, Section 1, is 10 pages (excluding table of contents, as well as start and end pages). You must keep Section 1 within these limits. The Panel and the referees will be instructed to disregard any excess pages.

The minimum font size allowed is 11 points. The page size is A4, and all margins (top, bottom, left, right) should be at least 20 mm (not including any footers or headers). Ensure that the font chosen is clearly readable (e.g. Arial or Times New Roman).

Please make sure that:

- ! you use the correct template to prepare your proposal;
- ! Part B, section 1, does not exceed the maximum number of pages;
- ! Part B of your proposal carries the proposal acronym as a header to each page and that all pages are numbered in a single series on the footer of the page to prevent errors during handling. We recommended using the numbering format “Part B - Page X of Y”.

In drafting PART B of the proposal, applicants must follow the structure of the template outlined in Appendix E

Appendix C - Instructions for completing “part C” of the proposal

In Part C the two academic experts indicated by the applicant in Part A will upload a scanned copy in PDF format of their reference letters supporting the applicant's intellectual ability, academic achievement, motivation, and ability to work in a group. Letters without signature will not considered.

Appendix D- Instructions for completing “part D” of the proposal

Part D consists of a single PDF file,

Upload a scanned copy in PDF format of the official degree which formally entitles the applicant to embark in a Doctorate in Italy; if the document is not written in Italian or English, add a translation to English, cured by yourself, and under your responsibility.

Additional documents that the University hosting the chosen PhD course can find useful in verifying your title, such as: exams passed after the submission deadline, Diploma supplement, Statement of validity-Dichiarazione di valore, certified translations, etc. can be added to the same PDF file.

Appendix E- Template for Part B

The minimum font size allowed is 11 points. The page size is A4, and all margins (top, bottom, left, right) should be at least 20 mm (not including any footers or headers). Ensure that the font chosen is clearly readable (e.g. Arial or Times New Roman).

Please make sure that Part B of your proposal carries as a header to each page the proposal acronym. All pages should also be numbered in a single series on the footer of the page to prevent errors during handling. It is recommended that you use the numbering format “Part B - Page X of Y”.

START PAGE

INdAM-DP-COFUND-2015

Call 1

PART B

NAME OF THE APPLICANT

“PROPOSAL ACRONYM”

Table of Contents

Section 1

START PAGE COUNT

1 Training and research project (compulsory)

- Give a description of your purposes in terms of training and research at the chosen PhD School.
- Describe your scientific interests and their cohesion with the scientific lines upheld by the chosen PhD School; show your awareness of the state of the art in the selected scientific field and competence in the research methods within the discipline, and include an adequate bibliography.
- Point out the matching between your University career (profile) and the domain of Mathematics and/or its applications in which you plan to work.
- . Point out the matching between your training and research project and the scientific and training objectives of the chosen PhD Programme

2. Your career profile

- Profile of of the university/ties you attended

- Give a short description of the university/ties you attended to obtain your academic titles (undergraduation, graduation, Master of Sciences...); when available, mention its/their main websites.

- Add your CV (compulsory)

An example on how to write a CV can be found at

<http://europass.cedefop.europa.eu/en/documents/curriculum-vitae/templates-instructions>

- **Include a summary of the graduation/master dissertation, if available, and the name, the title and the position of the supervisor(s). (compulsory)**

- **Add a list of any available related research paper or other significant work, or other achievements. (optional)**

STOP PAGE COUNT, MAX 10 PAGES

Section 2

In this section you should add one (or more) scanned copy/ies of the official transcripts (in English or Italian) detailing the university-level qualifications, the list of classes-exams attended/passed and marks to date, the official duration of the study programme, and, if they are available at the Call deadline, the final score and the date of graduation. If the study programme consists of two steps (e.g. a Bachelor degree and a Master degree), include both of them. **(compulsory)**

You can add other documents useful for the verification of the title by the University hosting the chosen PhD course (e.g. further qualifications, Diploma supplement, Statement of validity-Dichiarazione di valore, certified translations...).

If the documents in this section 2 are not written in Italian or English, add in the same PDF file a translation to English, cured by yourself, and under your responsibility.

END PAGE

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Call 1

PART B

NAME OF THE APPLICANT

“PROPOSAL ACRONYM”

Appendix F Template for academic letters of references in Part C

-Briefly explain how you know the applicant. If the applicant was a former student, explain how many courses the student took with you, and/or if you worked together in any other capacity.

Describe:

- how the applicant's skills match the position he/she is applying for (a PhD fellowship)
- her/his intellectual ability,
- her/his academic achievement,
- her/his motivation,
- her/his ability to work in a group.
- any other information useful to outline the applicant's career/profile.

For each of the above, you are invited to rank the applicant in the best x% among all the people you have known as closely as the applicant, at the time they have applied for a PhD fellowship in Mathematics and/or applications.