



Announcement n. 23590

POST-DOCTORAL SENIOR LEVEL 3 RESEARCH GRANT IN THEORETICAL PHYSICS

The 2022/2023 INFN Research Grant Program offers **16 (sixteen) positions** for research activity in Theoretical Physics.

Eligible candidates may be:

- Non-Italian citizens, or
- Italian citizens who, at the submission deadline, hold a position in a foreign institution and have been continuously abroad for at least three years.

The Research Grant cannot be awarded to those who have already benefited from “Assegni di Ricerca” in Italy for a total duration of six years.

If the winners of this competition have already benefited from INFN Research Grant for a period of less than six years, the new Research Grant may be awarded up to the aforementioned limit.

Those who have already won a Research Fellowship in Italy of the same type with INFN cannot participate in the call.

Applicants must have a Ph.D. degree (or an equivalent qualification), obtained no more than eight years prior to the call deadline, *i.e.* on or after November 9th, 2013. This time limit may be extended in case of:

- Maternity (18 months for each child born before or after the Ph.D. award, up to a maximum of 4.5 years);
- Paternity (effective time of leave taken for each child born before or after the Ph.D. award, up to a maximum of 4.5 years);
- National Service (effective time of leave taken after the Ph.D. award);
- Long-term illness, *i.e.* over 90 days, (effective time of leave taken for each incident occurred after the Ph.D. award).

The total elapsed time since the award of the Ph.D. should not in any case exceed twelve years and six months. The reasons for an extension of the time limit must be duly documented only in case of a successful application. Failure in providing the appropriate documentation will result in the ineligibility for the appointment.

Candidates who are preparing their doctoral thesis are eligible to apply; however they must have obtained their Ph.D. degree **by November 1st, 2022 or in any case before** taking up their appointment with INFN.

The research topics of the **16** Research Grants and the corresponding INFN sites are listed in Annex 1. Each candidate may apply up to a maximum of two Research Grants.

The annual gross salary is 31.213,48 €, (the net salary according to the regulations in force on 01-04-2021 is 27.600,00€. This number might be subject to change).

In order to promote the mobility of researchers, the winners of the scientific research grants who have obtained the Ph.D. in a Province or Metropolitan City other than that where their research grant is seated, will receive an additional economic incentive of 5.000,00 € gross year for each year the contract is in force, provided that they are not resident or have not had the residence or scholarships or other research grants paid by the INFN or other scientific institutions in the three years prior to the signing of the contract in the Province or Metropolitan City of the destination.

This condition is verified at the starting of the activity.

Each Research Grant is initially issued for one year and may be extended for a second year.

Applications, in electronic form, must be submitted to INFN not later than **November 9th, 2021 (11:59 a.m. CET)** through the website <https://reclutamento.dsi.infn.it/>. In the application the candidates must specify the date of their Ph.D., the selected research topic(s) and the corresponding INFN site(s) (up to a maximum of two) among those listed in Annex 1, and must include:

- a curriculum vitae;
- a publication list;
- the names and e-mail addresses of three referees, each of them may upload a reference letter not later than **November 12th, 2021 (11:59 a.m. CET)**.

Italian applicants must also specify the foreign institution where they hold a position and must certify that they have been continuously abroad at least since November 9th, 2018.

Candidates will be excluded from participation in this call if they submit their application later than the deadline indicated.

Incomplete applications (lack of information or missing files) will not be considered.

The selection of the candidates will be based on:

- 1) the candidate's scientific quality, as shown by his/her CV and his/her track record of results achieved;
- 2) quality and relevance of the submitted scientific publications to be evaluated taking into account the specific research area and the candidate's career stage;
- 3) qualification of the candidate as attested in the submitted reference letters;
- 4) matching of the candidate's scientific experience and qualifications with the research topic of the Grant.

For each Research Grant consideration will be given to candidates working in the corresponding specific research topic; however candidates working in other subjects may be also considered.

At the end of the selection process, the results of the selection will be published at INFN website (Job Opportunities – Details of the announcement). Successful candidates will then receive an official communication from the INFN administration offices. The appointed should start their Research Grant **not later than November 1st, 2022**; however, special requests to defer the starting date can be considered.

Roma, 15th September 2021

RC/ADV

ISTITUTO NAZIONALE DI FISICA NUCLEARE
II PRESIDENTE
(Prof. Antonio Zoccoli)¹

¹ Documento informatico firmato digitalmente ai sensi della legge 241/90 art. 15 c 2, del testo unico D.P.R. 28 dicembre 2000, n. 445, del D.Lgs. 7 marzo 2005, n. 82, e norme collegate, il quale sostituisce il testo cartaceo e la firma autografa

ANNEX 1

	INFN Section or Laboratory	Research Topic
1	Bologna	Precision Physics for discoveries at present and future colliders
2	Bologna	Quantum simulation and computation for Fundamental Interactions
3	Ferrara	Neutrinos and other light relics in view of future cosmological observations
4	Firenze	General Relativistic Magnetohydrodynamics Models of Astrophysical Compact Objects
5	Firenze	The QCD Plasma: new observables and quantum effects
6	Milano	Precision calculations for the LHC and future colliders
7	Milano Bicocca	Dualities, non-perturbative phenomena in Quantum Field Theory and Black Holes
8	Napoli	Theory and Phenomenology of Quantum Gravity
9	Padova	Symmetries and Exactly Solvable Structures in Field and String Theories
10	Pisa	Phenomenology of Fundamental Interactions and Cosmology
11	Roma	Investigating current tensions between cosmological data and their impact on Fundamental Physics
12	Roma	Inferential Methods for Complex Nonlinear Dynamics (from genomics to gravitational clustering)
13	Roma Tre	Flavour Physics and QCD on the Lattice
14	Torino	Dynamics and Statistics in Complex Fluids
15	Torino	Integrability in Gauge and Effective Field Theories
16	Trieste	Non-perturbative effects in Gauge and String Theories