SISSA
Scuola Internazionale Superiore di Studi Avanzati

Translation of Announcement for 1 research position
at the Physics Area of SISSA
Decree No. 889 dated 14 November 2025

THE DIRECTOR

Having regard to Law No. 168 of 9 May 1989;
Having regard to Law No. 241 of 7 August 1990 and all subsequent amendments and additions;
Having regard to Presidential Decree No. 445 dated 28 December 2000;
Having regard to Legislative Decree No. 165 of 30 March 2001 and all subsequent amendments and additions;
Having regard to Legislative Decree No. 196 of 30 June 2003, as amended by Legislative Decree No. 101 of 10 August 2018, which transposes the EU General Data Protection Regulation 2016/679 (GDPR);
Having regard to Law No. 240 of 30 December 2010, and to Art. 22 in particular, as amended by Law No. 79 of 29 June 2002 and subsequent amendment and additions;
Having regard to Law No. 183 of 12 November 2011, and to Art. 15 in particular;
Having regard to the Statute of SISSA, issued by Directorial Decree No. 40 of 18 January 2012, published in the Official Journal No. 36 dated 13 February 2012, in force since 28 February 2012;
Having regard to SISSA Directorial Decree No. 121 dated 5 March 2012;
Having regard to Directorial Decree No. 295 of 21 May 2012, establishing SISSA's scientific Areas;
Having regard to Decree No. 639/2024 of 2 May 2024, issued by the Ministry of University and Research, concerning the determination of scientific-disciplinary groups and their descriptions, as well as the streamlining and updating of scientific-disciplinary sectors, and their reassignment to scientific-disciplinary groups, pursuant to Article 15 of Law no. 240 of 30 December 2010;
Having regard to SISSA Regulation for the award of research contracts pursuant to Art. 22 of L.30 .12.2010, no. 240, as amended by L. 29.06.2022 no. 79, issued by Directorial Decree No. 180/2025 of 07.03.2025;
Having regard to the resolution of the Board of Directors dated 28 October 2025, based on the assent granted by the Academic Senate on 21 October 2025, authorising a public selection procedure for the award of a research contract pursuant to Art. 22 of Law No. 240/10;
Having established the availability of funds to cover the expenditure for the above-mentioned research position, guaranteed by the project ERC beyond2, complete title of the project: "Beyond two-point correlations: From higher-order data statistics to neural representations", Acronym: beyond2, Grant 101166056 – dott. Sebastian D. Goldt (UGOV code: R_HE_ERC_StG_FISI_Goldt_1048; project code:

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G93C24000860006, Financing agency: European research council, Funding Channel: European Union's Horizon 2020 research and innovation programme);

D E C R E E S AS F O L L O W S

Art. 1 **- A public selection based on qualifications is hereby announced for 1 research contract at SISSA Physics Area pursuant to Art. 22 of Italian Law No. 240 dated 30 December 2010, as amended by Law No. 79 dated 29 June 2022.**
Full details and admission requirements are listed in Annex 1.
Pursuant to Art. 7, par. 1, of the Italian Legislative Decree No. 165/2001, public administration bodies ensure gender equality and equal opportunities, as well as the absence of any form of direct or indirect discrimination on grounds of gender, age, sexual orientation, ethnicity, disability, religious belief and language, affecting access to employment, working conditions and economic treatment, vocational training, career advancement and workplace safety. Public administration bodies also guarantee a working environment characterised by organisational well-being and undertake to detect, counteract and eliminate any kind of moral or psychological violence in the working environment".

Art.2 - Eligible candidates must hold a doctoral degree or equivalent degree obtained in Italy or abroad, or be enrolled in the final year of a doctoral program, provided that the degree is expected to be obtained within six months after the date of publication of this call for applications. Applicants must also meet the additional minimum requirements specifically indicated in Annex 1.
Personnel with permanent positions in Italian universities, public research and experimentation institutions, ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development), ASI (Italian Space Agency) or institutions which award scientific degrees equivalent to PhD, in accordance with art. 74, par. 4 of the Italian Presidential Decree No. 382 dated 11 July 1980, are excluded from applying.
Those who have held contracts under Article 24 of L.240/2010 are also excluded from applying.
In accordance with art. 18 of the Italian Law No. 240/10, candidates having a family relationship or other degree of kinship up to the 4th degree with the following persons are also excluded from applying:

- SISSA Professors belonging to the Area that requested the position;
- Director of SISSA;
- Secretary General of SISSA;
- Member of the Board of Directors of SISSA.

