



Excerpt from the Rector's decree n. 928/2021

Call for the selection of n. 20 Junior Research Fellows

(Under the Italian Law 240/2010 article 24, subparagraph 3, point a)

The University of Pisa announces a call for 20 Junior Fixed-Term Research Fellow for the Department and the scientific area or sector as listed in Annex A.

The fixed-term contract is to carry out research activities, teaching, integrative teaching activities and services for students, for a 350 hours commitment, on a full-time basis.

The Junior Research Fellow is required to perform lectures for a minimum of 36 up to a maximum of 60 hours per academic year, allocated as an institutional assignment for Bachelor's and Master's degree programmes, Specialization Schools and PhD programmes. It is possible to provide a further derogation up to a maximum of 72 hours, in order to avoid an excessive partitioning of teaching modules.

Contract duration: 3 years

Gross annual salary: € 36.344,04

Deadline for application: 30/8/2021 1 p.m.

Admission requirements:

PhD or equivalent academic qualification awarded in Italy or abroad and recognised as eligible for admission.

medical specialization, for the sectors concerned

As for a qualification awarded abroad, equivalency or comparability documentation has to be provided as stated under:

D.Lgs.165/2001, article 38:

http://www.funzionepubblica.gov.it/sites/funzionepubblica.gov.it/files/modulo_equivalenza_Titoli_Accademici.pdf

Or under:

D.P.R. 382/1980, article 74:

http://www.miur.gov.it/documents/20182/0/Equipollenza_Dottorato_ricerca_dpr382.pdf/f5ff98ae-ddff-4166-a822-83ef1b57c7f0

As for an equivalent or comparable academic qualification, the candidate shall be admitted within the application's deadline and shall provide the qualification equivalency or comparability before the signing of the contract.

No admission to this selection for:

- Professors or Research Fellows with permanent position at the university, currently employed or currently retired;
- Fixed-term Research Fellowship or Post PhD research grants at the University of Pisa or other Italian universities, either public, private or online, and other public institutions (Under the Italian Law Italian Law n. 240/2010, articles 22 and 24) for a period that, totalled over this contract, would exceed 12 years altogether, even when not consecutive. As for the duration of the working period mentioned above, parental leave or medical leave, are excluded (under the existing legislation).

Applications:

Applications are to be submitted online only, using the following link: <https://pica.cineca.it/unipi/>

or shall be invalid. It is necessary to have an email address to login and complete the application.

Applicants should fill in all the required data and upload all documents in PDF format.

The system allows saving a draft of the application within the application deadline. The system will register the online application date and send a receipt with an automatic e-mail reply. After deadline, the system will not allow login nor application submission.

In order to be valid, application shall include all the required data, applicant's signature and a valid identification document.

Each application will be assigned a tracking number to be cited in all subsequent communications, together with the selection code provided by the application form.

Applicants undertake to communicate in writing any variations of what declared in the application form.

The communication shall be edited in PDF format, signed and forwarded to the University of Pisa Rector via the Italian certified e-mail system address (P.E.C. Posta Elettronica Certificata): protocollo@pec.unipi.it or via e-mail at: concorsi@adm.unipi.it. Applicant's valid identification document shall be annexed.

For further information on application submission, please refer to concorsi@adm.unipi.it

For any IT malfunctioning please refer to unipi@cineca.it.

Applications shall be completed with the following annexes:

1. A self-attested Curriculum of the personal didactics, teaching and scientific activities, dated and signed;
2. The Publications applicant considers eligible for this selection with the corresponding list dated and signed;
3. A complete list of all Publications, dated and signed;
4. A copy of the fiscal code (if applicable) and identification card/passport, dated and signed;

All publications should not exceed 30 megabyte and are to be submitted in PDF format only, using the specific section of the application form.

Selection procedure:

A Rector's Decree will appoint the Selection Committee, consisting of three members.

