

Bando PRIN 2022
Codice progetto: 20225MESZB – CUP: E53D2300047000
Titolo Progetto: Resilient Optimization in Distributed
Cyber-Physical Control Problems subject to
Adversarial Behaviour
Responsabile Scientifico: prof. Sabato Manfredi

UNIVERSITY OF NAPLES “FEDERICO II”

DEPARTMENT OF ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGIES (DIETI)

CALL FOR APPLICATIONS FOR No. 1 POST-GRADUATE FELLOWSHIPS FOR CARRYING OUT RESEARCH ACTIVITIES PURSUANT TO ITALIAN LAW 240/2010 – ART. 22 (ITALIAN CONTRACT DENOMINATION: “ASSEGNI PER ATTIVITÀ DI RICERCA”)

Call ref. D.I.E.T.I. ASS.RIC. 19/2024

This document cannot be used for legal purposes and is only meant to provide information in English on the call for applications.

Article 1 – Object

The Department of Electrical Engineering and Information Technologies (DIETI) of University of Naples Federico II, hereinafter referred to as “Department”, announces a public competition, based on qualifications and interview, for the award of no. 1 post-graduate fellowships for carrying out research activities (Italian full denomination “Assegni per lo svolgimento di attività di ricerca”, or in short “Assegni di ricerca”), hereinafter referred to as “fellowships”.

The details of the contract are indicated in **Annex A** of this notice, which lists, for each fellowship:

- scientific area and sector
- hosting Department
- duration of the fellowship contract
- salary (gross amount per year; the net amount is about 88% of that)
- planned date of start of the contract
- compatibility with additional contracts for lecturing or teaching-assistance
- brief description of the research program and funding body (where applicable)
- research supervisor, if already identified
- requested scientific experience
- maximum number of scientific publications or other research output to be included in the application

Article 2 – Required degree

Applications require a “Laurea Magistrale” in **Automation Engineering, Computer Engineering, Computer Science, Electronic Engineering, Electrical Engineering, Mechanical Engineering, Aerospace Engineering** or an equivalent Italian or foreign degree. If the candidate has a foreign degree, admission to the competition is granted conditionally, and the actual degree equivalence will be assessed by the selection committee. The required degree must have been awarded within

the application deadline given in Article 4 of this notice.

Article 3 - Exclusions

Participation in the competition is not allowed to:

- permanent employees of universities, public research centers and institutions, the Agenzia Nazionale per le Nuove Tecnologie, l'Energia e lo Sviluppo Economico Sostenibile (ENEA) and the Agenzia Spaziale Italiana (ASI), as well as other Italian institutions whose diploma has been recognized as equivalent to the research doctorate (PhD) in accordance with Article 74, 4th paragraph, of the Presidential decree D.P.R. no. 382/1980;
- those who have a degree of kinship or affinity up to and including the fourth degree with any faculty members belonging to the Department who has opened the position or where the research activity will be carried out (if different), as well as with the Rector, the Director-General or any members of the Board of the University;
- those who have already been under Italian "Assegni di ricerca" contracts pursuant to Italian Law 240/2010 for a total time that, once added to the duration of the fellowship of this call, exceeds six years; any period completed while being enrolled in research doctorate (PhD) programs can be however excluded from this total;
- those who have already been under Italian "Assegni di ricerca" or "ricercatore a contratto" contracts pursuant to Italian Law 240/2010 (arts. 22 and 24), even with different universities and research institutions, for a total time that, once added to the duration of the fellowship of this call, exceeds twelve years, even if not continuative; periods of leave for maternity or illness do not contribute to the total.

Article 4 – Application submission

The application must be received **no later than 13:00 (Italian Time) on May, 3rd 2024.**

The application, either digitally signed or with a scanned signature accompanied by a copy of an identification document, must be submitted by email to the following address: partecipazionebandi.diети@unina.it, indicating in the subject "Application for Assegno di Ricerca Rif. D.I.E.T.I. ASS.RIC. 19/2024". The text of the email must include surname, first name, and address of the applicant and Teams or Skype contacts for the possible oral interview. The documents included in the application must be attached to the email, or alternatively only listed and transmitted separately by an electronic file-transfer service specified in the email itself. The University disclaims responsibility for any technical problems in the transmission of the email or if the file transfer service does not work properly.

To apply for multiple selections with different identification numbers, distinct emails must be sent, each including all the relative attachments.