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This research position is awarded through a private law contract which does not give any right to be employed by universities, pursuant to Art. 22, par. 1, of the Italian Law No. 240/2010.

Art.3 – The contract is drawn up in writing and undersigned by the researcher and the Director.
The employment relationship is for a two-year term, is governed by the individual contract and the current provisions regarding tax, welfare and social security treatment provided for employment income.
The annual amount of the contract, stated in Annex 1, is gross per year and includes charges to be paid by the contractor. The salary shall be paid in monthly arrears. The School shall provide insurance coverage against accidents in the workplace, occupational diseases and for third-party liability.

Art.4 – Research contracts cannot be held simultaneously with any other subordinate employment contract with public and private entities, including part-time and fixed-term employment. They are not compatible with research grants at any University or public research institution, nor with scholarships or research grants awarded by national or foreign institutions, except those exclusively aimed at international mobility for research purposes.
Research contracts are not compatible with the attendance of bachelor, master's , PhD programs, or specialization courses in the medical area, in Italy or abroad. Government employees must be given unpaid leave for the entire duration of the contract.
Notwithstanding all of the above, allowed activities and incompatible activities that are subject to authorization are defined in the Regulations for External Assignments and Activities for Academic Staff. Activities subject to authorization are evaluated and authorized by the Area of affiliation.

Art.5 – To be eligible for the public selection for the award of the research contract referred to in this announcement, candidates must meet the requirements described in Annex 1.
To prove the equivalence of a qualification so as to meet the requirements described in Annex 1, candidates must refer to the list of equivalences available on the website of the Italian Ministry of University and Research (https://www.mur.gov.it/it/aree-tematiche/universita/equipollenze-equivalenza-ed-equiparazioni-tra-titoli-di-studio/titoli-0).
Qualifications obtained abroad and declared equivalent by the Italian authority, according to the current legislation, will be accepted for the purposes of the selection procedure.
In the event of a foreign degree that has not already been declared equivalent in Italy according to the law (https://www.cimea.it/EN/), the examining board may admit the candidate upon evaluation of his/her study plan and its consistency with

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the scientific sectors specified in Annex 1. Such evaluation is relevant only for the purposes of this selection procedure.

Art. 6 – The selection is carried out by the Evaluating Committee taking into account the scientific profile of each candidate, as proven by qualifications and publications.
The qualifications evaluation criteria, which can be set by the examining board according to internationally recognized parameters, are consistency with the subject of the research program, relevance and quality of the following qualifications and activities:

- proven research activity;
- academic qualifications (University Degree, PhD, specialization degrees or attendance certificates of other postgraduate specialization courses held in Italy or abroad);
- other qualifications, if any.

For foreign degrees that have not already been declared equivalent in Italy according to the law, the candidate must attach a translation of the study plan into English and/or Italian.
The scientific qualifications must be relevant to the Area referred to in this announcement or to interdisciplinary subjects relevant to the areas involved.

Art.7 – The examining board is appointed by decree of the Director of SISSA, upon a proposal of the relevant Area Council. It comprises at least three members, of which one shall act as President and one as Secretary. The members of the examining board shall be chosen among professors and researchers of SISSA, other research institutions and universities, or among experts in the subjects referred to in this announcement.
The evaluation criteria are agreed upon in advance, and are summarized in the following Table:

Qualification	**Evaluation criteria**	**Maximum score**
University degree (MS, PhD, further degrees etc.)	Relevance for the purpose of the research activity	30 points
Publications and research (software, databases, patents, etc.)	Quality and relevance for the purpose of the research activity	20 points
Other qualifications (professional experience,	Quality and relevance for the purpose of the research activity	10 points

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reference letters - if required, other relevant skills, etc.)		
TOTAL		**60 points**

A candidate is eligible if s/he scores at least 42/60.
The examining board may use video conferencing tools to evaluate the applications, identify suitable candidates, draw up the ranking list and draft the minutes in electronic format.
At the end of the evaluations the examining board will draw up a minute, including the evaluation criteria, the total mark obtained by each candidate and a ranking of the eligible candidates.
The minutes of the selection procedure and the ranking are approved by Directorial Decree.
The first eligible candidate will undertake a research contract with SISSA in accordance with Italian Law No. 240/10, Art. 22, as amended by Law No. 79 of 29.06.2022.
Being in the ranking does not give any right in other selection procedures.

