



UNIVERSITÀ DI PISA

Excerpt from the Rector's decree n. 968/2022

Call for the selection of n. 15 Junior Research Fellows

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

The University of Pisa announces a call for 15 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

Deadline for application: 01/08/2022 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@cinca.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/E1 General biochemistry

Ssd BIO/10 Biochemistry

Nr. of position available: 1

Focus of research

In agreement with the declaration of the disciplinary sector BIO/10 (Biochemistry), the research will deal with the study of the properties of proteins and of the molecular mechanisms involved in their regulation

Scientific productivity

Scientific production will consist in the publication of papers on scientific international peer-reviewed journals with IF, in the dissemination of research results by oral/poster communications at national and international meetings, and in scientific collaborations with national and international institutions

Head office

Department of Biology

Specific didactic activity of the contract

The teaching activity will be held within courses belonging to the disciplinary sector BIO/10 and will consist in frontal lectures and laboratory activities according to the yearly teaching plan of the Department of Biology and of other Departments of the University of Pisa requiring competence specific of the BIO/10 sector. Teaching activity will also include the supervision of undergraduate students, and seminars for the "Biochemistry and Molecular Biology" PhD program

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/C1 Organic chemistry

Ssd CHIM/06 Organic chemistry

Nr. of position available: 1

Focus of research

Study of carbon-containing compounds, both of natural and synthetic origin. Development of efficient and environmentally friendly synthesis methodologies, also based on (stereo)selective and catalytic approaches; elucidation of the mechanisms by which organic compounds are formed and transformed both in the laboratory and in natural and environmental systems, structural characterization, and structure-reactivity relationships. Design of the synthesis of biologically active compounds and new organic materials

Scientific productivity

Achieve scientific autonomy, also through the supervision of BSc, MSc and PhD theses. International scientific publications and access to competitive research calls. Dissemination of research results through communications at national and international congresses, and in activities aimed at the public and on the web

Head office

Department of Chemistry and Industrial Chemistry

Specific didactic activity of the contract

Laboratory and theoretical courses of Organic Chemistry in BSc and MSc programs of the University of Pisa, compatibly with the minimum and maximum commitments defined by law and by the University Regulations for the role of RTD-A

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 03/D1 Medicinal, toxicological and nutritional chemistry and applied technologies

Ssd CHIM/08 Pharmaceutical chemistry

Focus of research

The research activity will concern the key topics of the scientific-disciplinary sector, focusing in particular on the design, synthesis and functional evaluation of synthetic compounds endowed with functional efficacy

Scientific productivity

Filing of a patent application by 30 June 2023. Acceptance of a consistent number of articles in indexed international journals congruent with the recruitment field by the end of the contract. Dissemination of the

research achievements in national and international conferences and on the web

Head office

Department of Pharmacy

Specific didactic activity of the contract

The teaching activity and the service to students will be carried out within the courses provided by the degree and master courses of the Department of Pharmacy, and the other Departments of the University of Pisa, and covering the key topics of the recruitment field

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

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

A4

Department of Computer Science

Admission Examination Sector 01/B1 Informatics

Ssd INF/01 Informatics

Nr. of position available: 1

Focus of research

Research activities will be conducted in the fields of the academic discipline INF/01 “Informatics”, with particular reference to the design and development of predictive models of agronomic parameters based on machine learning and simulation methods, to be applied on data collected through sensors. The activity will include the integration of these models into prototypes of ICT platforms for crops monitoring, with the aim of preparing one or more patent proposals and taking actions to favor the transfer of the developed technologies

Scientific productivity

Contribute to the progress of the state of art in Computer Science by means of international-level publications and development of innovative technologies that lead to the presentation of patent proposals and to technology transfer and public engagement actions

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

A5

Department of Civil and Industrial Engineering

Admission Examination Sector 08/B1 Geotechnics

Ssd ICAR/07 Geotechnics

Nr. of position available: 1

Focus of research

The scientific commitment will concern the specific topics of the scientific sector ICAR/07 (Geotechnics) with particular attention to reuse of waste materials in binary mixtures with sand (or gravel) for the purpose of seismic isolation of buildings. The research activity will be oriented to the: selection of mixtures suitable for seismic isolation; optimal definition of the percentage by weight of the materials constituting the mixture; determination of the mechanical and dynamic characteristics of the materials and developed mixtures via geotechnical laboratory tests; definition of the minimum thickness of the mixture layer to be inserted below the foundation by means of numerical and/or experimental studies; development of a new technique for installing the isolating layer in the case of existing structures/buildings

Scientific productivity

Scientific production aim: at least 3 publications on international journals and 3 oral presentations at national and/or international conferences relevant to the geotechnical field

Head office

Department of Civil and Industrial Engineering

Specific didactic activity of the contract

The contract includes 350 hours of supplementary teaching and assistance to students, for each academic year covered by the contract. The contract shall schedule 60 hours of teaching on annual basis

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

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

A6

Department of Civil and Industrial Engineering

Admission Examination Sector 09/A1 Aeronautical and aerospace engineering and naval architecture

