TRANSLATION OF ANNOUNCEMENT FOR 1 RESEARCH POSITION
Decree n. 1007/2023 dated 30.11.2023

Art.1 A public selection, based on qualifications and interview, is hereby announced for 1 research position in **Mathematics Area of SISSA** through the evaluation of the research project proposals submitted by the candidates together with their qualifications and published works. Full details, admission requirements and duration 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

Art.2 Eligible candidates must be in possession of a scientific-professional curriculum which enables them to carry out research activity and meet the further requirements specified in Annex 1.

Personnel with permanent positions in Italian universities, public research and experimentation institutions, ENEA, ASI or institutions which award scientific degrees equivalent to PhD, in accordance with art. 74, par. 4 of the Italian Presidential Decree No.382 dated 11.07.80, are excluded from applying.

In accordance with art. 18 of 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 (please see Annex A).

The research fellowship is awarded through a private law contract, which does not give any right to be employed by universities.

Art.3 The salary of the research fellowship detailed in Annex 1 is gross per year and includes contributions to be paid by the researcher. The fellowship is paid monthly in arrears. The fiscal and social security treatment of the research fellowship is in accordance with art. 4 of Italian Law No. 476 dated 13.08.84 and subsequent integrations and modifications, and par. 26 and followings of art. 2, Italian Law No. 335 dated 08.08.95 and subsequent integrations and modifications.

The School arranges for insurance coverage for the fellowship holders against accidents in the workplace and for third party liability while carrying out their research work. The insurance premium is deducted from the fellowship.

Art.4 The fellowships cannot be held contemporarily with other fellowships of whatever kind, except those awarded by Italian or foreign institutions with the aim of integrating the research activity of the candidate through a period spent abroad.

Provided that they fulfil their research obligations, the fellowship holders are authorized to carry out professional activity as long as the activity is compatible with the research position, does not represent a conflict of interest and is not prejudicial to the School. Fellowship holders willing to carry out external activity in a continuous way shall present a specific request, which will be evaluated by the relevant Area Council and subsequently submitted to the Academic Senate of the School for approval. If compatible with their research duties, and following written approval by the scientist responsible for the research project, fellowship holders can participate in research assignments commissioned to SISSA by third parties (in accordance with art. 66 of the Italian Presidential Decree No. 382/80), in accordance with the current regulations.

Fellowship holders cannot be enrolled in University Degree courses, PhD courses with scholarship or medical school of specialization in Italy or abroad.

Government employees must be given unpaid leave for the period of the fellowship.

Art. 5 The requirements for the admission to the selection procedure are listed in Annex 1. To prove the equivalence of a qualification so as to meet the requirements described in Annex 1, the candidate 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 the scientific sectors specified in Annex 1.

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The selection procedure is carried out by the examining board by evaluating the research fellowship, taking into account the scientific profile of the candidate as proved by their qualifications and published works.

The qualifications evaluation criteria, which can be set by the examining board according to internationally recognised parameters, consistency with the subject of the research fellowship, relevance and quality of the following qualifications and activities:

- the research project submitted by the candidate;
- proven research activity;
- academic qualifications (University Degree, PhD, specialization degrees or or attendance certificates of other postgraduate specialization courses held in Italy or abroad);
- other qualifications.

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.6   The examining board is appointed by decree of the Director of SISSA, upon a proposal of the relevant Area Council. It comprises a minimum of 3 and a maximum of 9 members representing the Area involved in this announcement, 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. A deputy can be appointed for each member.

The qualifications required for the admission to the selection procedure shall be carried out by the examining board according to the following table:

Qualification	Evaluation criteria	Score
Research project	Relevance, pertinence, quality	max 20 points
PhD	Relevance to the project	max 10 points
University Degree	Type of degree listed in the announcement - according to the degree mark	max 5 points
Published works and other research products	Relevance to the scientific disciplinary sector of the research project	max 25 points
Other post-lauream Degrees	Relevance to the scientific disciplinary sector	max 5 points

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Other qualifications	Contracts, scholarships, enrollment in PhD degrees, periods spent abroad, etc., if any	max 15 points
Interview		Max 20 points
TOTAL		**max 100 points**

A candidate is eligible if s/he scores at least 56/80 for qualifications and at least 14/20 at the interview.

At the end of the evaluations the examining board will draw up a report, including the evaluation criteria, the total mark obtained by each candidate and a classification list of the eligible candidates. The acts 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, in its former version prior to Law No. 79 of 29.06.2022.

Being in the ranking does not give any rights in other selection procedures.

Art.7 **Under penalty of exclusion, the application** for this selection procedure, along with the relevant qualifications held and the relevant scientific publications, **shall be submitted online through the electronic application accessible at the following address:** https://pica.cineca.it/sissa/ar-fs-mate-85-2023

A valid email address is required for the registration process.

Applicants shall upload all personal and professional data as requested by the application procedure; all documents must be uploaded in PDF format (.pdf). Each applicant can produce a maximum of no. 30 publications and a maximum of no. 30 other titles and qualifications.

All fields in the online application form must be filled out. Under penalty of exclusion, the application must contain:

-    research project (English language), concerning the Scientific Subject listed in the Annex 1;

-    the curriculum vitae with the complete list of the scientific and professional activities;

-    valid ID of the candidate to be uploaded in electronic format.

Failure to comply with the online application procedure will result in 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 automatic notification email. Submissions after the given deadlines will not be accepted by the system as the online application procedure won't be accessible.