The selection will be made according to a preliminary assessment of the candidates with an accurate and evidenced analytic evaluation of the Curriculum, of qualifications and scientific results, including PhD thesis.

After the preliminary assessment, the candidates that have comparatively proven to be the most meritorious, will be admitted to an open interview; they will represent between 10 and 20 % of the total and will be not less than six. The interview will concern applicant's qualifications and scientific results. In the event the number of applicants is six or less, all candidates are admitted. All admitted candidates will be summoned by registered post at least twenty days before the interview; the failed attendance to the interview will be considered as a voluntary renunciation.

During the interview, all candidates will be furthermore tested on the foreign language skills requested by the selection.

In compliance with the provisions adopted following the COVID-19 epidemiological emergency, interviews will take place on virtual mode to ensure the simultaneous connection between the members of the Commission and the candidates, under the regulations on the protection of personal data for confidentiality conservation.

During the interview it will be forbidden the audio / video recording through the IT platforms used as well as the broadcasting of the audio / video recording made with tools other than the platform.

The interview disclosure will be guaranteed inviting all candidates and any third part who has requested, with a link to the event; the link will be published at <https://www.unipi.it/index.php/concorsi-gare-e-bandi> in the section "Prove e colloqui in modalità telematica - Aule virtuali" and will allow the connection to the telematic session.

"The list of candidates admitted to the interview will be published on the university website at <https://www.unipi.it/index.php/concorsi-gare-e-bandi> in the section dedicated to the procedure in this call "

Please note that the English version is given as a matter of courtesy, for the only purpose of information. It cannot be legally used in the event of a dispute or a claim arising from the interpretation of this translation and concerning the contents, a possible uncertainty, contradiction or discrepancy. Should this occur, the Italian version of the call shall prevail as the only valid. For full Italian text see: <https://www.unipi.it/ateneo/bandi/ricercat/ricercator/index.htm>

(1) If applicable

Annex (A)

A1

Department of Biology

Admission Examination Sector **05/D1** Physiology

SSD **BIO/09** Physiology

Nr. of position available: **1**

Focus of research

In accordance with the official declaration of the scientific sector “Physiology” (BIO/09), the research activity will be focused on the vital functions of men and of the other animals, also in a comparative way

Scientific productivity

Publication of papers on international, high-impact scientific journals; participation to national and international meetings for the dissemination of the research results; participation to research projects

Head office

Department of Biology

Specific didactic activity of the contract

Lectures and practical laboratory teaching on topics typical of the scientific sector “Physiology” (BIO/09), according to the teaching activities planned for the courses organized by the Department of Biology; supervision of undergraduate and graduate students

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

Department of Biology

Admission Examination Sector 05/B1 Zoology and anthropology

SSD BIO/05 Zoology

Nr. of position available: 1

Focus of research

The research activity will concern the study of protozoa and invertebrate metazoans, their evolution and biodiversity at the organization level of cells, organisms, populations, species, and community. Both theoretical and experimental research will be carried out in the field and in the laboratory and will address the study of morpho-functional organization, intra- and interspecific interactions and with the environment, biogeography, systematics and phylogeny of protozoa and invertebrates. In particular, the expected type of research will focus on theoretical and experimental studies pertaining to biology and systematics of protozoa.

Scientific productivity

The minimum scientific productivity goals of the candidate will consist in the publication of scientific papers on international journals with IF (1-3 articles/year), presentation of research results attending national and international scientific meetings and joining to national and international research projects

Head office

Dipartimento di Biologia

Specific didactic activity of the contract

The teaching activity will be carried out in the framework of courses including topics related to the BIO/05 sector and will consist of lectures and exercise/laboratory activities for students Furthermore, the candidate will supervise undergraduate and graduate students.