Article 5 – Content of the application and attachments

The application must be drawn up in accordance with Annex B of this notice and must contain the following information and declarations:

- a) surname and name, date and place of birth, citizenship, residence, and Italian tax ID code (the latter only for Italian residents);

- b) the competition identification number and the name of the host Department (see Annex A);
- c) the e-mail address and the telephone number where the applicant wishes to receive any official notification relating to this competition, as well as the commitment to promptly communicate any changes that should occur to these contact details (note: no communication will be sent by paper mail);
- d) declaration of possession of a Laurea Magistrale degree or a degree deemed equivalent by the applicant;
- e) declaration of not falling into any of the situations of exclusion from the competition listed in Article 3 of this notice.

The application must include the following documents (enclosed within the same envelope in case of non-electronic application):

- 1) Copy of identification document
- 2) Curriculum Vitae
- 3) List of the publications and other research output submitted for the evaluation (item 4)
- 4) Publications and other research output to be evaluated, within the maximum number specified in Annex A of this notice. The Laurea Magistrale (or equivalent) thesis or the doctoral dissertation can be attached as one of the publications.
- 5) Copy of the documentation proving possession of the required degree specified in Article 2 of this notice; alternatively, substitutive declaration of certification, pursuant to art. 46 of the Presidential Decree D.P.R. no. 445/2000, provided in accordance with Annex C of this notice.
- 6) Copy of documentation proving possession of any other qualifications considered useful for the evaluation (degrees, masters, specialization diplomas, PhD degrees, post-graduate courses completed in Italy or abroad, scholarships, contracts or other formal research appointments both in Italy and abroad, etc.). Alternatively, a substitutive declaration of certification can be included, pursuant to art. 46 of the Presidential Decree D.P.R. no. 445/2000, provided in accordance with Annex C of this notice.

Applications that do not include the required declarations and documents will be excluded from the selection procedure.

The Administration disclaims all responsibility for lost notification due to inaccurate contact details provided by the applicant or missed or delayed communication of their variation, and for any postal or email problems not attributable to the University.

In the case of non-electronic applications, candidates must provide for the collection of all documents enclosed with their applications within three months after the end of the selection. Afterwards, these documents will be discarded.

Article 6 – Evaluation procedure

The selection committee includes three members chosen among university professors and researchers. The committee must conclude the selection within sixty days from the notification of the appointment decree. A person from the administrative staff can participate to the work of the committee with the only task of taking minutes.

In the first meeting, the committee will decide the criteria and methods for evaluating the candidates' qualifications and for the interview, as formalized in the relative minutes. The overall

evaluation score for each candidate is 100 points, of which 40 points are for the qualifications and 60 points for the interview.

Before the evaluation of qualifications, the selection committee verifies the equivalence of the required degrees (Article 2) obtained in foreign countries. When assessing qualifications, the committee must assign a separate score, in compliance with the above indications, to each of the following items:

- final grade of the Laurea Magistrale degree or equivalent;
- possession of a research doctorate (PhD) or equivalent;
- publications and other research output submitted for evaluation purposes, within the maximum number given in Annex A of the notice; the Laurea Magistrale (or equivalent) thesis or the doctoral dissertation can be evaluated as one of the publications;
- any diplomas of specialization or of completion of other post-graduate programs;
- other qualifications related to the research activity carried out, such as research contracts, scholarships, and appointments in universities or in national or international research bodies.

The assessment will consider the consistency of the qualifications with the scientific area of interest and/or the scientific sector as well as with the requested scientific experience. In evaluating publications and other research output, the committee will also consider the following general criteria: originality, innovativeness, and rigorousness in the methodology; scientific relevance of the publisher/journal and level of diffusion within the scientific community; individual contribution of the candidate.

The publication date of the results of the qualification evaluation and the convocation date for the interview are reported in Annex A. This notice constitutes formal notification of convocation for the candidates.

The interview of a candidate can take place by videoconference, as long as proper identification of the candidate is guaranteed, and the interview is open to the public. The interview can be held in English or in another foreign language that is relevant to the planned research activity. At the end of all the interviews, the selection committee will publish the candidates' scores.

Candidates must guarantee, specifying it in the application, that the location from which they will take the interview is equipped with a webcam, essential for the identification of the candidate, and is equipped with a microphone and headphones / audio speakers. At the beginning of the telematic interview, candidates must show to the Commission the same identification document sent with the application.

This timetable for conducting the competition tests will have the value of official notification and no personal communications will be forwarded to the interested parties.

