



Piano Nazionale di Ripresa e Resilienza (PNRR) Admission to the “Philosophiae Doctor” courses Academic Year 2023/24

In the framework of Piano Nazionale di Ripresa e Resilienza (PNRR), through the resources provided by Ministerial Decree 118 of 02.03.2023, the Scuola Internazionale Superiore di Studi Avanzati (SISSA) announces a competition based on qualifications and exams for admission to the following “**Philosophiae Doctor**” (Ph.D.) programs:

Name of course and projects	Fellowships
<p>Astrophysics and Cosmology</p> <ul style="list-style-type: none"> • <i>Scientific Exploitation of Astrophysical and Cosmological Observations</i> • <i>Theoretical, Phenomenological and Computational Investigations of Open Problems in Astrophysics & Cosmology</i> 	2
<p>Physics and Chemistry of Biological Systems</p> <ul style="list-style-type: none"> • <i>General subject (Structural bioinformatics, Statistical mechanics of complex molecular systems, Biomolecular simulations, Simulations of rare events, Data science of complex and biomolecular systems, Polymer physics)</i> 	2
<p>Theory and Numerical Simulation of Condensed Matter</p> <ul style="list-style-type: none"> • <i>Thermodynamic characterisation of measurement and complexity of dynamics for multi-qbit registers</i> • <i>Development of multi-element interatomic potentials for energy materials from ab-initio data and machine learning</i> 	2
<p>Mathematical Analysis, Modelling, and Applications</p> <ul style="list-style-type: none"> • <i>Dynamical Systems and PDEs, Calculus of Variations, Hyperbolic conservation Laws and Transport problem, Geometric Analysis, Geometry and control theory</i> 	2
<p>Geometry and Mathematical Physics</p> <ul style="list-style-type: none"> • <i>Geometric and analytic aspects of Mathematical Physics</i> 	1
<p>Functional and Structural Genomics</p> <ul style="list-style-type: none"> • <i>General subject (Functional genomics, Cerebral cortex development, Prion biology, Computational genomics, Neurodevelopmental and neurodegenerative disorders, Bioinformatics, Neurogenomics, Structural biology, Molecular and cellular biology, Evolutionary and comparative genomics, Drug discovery, Invertebrates neurogenetics, Epitranscriptomic modulation of CNS development and function, Aging)</i> 	2



Neurobiology • <i>Manipulating and monitoring cellular function in the nervous system</i>	1
Cognitive Neuroscience • <i>Brain mechanisms of perception and higher cognitive functions</i>	3

The activities are structured within Mission 4, Component 1, Investment 4.1 - research doctorates - of the Piano Nazionale di Ripresa e Resilienza (PNRR), which includes study and research periods abroad ranging from a minimum of 6 to a maximum of 18 months.

The programs have a duration of 4 years, with the possibility of obtaining the degree at the end of the third year, and they consist of both academic and research activities, including exams that must be passed to progress from one year to the next and obtain the Ph.D. degree.

For information regarding the rights and obligations of students and the functioning of the courses, please refer to the [Regulations of the SISSA Ph.D. courses](#).

Fellowships and other benefits financed by SISSA:

The School awards fellowships to all students for a maximum of 4 years the amount of which is, at the moment, of € 16.242,96 gross per year (about 12% tax).

For the first three years, funding will be ensured through the financing provided by Ministerial Decree 118 of 02.03.2023. Any additional fourth year will be covered by the School's budget.

Admitted students will be granted a one-time settlement allowance of €500.00 if they are domiciled in a country belonging to the European Union, and €1,000.00 if they are domiciled in non-European countries.

A contribution towards living expenses of the amount of €150,00 gross per month will be awarded to those who will subscribe a registered rent contract in the Trieste province.

A "laptop contribution" up to € 400,00 may be granted upon request and presentation of the relevant invoice.

A contribution towards the expenses to be enrolled in the health insurance system up to € 198,77 will be granted to non-EU students only.