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

Department of Chemistry and Industrial Chemistry

Admission Examination Sector 03/C2 Industrial and applied chemistry

SSD CHIM/04 Industrial chemistry

Nr. of position available: 1

Focus of research

Research activity in the areas relevant to the declaration of SSD CHIM/04 with particular regard to the preparation and characterization of functional polymeric materials subsequent modification through chemical functionalization processes and/or physical processing with substances and materials with technologically advanced features. The study and research will be aimed at developing polymer-based materials and devices by studying the structure-property relationships for their possible use at industrial level in special and advanced applications like sensors, intelligent materials, and the energy field

Scientific productivity

Publications on scientific peer-reviewed international journals, communications to national and international scientific conferences

Head office

Department of Chemistry and Industrial Chemistry

Specific didactic activity of the contract

Teaching courses that pertain to the discipline CHIM/04-Industrial Chemistry

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **15** scientific publications

Department of Chemistry and Industrial Chemistry

Admission Examination Sector 03/A2 Models and methods for chemistry

SSD CHIM 02 Physical chemistry

Nr. of position available: 1

Focus of research

Research activity in the areas relevant to the declaration of SSD CHIM/02 with particular regard to development of computational methodologies based on statistical physics, molecular dynamics and machine learning and their application to the study of soft-matter

Scientific productivity

Dissemination of the results to the scientific community through publications in peer-reviewed international journals, presentation of the results in national and international conferences.

Head office

Department of Chemistry and Industrial Chemistry

Specific didactic activity of the contract

Courses in Physical Chemistry and related subjects

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

Department of Chemistry and Industrial Chemistry

Admission Examination Sector 03/A1 Analytical chemistry

SSD CHIM/01 Analytical chemistry

Nr. of position available: 1

Focus of research

Research activity in the areas relevant to the declaration of SSD CHIM/01 with particular regard to development, implementation and optimization of analytical procedures based on gas and liquid phase chromatography in combination with mass spectrometry, and of analytical pyrolysis techniques. The research will involve applications to study the qualitative and quantitative composition of natural organic materials and synthetic polymers in systems with different states of aggregation and variable complexity, such as environmental matrices, cultural heritage objects, and merceological products. Object of the research are also the pre-analytical aspects of analytical chemistry (sampling, separation, enrichment, matrix modifications) as well as the development and use of tools for the evaluation and interpretation of the chemical data

Scientific productivity

Publications on scientific peer-reviewed international journals, communications to national and international scientific conferences

Head office

Department of Chemistry and Industrial Chemistry

Specific didactic activity of the contract

Teaching courses that pertain to the discipline CHIM/01-Analytical Chemistry

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **18** scientific publications

Department of Civilisations and Forms of Knowledge

Admission Examination Sector 11/A1 Medieval history

SSD M-STO/01 Medieval history

Nr. of position available: 1

Focus of research

Research in the fields concerning the wide chronological arc that goes from the V to the XV century, with focus over Italy and Europe and openness to the different aspects of European expansion and contact with other cultures. It is requested attention to institutional political phenomena, to economic, social, religious, cultural and military aspects, to the gender relations

Scientific productivity

Production of no less than five original scientific contributions, in the form of a critical article, or of research book, or of commented edition of a historical source.

Head office

Department of Civilisations and Forms of Knowledge

Specific didactic activity of the contract

Series of lectures on medieval history, each of six university credits, with general or monographical character (in form of workshop, too)

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

A7

Department of Civilisations and Forms of Knowledge

Admission Examination Sector 10/N1 Ancient near eastern, middle eastern and african cultures

SSD L-OR/02 Egyptology and coptic civilization

Nr. of position available: 1

Focus of research

Research activity in the areas relevant to the declaration of SSD L-OR/02 with particular regard to the history, language and writings, archaeology, art history, and history of religion of Pharaonic Egypt. Candidates should have an excellent level of competence in the history, philology and material culture of Pharaonic Egypt

Scientific productivity

Scientific publications and participation in conferences and workshops on her-his research topics

Head office

Department of Civilisations and Forms of Knowledge

Specific didactic activity of the contract

The successful candidate will teach both undergraduate and graduate courses in the field of Egyptology, as lectures and seminars