The interview is aimed at deepening the candidate's curriculum and knowledge, with particular reference to the research program being the subject of the call, as well as a verification of an adequate knowledge of the English language.

The committee will publish the overall ranking in descending order of the total score, adding up the score of the qualifications and of the research proposal (if applicable) to that of the interview. In the event of a tie, priority will be given to the youngest candidate.

The minutes of the selection procedure are approved by decree of the Department Director. The same decree indicates the deadline for accepting the position. The fellowship(s) is/are awarded to

the first suitable candidate(s), according to the ranking order. If the awardees renounce or do not formally accept within the indicated deadline or if they do not obtain the required degree by the date indicated in Annex A (if applicable), the fellowship(s) will be awarded to the next suitable candidate(s) according to the ranking order.

The fellowship award is conditional to the candidate signing the corresponding contract with the designated Department within the deadline that will be specified by the Department itself.

Article 7 – Activities and obligations of fellowship holders

The planned date of start for the research activity is indicated in Annex A. The date is reasonably flexible, as long as its variations do not affect the planned research activity and the financial coverage of the fellowship. Fellowship holders will have to carry out their activity within the research project specified in Annex A, under the supervision of a faculty member appointed by the Department and in compliance with the following criteria: work flexibility within the limitations of the research requirements, work continuity, fixed term, coordination with the overall activity of the University, close link with the realization of the planned research program, autonomous development of the collaboration within the program, absence of predetermined working hours, *ex post* reporting of the working hours when required by the administration.

To carry out their research activities, fellowship holders have the right to use the facilities, equipment, and services of the Department hosting their research, based on the same regulations that apply to the other researchers of the Department. They can also receive travel (mission) assignments as part of their research activities.

The fellowship holder may carry out unpaid teaching-assistance activities, subject to the authorization of the research supervisor. If not explicitly excluded in Annex A of this notice, the fellowship holder may also carry out paid teaching activities on contracts pursuant to art. 23, paragraph 2, of Italian Law 240/2010, subject to the authorization of the Department Director on the advice of the research supervisor. The award of a teaching contract that implies the responsibility for a module or a course is only allowed to holders of postdoctoral fellowships. The overall teaching activity, carried out in any capacity, excluding seminars, cannot exceed 60 frontal (class) hours per year.

Fellowship holders in medical-clinical sciences, if officially licensed, can also carry out assistance and care activities, exclusively in relation to the needs of their research project or program, subject to authorization by the Department governing body.

On a regular basis, according to a schedule set by the Department, fellowship holders must submit a written report on their research activity, endorsed by the research supervisor. At the end of the fellowship, the holder must submit a final report which, accompanied by the evaluation of the research supervisor, will be assessed by the Department governing body.

Fellowships cannot in any way be equated to subordinate employment relationship and do not give rise to any rights in regard to accessing permanent university positions.

Article 8 – Incompatibilities, leaves of absence, and interruptions

The fellowship is individual. Under penalty of its forfeiture, beneficiaries cannot combine it with income deriving from professional activities or other continuous employment relationships. Moreover, fellowships cannot be combined with other scholarships, except for those granted to

support stays abroad aimed at carrying out part of the research activity.

The fellowship is also not compatible with the enrollment in bachelor's or master's degree programs or equivalents, in PhD programs with award of a scholarship, and in medical or healthcare specialization programs, in Italy or abroad. Enrollment in a PhD program without receiving a corresponding scholarship is allowed.

Fellowship holders are not allowed to hold concurrently other appointments within the University, except for the provisions of Article 7. Without prejudice to the full performance of their duties, fellowship holders may exceptionally request to carry out assignments external to the University, provided they are occasional and of short duration, do not involve a conflict of interest with the research activity of the fellowship holder, and do not, in any case, prejudice the University. Such assignments are subject to the authorization of the Department governing body, on the advice of the research supervisor.

Fellowships can be awarded to public administration employees, provided they are placed on unpaid leave for the duration of the contract.

The research activity is suspended during the period of compulsory maternity leave or for duly proven sickness; the overall duration of the contract cannot be reduced due to such suspensions. It is also possible to suspend the grant for other serious reasons that prevent the research from being carried out, at the request of the research supervisor and with the approval of the Department governing body, as long as the suspension does not affect the financial coverage of the grant. An overall period of justified absence not exceeding thirty days in a year does not constitute suspension and, consequently, is not to be recovered.