Art.8 - **Under penalty of exclusion, the application** for this selection procedure, along with the relevant qualifications held and relevant scientific publications, **shall be submitted online through the electronic application accessible at the following address:** https://pica.cineca.it/sissa/cdr-fe-fisi-22-2025.
A valid email address is required for the registration process.
Applicants shall upload all personal and professional data as requested by the application procedure. Each attachment may not exceed 30MB.
All fields in the online application form must be filled out. Under penalty of exclusion, the application must contain:

- a curriculum vitae with a complete list of the candidate's scientific and professional activities;
- a valid ID of the candidate, to be uploaded in electronic format.

Candidates accessing the PICA platform using their digital identity (SPID – Public Digital Identity System) will not be required to upload a scan of their personal ID, nor to sign and upload their application.

Failure to comply with the online application procedure will result in the exclusion of the applicant from the selection.
Prior to final submission, and within the given deadline for applications submission, the online application procedure allows to modify and save the inserted information in a draft copy. Confirmation of final submission date will be certified by an

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automatic notification email. Submissions after the given deadline will not be accepted by the system, as the online application procedure won't be accessible.

The online application and submission procedure shall be completed **by 9 December 2025, 11.59 p.m. CEST (Rome time).**
Reference letters shall be uploaded on the PICA platform by the candidate's referees/supervisors by 15 December 2025, 11:59 p.m. CEST (Rome time).

The submission of the online application must be completed and finalized:

- **with the digital signature of the candidate**, by means of smart card, USB token or remote digital signature allowing the applicant to digitally sign electronic documents with a software using a PC or a web portal for Remote Signature, provided by a Certification Service Provider (CSP). Candidates with a smart card or a USB token for digital signature should check the compatibility with the Digital Signature system embedded in our server. In case of compatibility, candidates shall sign the application on the server (e.g. ConFirma);
- **holders of server-incompatible Digital Signature and holders of Remote Digital Signature** who can access a web portal for digitally signing electronic documents shall save the .pdf file generated by the system on their PC. The .pdf file shall not be modified in any way, and it shall be digitally signed in CAdES format: the system will generate a file with .p7m extension. The candidate shall upload the .p7m file on the system. No changes are to be made to the file by the candidates before the Digital Signature, on pain of exclusion from the selection procedure;
- **in case the two above-mentioned options do not apply**, candidates shall save the .pdf file generated by the system on their PC. The .pdf file shall not be modified in any way, on pain of exclusion from the selection procedure. The .pdf shall be printed out, signed on the last page, scanned in .pdf format and uploaded on the system.

For any technical issue regarding the application, candidates may contact the technical support through the link at the bottom of the page: https://pica.cineca.it/sissa ("supporto").
The School will verify that all the statements made in the application and accompanying documentation comply with the provisions of Presidential Decree No. 445/2000.

Art.9 – After a budget verification has been carried out, the selected candidate will be formally notified of the award of the research fellowship.

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Within 30 days from the start of the research activity at SISSA, Italian and EU candidates and non-EU citizens resident in Italy will have to submit a valid ID and fill out the following documents:

1) affidavit attesting birth, citizenship, place of residence and Italian tax code of the applicant;
2) affidavit attesting the possession of a University Degree;
3) affidavit of the actual or expected date of Ph.D. award. Under the law, the Ph.D. degree has to be awarded within six months from the publication of this notice.

Non-EU citizens authorized to sojourn in Italy owing to conventions between Italy and their own country have to submit the same above-mentioned documents.
Non-EU citizens regularly sojourning in Italy may submit an affidavit according to articles 46 and 47 of Presidential Decree No. 445/2000 exclusively for personal data and events which can be certified and attested by public Italian authorities.
In any other case, the information requested in points 1) and 2) of this article must be notified by means of an affidavit and plain copies of the relevant documents within 30 days from the beginning of the research activity at SISSA. Research fellows are requested to submit certificates and declarations issued by the foreign competent authorities, possibly accompanied by an Italian translation authenticated by the Italian Consulate abroad. The School reserves the right to verify all affidavits.
Should the winner refuse the position, not accept it or fail to submit the above-mentioned documents on time, the research fellowship may be offered to the next eligible candidate in the classification list, following the authorization granted by the Director, at the express request of the Area Coordinator or the scientist responsible for the research activity.
The starting date of the contract shall be agreed with the Area Coordinator or with the scientist responsible for the research project.
Should the financial coverage not be guaranteed by the funding body, SISSA reserves the right not to activate the research position. The start of the contract will therefore be subject to verification of the necessary financial coverage.

Art.10 – Holders of research contracts undertake to carry out the research activity as foreseen in this Announcement and in accordance with the research program of the Area. The research activity is carried out following the instructions of the scientific supervisor.
At the end of the second year, contract holders are required to submit a report on their research activity to the relevant Area Council, with the aim of closing the research program and/or for the purpose of a possible renewal or extension of the contract.