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

Department of Economics and Management

Admission Examination Sector 13/B1 Management

SSD SECS-P/07 Business administration and accounting studies

Nr. of position available: 1

Focus of research

Research activity in the areas relevant to the declaration of SSD SECS-P/07. The sector includes scientific and teaching-training activities in the context of the study of the main organization constituents and of the factors contributing to the long- term economic development of companies, considering profit, non-profit organizations and public administrations, including healthcare organizations. The sector of Business Administration includes two closely linked research fields: the studies of business administration, which involve theories of the firm and of business groups, strategies and business policies, analysis and design of business processes, business ethics, financial statements, business evaluation, auditing and consulting; the studies of Accounting which regard the evaluation, analysis and use of data to support decision and control processes, accounting and financial statements (including financial auditing and financial analysis), accounting for decision making (management accountants, planning and control),

accounting history

Scientific productivity

A monograph, contributions in volumes and articles published in qualified national and international journals in the field of business administration

Head office

Department of Economics and Management

Specific didactic activity of the contract

Courses mainly related to the sector Business Economics (SSD SECS-P/07) offered by the “Dipartimento di Economia e Management”

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

Department of Pharmacy

Admission Examination Sector 05/A1 Botany

SSD BIO/15 Pharmaceutical biology

Nr. of position available: 1

Focus of research

Research activity in the areas relevant to the declaration of SSD BIO/15 with particular regard to the study of biological active phytocomplex from medicinal plants and in particular their structural characterization”

Scientific productivity

Scientific publications on ISI international journals, participation to national and international conferences in the research field, starting scientific cooperation on topics defined by the program with Italian and /or foreign organizations and institutions

Head office

Department of Pharmacy

Specific didactic activity of the contract

Teaching courses of the Department of Pharmacy and other Departments of the University of Pisa in which the SSD (disciplinary scientific sector) skills are requested.

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

Department of Philology, Literature and Linguistics

Admission Examination Sector 10/G1 Historical and general linguistics

SSD L-LIN/01 Historical and general linguistics

Nr. of position available: 1

Focus of research

Research activity in the areas relevant to the declaration of SSD L-LIN/01, i.e. theoretical studies on language faculty, history of linguistic thought and studies of historical linguistics, with reference to language change and methodologies of comparison and reconstruction; the study of linguistic variation, plurilingualism and linguistic contact, sociolinguistic and ethnolinguistic issue; moreover, in the context of applied linguistics, acoustic phonetics, morphosyntactic and lexicographic aspects; descriptive applications to languages and dialects, as well as psycholinguistics, linguistic pathologies, interactions between linguistics and computer science and problems of linguistics education; finally, the study of Baltic languages and related philology

Scientific productivity

Publications in peer-reviewed journals at national and international level; publications in volumes and conference proceedings

Head office

Department of Philology, Literature and Linguistics

Specific didactic activity of the contract

Didactic activities in BA and MA degree courses

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of 12 scientific publications

A11

Department of Computer Science

Admission Examination Sector 01/B1 Informatics

SSD INF/01 Informatics

Nr. of position available: **2**

Focus of research

Research activities in the fields of the academic discipline INF/01 Informatics

Scientific productivity

Contributions to the progress of the state of art in Computer Science by means of international level publications

Head office

Department of Computer Science

Specific didactic activity of the contract

The duties of the role include delivering teaching to all levels of students (undergraduate and graduate) of the academic discipline INF/01 - Informatics

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

A12

Department of Energy, systems, territory, and construction engineering

Admission Examination Sector 09/E2 Electrical energy engineering

SSD ING-IND/33 Electrical power systems

Nr. of position available: 1

Focus of research

Research activity in the areas relevant to the declaration of SSD ING-IND/33 with particular regard to technical-economical optimisation criteria (in terms of size and operation) of systems for the production of electric energy from renewable energy sources, integrated with energy storage systems.