Article 9 – Taxation, social security, and insurance treatment

Taxation, social security, compulsory maternity leave, and sick leave for the fellowships of this call are regulated by Article 22, paragraph 6, of Italian Law no. 240/ 2010. In the period of compulsory maternity leave, the allowance paid by INPS pursuant to art. 5 of the decree of the Minister of Labor and Social Security of 12 July 2007 is supplemented by the University up to the full amount of the salary.

The University provides insurance coverage in favor of fellowship holders, including third-party liability, for accidents occurring during their research activity.

Article 10 – Forfeiture, withdrawal, termination

Those who do not sign the fellowship contract within the deadline communicated by the Department lose the right to sign it, except if the delay occurs for reasons of health or force majeure which are duly and promptly proven by the candidate. The same forfeiture occurs to those who provide false declarations regarding the possession of the requirements, or the lack of incompatibilities referred to in Articles 3 and 8 of this notice, without prejudice to the additional sanctions provided by law.

The fellowship holder may withdraw from the contract, upon written notification to the Department with at least 15 days' notice. The payment of the last month will be commensurate with the period of activity carried out. In case of lack of notice by the fellowship holder, the University has the right to withhold or recover from the research fellow an amount corresponding to the salary for the period of notice not given.

A procedure for terminating the contract can be started on a motivated proposal of the research supervisor approved by the Department governing body. This can occur if the fellowship holder, after starting the planned research activity, does not continue it regularly and uninterruptedly for the entire period, without justified reason, or if the fellowship holder is responsible for serious and repeated failures or non-compliance. Specific causes of termination may be the following: unjustified failure to start the activity or delay in the actual start of the activity; unjustified suspension of the activity for a period that jeopardizes the research program; violation of the incompatibility regime reiterated after a first notice; a negative opinion on the research carried out, expressed by the Department governing body.

Article 11 – Handling of personal data

Pursuant to EU Regulation no. 679/2016, candidates are informed that their personal data will be processed, in paper or electronic form, for the sole purposes of this procedure, of the possible formulation of the employment contract and of its subsequent management.

The handling will be carried out by the persons in charge of the procedure, as well as by the selection committee, with the use of computerized procedures, in the ways and within the limits necessary to pursue the aforementioned purposes, even in the event of communication to third parties.

The conferral of such personal data is necessary for the evaluation, for the verification of the requirements and of the actual possession of the declared qualifications. Failure to provide them may preclude such obligations and, in the cases provided for in the notice, may result in exclusion from the selection procedure. Further data may be requested from candidates for the aforementioned purpose only.

Collected data may be disclosed to subjects entitled by the Italian Law no. 241/1990, of Legislative Decree 33/2013 and their subsequent amendments and additions.

The personal data on candidates will be stored, in accordance with the provisions of current legislation, for a time not exceeding that necessary to achieve the purposes for which they are processed.

Pursuant to the GDPR 2016/679, the University of Naples Federico II may publish on its website the Curriculum Vitae of the winner, for the institutional purposes and in compliance with Italian Legislative Decree no. 33/2013 (Transparency Decree) as amended by Legislative Decree 97/2016. It is understood that, in addition to the complete Curriculum Vitae, it will be possible for the winner to provide a specific version of the Curriculum Vitae without personal data, for the sole purpose of publication on the University website.

Candidates are granted the rights referred to in the third chapter of EU Regulation no. 679/2016, including the right to access their personal data, to request their correction, updating and cancellation, if incomplete, erroneous or collected in violation of the law, as well as the right to oppose their processing for legitimate reasons. Further information on the procedures for possible complaints and on the responsibilities of data protection are available on the dedicated website, at the address <http://www.unina.it/ateneo/statuto-e-normativa/privacy>.

Article 12 – Other issues

For matters not covered by this notice, reference should be made to the current University Regulations for the awarding of “Assegni di ricerca” fellowships.