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Art.11 – The total duration of research contracts, held at one or more Universities or institutions, must not exceed 5 years for each researcher. To this end, the periods of absence due to maternity leave or state of illness are not taken into account.
The renewal or extension of the research contract, if applicable, shall be requested upon the reasoned proposal of the designated scientific supervisor, after an evaluation of the research activity carried out by the contract holder on the research project and the progress of the program itself. The request must be approved by the scientist responsible for the funds covering the cost of the position, and subsequently approved by the relevant Area Council, the Academic Senate of the School and, as far as financial coverage is concerned, by the Board of Directors.

Art. 12 - Termination of employment occurs upon expiry of the contract or withdrawal of one of the parties. If the selection procedure is revoked, the contract is terminated in any case.
Fellowship holders wishing to resign must give an advance notice of at least 30 days, in which case no penalty shall be applied by SISSA. Failure to do so shall result in a penalty involving the recovery or the failure to pay the salary for the period of notice not given.
SISSA shall reserve the right to terminate the contract if the external funding becomes unavailable. In this case SISSA shall give the fellowship holder at least a 60 days' notice. Failure to do so shall result in the payment to the research fellowship holder of an amount equal to the period of notice not given.
The compulsory advance notice shall not be applied during the trial period.

Art. 13 - The Head of procedures is Dr. Alessandra Lucatello, Chief of the Human Resources Area (e-mail: contrattiricerca@sissa.it).

Art.14 – All matters regarding data processing and protection are in accordance with the Italian Legislative Decree No. 196/2003 dated 30.06.2003, as amended by Legislative Decree No. 101 dated 10.08.2018, that transposes Regulation (EU) 2016/679 (GDPR). All the data provided to this administration will be processed for the sole purposes connected with and instrumental to the selection procedure and the eventual drawing up and management of the contract.

THE DIRECTOR
Prof. Andrea Romanino
(Italian version signed digitally)

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ANNEX 1

PHYSICS AREA
Public selection based on qualifications

Research title: Learning dynamics of neural networks

Fields of the research activity: Theory of neural networks, statistical physics, high-dimensional statistics.

Scientific supervisors: Prof. Sebastian Goldt
Members of the research group: Roberto Trotta, Guido Sanguinetti, Alessandro Laio, Francesca Mastrogiuseppe

Area 02 - Physics
Academic recruitment field: 02/PHYS-06 Physics for life sciences, environment, and cultural heritage, physics education and history of physics
Academic discipline: PHYS-06/A Physics for Life Sciences, Environment, and Cultural Heritage

All-inclusive gross annual salary, granted in 13 monthly payments: € 34,285.00

Minimum requirements:
Master's degree in: Mathematics, Physics, Theoretical computer science, statistics or related fields
PhD degree in: Mathematics, Physics, Theoretical computer science, statistics or related fields

Proven experience in: Experience in analysing machine learning problems using tools from statistical physics and high-dimensional statistics.

The online application and submission procedure shall be completed **by 9 December 2025, 11.59 p.m. CEST (Rome time).**
Reference letters shall be uploaded on the PICA platform by the candidate's referees/supervisors **by 15 December 2025, 11.59 p.m. CEST (Rome time).**

Evaluation criteria:
University degrees: up to 30 points
Published works and other research products: up to 20 points
Other qualifications: up to 10 points
TOTAL: up to 60 points

The research activity shall be carried out on behalf of and shall be funded by the project ERC beyond2, complete title of the project: "Beyond two-point correlations: From higher-order data statistics to neural representations", Acronym: beyond2, Grant 101166056 – dott. Sebastian D. Goldt (UGOV code:

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R_HE_ERC_StG_FISI_Goldt_1048; project code: G93C24000860006, Financing agency: European research council, Funding Channel: European Union's Horizon 2020 research and innovation programme).

A contribution towards relocation expenses in Trieste is envisioned for the successful candidate if resident abroad (in the EU or outside the EU). The costs will be covered by the project ERC beyond2, complete title of the project: "Beyond two-point correlations: From higher-order data statistics to neural representations", Acronym: beyond2, Grant 101166056 – dott. Sebastian D. Goldt (UGOV code: R_HE_ERC_StG_FISI_Goldt_1048; project code: G93C24000860006, Financing agency: European research council, Funding Channel: European Union's Horizon 2020 research and innovation programme).

Position approved by:
Area Coordinator on 15.10.2025
Academic Senate on 21.10.2025
Board of Directors on 28.10.2025

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