Scientific productivity

Publication of papers on International journals and national and international scientific conferences, presentation of papers to scientific conferences, participation to funded research projects at European, National and Regional level, participation to technology transfer

Head office

Department of Energy, Systems, Territory, and Construction Engineering

Specific didactic activity of the contract

Teaching, either in classrooms and supplemental, in courses of the “Settore scientifico disciplinare” ING-IND/33 in the framework of bachelor, MS, PhD courses of the Scuola di Ingegneria” of the University of Pisa. Activities as tutor and support to the preparation of Bachelor, MS, PhD theses

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

A13

Department of Mathematics

Admission Examination Sector 01/A2 Geometry and algebra

SSD MAT/03 Geometry

Nr. of position available: 1

Focus of research

Properties and classification of geometric structures (topological, differential, real analytic and complex manifolds, algebraic varieties), including the combinatorial and computational techniques that can be applied to their study, as well as (general, algebraic and differential) topology, complex analysis and geometry, and the algebraic and geometric properties of dynamical systems.

Scientific productivity

Publishing papers of interest in the realm of geometry in generalist or specialized journals at a national or international level. Seminars in Universities, Research Institutes and international or national Conferences

Head office

Department of Mathematics

Specific didactic activity of the contract

Teaching of courses having as a topic the basics of mathematics, in any degree program of the university, and of advanced courses of geometry topic in the first degree, master and PhD programs in mathematics

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

Department of Mathematics

Admission Examination Sector 01/A2 Geometry and algebra

SSD MAT/02 Algebra

Nr. of position available: 1

Focus of research

Study of properties and classification of algebraic structures, commutative and non-commutative, including combinatorial and computational techniques needed for such study, and study of algebraic Number Theory

Scientific productivity

Publishing papers of interest in the realm of algebra in generalist or specialized journals at a national or international level. Seminars in Universities, Research Institutes and international or national Conferences

Head office

Department of Mathematics

Specific didactic activity of the contract

Teaching of courses having as a topic the basics of mathematics, in any degree program of the university, and of advanced courses of algebra topic in the first degree, master and PhD programs in mathematics

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

A15

Department of Agricultural, Food and Agro-Environmental Sciences

Admission Examination Sector 07/C1 Agricultural, forest and biosystems engineering

SSD AGR/08 Agricultural hydraulics and watershed protection

Nr. of position available: 1

Focus of research

The research topics will be related to activities included in the scientific sector AGR/08 and specifically agricultural hydraulics, agricultural hydrology and irrigation.

Specifically, the research activities will focus on the study of water use efficiency and productivity at different spatial scales. Thus, the activities will integrate the Water Auditing and Accounting procedures for a systemic assessment of the status and trends of the water supply, distribution and accessibility within agricultural lands.

The research activities will also aim at extending the most modern digital systems and protocols for the monitoring and expert management of water resources in farms and small catchments. Moreover, new research lines will be introduced to strengthen the farm water supply strategies, with an emphasis on surface water harvesting and the development of the reuse of wastewater potentially suitable for irrigation.

Other innovative research activities will involve the calibration and validation of a combination of sensors and agro-hydrological models for expert farm irrigation management, as well as high-throughput screening systems (HTS) for the macroscopic modelling of the water-salt stress function of crops

Scientific productivity

The scientific productivity will aim to meet the target of scientific journals classified within the ISI and Scopus subject categories covered by the AGR/08 sector. Besides, the researcher has to ensure participation in national and international scientific conferences to disseminate the research results

Head office

Department of Agricultural, Food and Agro-Environmental Sciences

Laboratorio di Sensoristica e Modellistica Agro-Idrologica (AgrHySMo Lab.)

Specific didactic activity of the contract

Regarding the teaching activities, supplementary teaching and student services will concern the scientific sector AGR/08, and specifically, the courses activated in the degrees of 'Agricultural Sciences' and 'Viticulture and Enology' and the MSc degrees in 'Agrifood production and agroecosystem management' and 'Urban green areas and landscape planning and management'.