ANNEX A

INFORMATION SHEET ON THE "ASSEGNO DI RICERCA" OPEN FELLOWSHIPS	
Competition identification number	Rif. D.I.E.T.I. ASS.RIC. 19/2024
Type of selection procedure	Predefined research program
Department hosting the research	Department of Electrical Engineering and Information Technologies (DIETI)
Scientific area	Automation
Scientific sector	ING-INF/04
Fellowship type	Postgraduate
Required degree and deadline for graduation	Laurea magistrale or equivalent, awarded by the application deadline
Planned date of start for the research activity	June 1 st 2024
Contract duration (months)	12 months
Salary (gross amount per year)	€ 19.367,00
Compatibility of the fellowship with additional teaching contracts	Compatible only for teaching assistant contracts, following authorization by the Department Director on the advice of research supervisor
Title of the research program	Design and validation of algorithms for distributed resilient optimization of cyber-physical systems
Brief description of research program	The research program involves activities aimed at achieving the objectives of the project for which funding is requested, focusing on the synthesis of distributed strategies to confer resilience to cyberphysical systems against attacks from malicious agents, disturbances, or information losses. Specifically, the research activities include the design of distributed algorithms for the resilient optimization of cyber physical systems and the development of a simulation environment for validating the designed algorithms.
Funding body (with grant number, if applicable)	MUR- PRIN2022
Research supervisor (if already defined)	Prof. Sabato Manfredi
Requested scientific experience	
Maximum number of scientific publications (or other research output) to be submitted for evaluation	3
Date, time, and location of publication of the results of qualification assessment	May 8th, 2024, at 16:00 (Italian Time) on the D.I.E.T.I. website
Date, time, and location of the interviews	May 8th, 2024, at 16:30 (Italian Time) by videoconference

ANNEX B

APPLICATION FORM

To the Director of the Department of
Electrical Engineering and
Information Technologies
University of Naples Federico II

The undersigned (surname) _____ (name) _____,
born on (birth date) _____ in (birth Country and town) _____,
resident in (residence Country and town) _____,
address _____, post (ZIP) code _____, citizen
of (citizenship Country) _____, tax ID code (only for Italian citizens)
_____, contact mobile phone no. _____,
contact email address _____,

REQUESTS

to be admitted to the competition for the award of research fellowships pursuant to Italian Law 240/2010 – Article 22 (Italian denomination: “Assegni per attività di ricerca”) with identification number _____ and research activity to be carried out at the Department (Hosting Department name) _____.

For this purpose, being aware of the criminal penalties provided for by Article 76 of the Presidential Decree no. 445/2000 for the case of false or misleading declarations,

DECLARES

A To expect to receive a Research Doctorate degree (PhD) from the University (University name) _____ by the date specified in the call Annex A

B. Not to fall into any of the situations of exclusion from the competition listed in Article 3 of the call-for-application notice to which this application form refers.

The undersigned undertakes to promptly communicate any variations in the contact information indicated above.

The following documents are attached to this application:

- 1) Copy of the undersigned identification document.
- 2) Curriculum Vitae.
- 3) List of publications or other research output (item 4).
- 4) Publications or other research output submitted for the evaluation.
- 5) Documents proving possession of the required degree referred to in declaration A of this application, or corresponding substitutive declaration of certification, pursuant to art. 46 of the Presidential Decree no. 445/2000, provided in accordance with Annex C of the call-for-application

notice (if applicable).

6) Documents proving possession of any other qualifications that are deemed useful for the evaluation, or corresponding substitutive declaration of certification/affidavit, pursuant to art. 46 of the Presidential Decree no. 445/2000, provided in accordance with Annex C of the call-for-application notice (this can also be merged with the declaration referred to in point 5).

The undersigned declares to be aware that the personal data provided in this application and its attachments will be used by the university administration only for institutional purposes and for the completion of the selection procedure, as detailed in Article 11 of the call-for-application notice.

(date)

(signature)

ANNEX C

SUBSTITUTE DECLARATION OF CERTIFICATION/AFFIDAVIT

(ART. 46 e 47 D.P.R. No. 445 of 28.12.2000)

The undersigned (surname) _____ (name) _____,
born on (birth date) _____ in (birth Country and town) _____, resident in (residence Country and town) _____, address _____, post (ZIP) code _____,

being aware of the criminal penalties provided for by art. 76 of the Italian Presidential Decree No. 445 of 28 December 2000 for the case of false or misleading declarations,

in relation to his/her application for "Assegni di ricerca" fellowships,

DECLARES

to possess the following qualifications (each to be reported with the full name of the institution that issued the qualification, the date it was received, and other details, e.g. final grade, etc.):

1) _____

2) _____

3) _____

...

FURTHER DECLARES

that the following documents attached to the application are true copies of the respective originals:

1) _____

2) _____

3) _____

...

(date)

(signature)

Important: the present declaration must be accompanied by a photocopy of a valid identity document of the person who signed it.

Warning: The declarant will be held criminally liable according to Italian law in the event of a false declaration; moreover, any benefits obtained by the declarant from this declaration will be null and void in case of untruthful declarations (Articles 75 and 76 of Italian Presidential Decree no. 445 of 28 December 2000).