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Each application will be given a registration number. For all further communications, the registration number shall be quoted along with the code of the research grant competition.

The online application and submission procedure shall be completed **by January 10th, 2024 no later than 11:59 p.m. CET (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, for digitally signing 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 an 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 (i.e. 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 competition;

- **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 competition. The PDF shall then be printed out, signed on the last page, scanned in PDF format and uploaded on the system.

For any technical problem regarding the application candidate should apply to sissa@cineca.it .

The University will verify that all the statements made in the application and accompanying documentation comply with the provisions of Presidential Decree No. 445/2000.

INTERVIEWS CALENDAR:
The list of candidates admitted to the interview will be published on the SISSA website on January 17th, 2024 by 1:00 pm CET (Rome time). The interview will be held online on January 19th, 2024.

At the interview candidates must prove their identity showing a valid ID or passport. The notice of the interview calendar acts as an official notification. Candidates are required to collect at their own expenses all documents and

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publications they have submitted within 3 months from the selection procedure. After this time frame, SISSA cannot be held responsible in any way for these documents and publications.

Art.8   After a budget verification has been carried out, the selected candidate will be formally notified of the award of the research fellowship.

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 and a PhD (only if required by the announcement);

Non-EU citizens authorized to sojourn in Italy owing to the 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 the Italian Presidential Decree No. 445/2000 exclusively for personal qualities and events which can be certified and attested by public Italian authorities.

In any other case the details listed 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. However, within 60 days from the beginning of their research activity winners have to submit certificates and declarations issued by the foreign competent authorities, 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 fellowship 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 fellowships. The start of the contracts will therefore be subject to verification of the necessary financial coverage.

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Art.9 Fellowship holders undertake to carry out the research activity as foreseen in the contract and in accordance with the research program of the Area. The research activity is carried out in the frame of the research project for which the applicant has been selected. Every year the fellowship holders must present a report on the activity carried out in the previous year to the Area Council. In major case of non-compliance the contract can be terminated, by decision of the School Senate and on proposal of the Area Council, heard the researcher concerned.

The contract is automatically resolved in the following cases:
- unjustified delay or failure to start the research activity;
- unjustified suspension of the activity for more than 15 days;
- breach of the incompatibilities established by the current Rules for the awarding of research fellowship in SISSA;
- negative evaluation of the research activity expressed by the Area Council.

An authorized absence of up to 30 days a year does not require the fellowship to be suspended or the absence to be made up at a later date.

Fellowship holders wishing to resign must give a 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. The 30 days' notice shall not be applied during the first 30 days of research activity.

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 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.

Art.10 The total duration of the research fellowship including the renewals must not exceed 6 years with the same researcher. To this end, the time in which the candidate was holder of a research fellowship and enrolled in PhD courses (without scholarship) is not taken into account for a period not exceeding the legal duration of the PhD program.

In accordance with the Italian Law No. 240/10, in its former version prior to Law No. 79 of 29.06.2022, candidates cannot be awarded research fellowships or temporary researcher contracts with public, private or online universities, nor with other institutions as specified in art. 22, par. 1 of Law No. 240/10 for a period exceeding 12 years, whether consecutive or not. To this end, the periods of absence due to maternity leave or state of illness are not taken into account.

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The renewal of the research fellowship is decided by the School Academic Senate and, as for the financial coverage, by the Board of Directors, on the basis of the evaluation of the research activity carried out by the fellowship holder and the state of the art of the research program, upon request of the scientist responsible for the research activity.

Art.11 All matters regarding data processing and protection are in 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 digitally signed)

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ANNEX 1

Mathematics Area
Public selection based on **qualifications and interview**

Fields of the research activity: **Development of Virtual Element Methods for the solution of multiphysics problems modelled by partial differential equations posed on complex/moving domains.**

Scientist responsible for the research activity: Prof. Andrea Cangiani
Members of the research group: Gianluigi Rozza, Luca Heltai, Pasquale Africa, Michele Girfoglio, Niccolò Tonicello

Area 01 – Mathematics and Computer Science
Public selection sector: 01/A5 – Numerical Analysis
Relevant academic scientific sector: MAT/08 - Numerical Analysis

Duration of the research fellowship: 12 months
Renewable: yes
Gross remuneration per year: € 24.336,00

Requisites for the admission to the selection procedure:
University degree: Master of Science in Mathematics, physics, mathematical or physical engineering, electronic engineering, industrial engineering.

Doctoral degree: Mathematics or equivalent. The title is compulsory at the starting date of the contract.

Proven experience in: mathematical modelling, numerical analysis and simulation of complex systems governed by PDEs.

Additional requirements, competencies and abilities: HPC for PDEs, numerical analysis of finite element methods, modeling and simulation of industrial or bio-mathematical problems.

Evaluation criteria:
Research project: up to 20 points
PhD: up to 10 points
University degree: up to 5 points
Published works and other research products: up to 25 points
Further post-lauream diplomas: up to 5 points
Other titles: up to 15 points
Interview: up to 20 points

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Only candidates whose qualifications are scored above 56/80 will be admitted to the interview. A candidate is eligible if s/he scores at least 56/80 for qualifications and at least 14/20 at the interview.

Two reference letters are recommended. They can only be submitted through the PICA portal by the referees/supervisors indicated by the candidate in the application.

Gross total cost of the research fellowship will be funded by School funds.

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 School funds.