Among them, as a not exhaustive example, there are Agricultural hydraulics and hydrology; Agricultural hydraulics and hydrology for viticulture; Laboratory of sensors and modeling for agro-hydrological monitoring; Monitoring and management of water resource; Monitoring and management of water resource in urban green areas and landscape

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

A16

Department of Agricultural, food and agro-environmental sciences

Admission Examination Sector 07/I1 Agricultural microbiology

SSD AGR/16 Agricultural microbiology

Nr. of position available: 1

Focus of research

Research activity in the areas relevant to the declaration of SSD AGR/16 A<with particular regard to studies on the biodiversity, ecology, physiology, genetics and taxonomy of agricultural and food microorganisms, in relation to their role in agroecosystems and in food production

Scientific productivity

Publication of papers in the field of agricultural microbiology in international scientific journals (ISI index)

Head office

Department of Agricultural, food and agro-environmental sciences

Specific didactic activity of the contract

Courses of the SSD AGR/16 in Department of Agricultural, food and agro-environmental sciences

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

Department of Geosciences

Admission Examination Sector 04/A1 Geochemistry, mineralogy, petrology, volcanology, earth resources and applications

SSD GEO/07 Petrology and petrography

Nr. of position available: 1

Focus of research

The scientific activity will focus on: structure, composition, origin and systematics of igneous and metamorphic rocks. Petrogenetic and geodynamic significance of petrographic associations. Thermodynamic interpretation and modelling of petrogenetic processes, including experimental investigations. Petrochemical and petrophysical rock characterization. Geological survey and petrogenetic/structural studies of igneous complexes. Evolution of the Earth and planetary bodies.

Scientific productivity

Publication of scientific papers in high-rank international scientific journals. Attendance to national and international congresses. Outreach activities. Set up and management of analytical laboratories, including laser ablation and mass spectrometry

Head office

Department of Geosciences

Specific didactic activity of the contract

Teaching petrology topics, at undergraduate and graduate levels. Student tutoring

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

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Department of Political Sciences

Admission Examination Sector 14/D1 Economic sociology, sociology of work, urban and environmental sociology

SSD SPS/09 Economic sociology and sociology of work and organizations

Nr. of position available: 1

Focus of research

The research activity will concern the relationship between society and the world of goods production and of work and professions, and the social impact of the transformations related with the production and distribution of wealth

Scientific productivity

Articles, both in Italian and English, in outstanding national and international journals, or essays for books edited by renowned publishers, on topics of concern for the research field, as well as paper presentations at national and international conferences.

Head office

Department of Political Sciences

Specific didactic activity of the contract

Courses belonging to the SSD SPS/09

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications

Department of Political Sciences

Admission Examination Sector 11/E3 Social psychology and work and organizational psychology

SSD M-PSI/05 Social psychology

Nr. of position available: 1

Focus of research

The scientific activity will focus on the study of social, cultural and organisational phenomena, taking as its specific point of view the study of psychological and relational processes that at different levels (individual, interpersonal, intra- and inter-group, organisational) influence the system of cognitions, emotions, motivations and actions of individuals and social groups in different systems and contexts of life, combined with applicative knowledge aimed at supporting the proper functioning of these systems and contexts. It also includes scientific and disciplinary competences related to the methods and techniques of research in Social Psychology

Scientific productivity

Publications in recognised national and international journals with an impact as regards bibliometric indicators in databases commonly used in the scientific disciplinary sector of Social Psychology, as well as communications at prestigious national and international conferences and congresses.

Head office

Department of Political Sciences

Specific didactic activity of the contract

The teaching activity will be related to the SSD of Social Psychology

Candidates will be required to demonstrate an adequate knowledge of **English** language

Candidates may present a maximum number of **12** scientific publications