Students enrolled in the third/fourth year can request a contribution of up to € 1.000,00 for their access to training and/or to create a network of academic contacts to help them in their future career.

A contribution (70% of the amount of the fellowship) may be awarded to students who should be forced to suspend their activity due to illness, maternity or other serious reasons up to 5 months.

Students' Secretariat

For more information on the School's initiatives to promote well-being, please refer to the following resources: [Welfare - Interventi al personale | Scuola Internazionale Superiore di Studi Avanzati \(sissa.it\)](#)

• **Requirements:**

The School welcomes applications from young candidates who are going to complete or soon after completion of their undergraduate studies with a strong interest in research.

Applications can be submitted, without age and citizenship limitations, by those who have a “Laurea Magistrale” degree or a similar qualification (i.e. Master of Science) obtained abroad, deemed suitable at discretion of the examining commission. The title must be held by October, 31st 2023, under penalty of forfeiture of admission to the Course.

• **Online application:**

An online application must be filled and sent using the procedure available at the page <https://pica.cineca.it/sissa/> by 13.00 hrs (Italian time) of the deadlines foreseen for each Ph.D course:

Astrophysics e Cosmology; Theory and Numerical Simulation of Condensed Matter; Mathematical Analysis, Modelling, and Applications; Geometry and Mathematical Physics; Functional and Structural Genomics; Neurobiology	22 August 2023
Physics and Chemistry of Biological Systems; Cognitive Neuroscience	28 August 2023

Candidates should upload the following documents in pdf format:

- curriculum vitae et studiorum;
- a certificate of University examinations taken (with marks);
- a final degree certificate;
- If, at the time of application, candidates should not be yet in possession of a degree certificate, they can submit it at the time of the examination. European Union candidates can submit a personal declaration instead of the aforementioned certificates.
- a copy of the diploma thesis (if any).
- A personal document (passport; ID card).

Candidates with a certified disability, can report their needs related to the exams in a specific section of the online procedure.

At the end of the procedure, candidates will have to indicate the names and email addresses of two professors that will receive an email requesting to send a

recommendation letter through the same online procedure **within two days of the announcement expiry date.**

The candidate will then have to print out the admission request form, sign it and send it through the same online procedure.

- **Selection procedures:**

All the information about the exams can be found in the Ph.D schedules attached to the present announcement.

Interview by videoconference

The candidate must be available at that address, on the day and at the time that will be notified by the Commission via e-mail.

For identification purposes, and under penalty of exclusion from the selection process, each candidate is required to identify themselves showing the same identity document already uploaded as an attachment to the application before the interview begins.

In the case of a written exam, each candidate must provide two cameras; one that allows the vision of the candidate himself (i.e. computer / laptop) and one that frames the screen where the candidate takes the test (i.e. mobile phone).

Failure to give personal address, lack of internet connection, unavailability of the candidate at the expected day/time, or failure to show a valid identification document, shall be reason for exclusion from the selection process.

SISSA accepts no responsibility in the event that technical reasons should prevent the proper conduct of the oral examination.

- **Admission:**

Candidates admitted to the School will be notified by email and will be asked to be present at the School as follows:

2 October, 2023 for all the Ph.D courses in the Mathematics and Physics Areas and in Cognitive Neuroscience.

6 November, 2023 for the Ph.D courses in Functional and Structural Genomics and Neurobiology.

Failure to do so without a valid reason will result in the loss of the place and fellowship awarded.

In order to be enrolled and to be awarded the fellowship, admitted candidates must pay a “Regional Tax” of the amount of € 120,00 - € 160,00 per year. Information can be retrieved at <http://www.ardiss.fvg.it/>

As per Legislative Decree 30.06.03 n.196, and of the European Regulation 2016/679 (General Data Protection Regulation), we inform that all data given to this Administration will be processed only for purposes related to and instrumental to the existing contract, in compliance with the provisions in force.

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