Ssd ING-IND/05 Aerospace equipments and systems

Nr. of position available: 1

Focus of research

Typical themes of Aerospace Systems, with special reference to the preliminary design of the spacecraft flight systems, the spacecraft guidance and control, and the spacecraft trajectory and orbital analysis. The analysis and test methods will be mainly performed through modeling and simulation, from both analytical and numerical viewpoint

Scientific productivity

The scientific activity is devoted to writing scientific papers on international peer-reviewed journals of high IF, with special attention on the development of systems strictly related to the technology employed on spacecraft equipped with propellantless systems such as solar sails and electric solar wind sails. In parallel with this activity, a local dissemination of the main results will be made through meetings with high school students and with special events aimed at awakening stakeholders to the use of advanced technologies with a low environmental impact for mitigating the space debris problem in the space regions used by commercial satellites. The knowledge obtained during the research period could be effectively used to write a patent idea that takes into account the actual resources in the territory

Head office

Department of Civil and Industrial Engineering

Specific didactic activity of the contract

Didactic and servicing activity in the scientific area ING-IND/05 within the Aerospace Engineering MS course and within the Ph.D. course of Industrial Engineering

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

Candidates may present a maximum number of **16** scientific publications

A7

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

Electric Power Systems in general; Electric vehicles; electric storage systems

Scientific productivity

Scientific papers on International conferences and Journals; patents

Head office

Department of Energy, Systems, Territory, and Construction Engineering

Specific didactic activity of the contract

Courses of the SSD ING-IND/33

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

Candidates may present a maximum number of 12 scientific publications

Department of Information Engineering

Admission Examination Sector 09/G2 Bioengineering

Ssd ING-INF/06 Electronic and informatics bioengineering

Nr. of position available: 1

Focus of research

Development of research activities directed towards technology and knowledge transfer pertinent to the scientific discipline ING-INF/06- Electronics and Informatics Bioengineering

Scientific productivity

Significant advances in topics within the area 09/G2 documented by patents, high quality peer-reviewed publications and participation in events linked to knowledge transfer as well as in national and international research projects

Head office

Department of Information Engineering

Specific didactic activity of the contract

Courses within the area 09/G2 (SSD ING-INF/06)

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

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

Department of Translational Research and of New Surgical and Medical Technologies

Admission Examination Sector 06/M1 Hygiene, public health, nursing and medical statistics

Ssd MED/42 Hygiene and public health

Nr. of position available: 1

Focus of research

The candidate should have extensive experience in the various aspects of hygiene and public health, in particular epidemiology, management, health monitoring and evaluation. He/she should be involved in public health research projects, with a focus on prevention of infectious diseases, vaccine hesitancy, social determinants of health and vulnerable populations. He/she should be able to work in an interdisciplinary and international environment.

Scientific productivity

The candidate will be expected to participate in the drafting of manuscripts related to the research activities described above, as well as to write position papers and informative articles to raise awareness of the health needs of vulnerable populations.

Head office

Department of Translational Research and of New Surgical and Medical Technologies

Specific didactic activity of the contract

The candidate will have to carry out teaching activities in three-year and single-cycle degrees in the health area and in post-graduate schools (masters, doctoral courses, specialisation schools) where there are teaching courses related to SSD MED/42.

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

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

A10

Department of Agricultural, food and agro-environmental sciences

Admission Examination Sector 07/F1 Food science and technology

Ssd AGR/15 Food science and technology

Nr. of position available: 1

Focus of research

In agreement with the declaration of the disciplinary sector AGR/15, with particular regard to the patenting of nutraceutical oils with low environmental impact called "Cryo-citrus olive oils. waste free (without production waste)".

The patent idea is able to fully enhance both the olive oil sector and the citrus production chain, allowing the recovery of all the by-products of citrus and olive processing. The production process would be fully in line with the demands of the modern consumer who wants to buy foods with high nutraceutical properties but with basically no environmental impact. Furthermore, these innovative vegetable oils could be used not only for direct consumption but also in cooking preparations that currently tend to limit the use of extra virgin olive oil because it has too much impact from a sensorial point of view

Scientific productivity

Publication of scientific articles in high impact international scientific journals. Participation in national and international congresses. Seminar and dissemination activity. Development and management of analytical and operational protocols (process and product)

Head office

Department of Agricultural, food and agro-environmental sciences

Specific didactic activity of the contract

The researcher will hold teaching activities within the training activities of the disciplinary sector AGR/15 in the field of food technologies. The number of hours foreseen will be compatible with the number of hours foreseen by the regulations in force. The organization of educational laboratories in order to transfer technical-analytical skills will also be the subject of the researcher's didactic activity

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

Candidates may present a maximum number of **19** scientific publications

A11

Department of Agricultural, food and agro-environmental sciences

Admission Examination Sector 05/A2 Plant physiology

Ssd BIO/04 Plant physiology

Nr. of position available: 1

Focus of research

In agreement with the declaration of the disciplinary sector BIO/04, with particular regard to the physiological response of plants to various environmental stresses with particular reference to adaptation to inert growth substrates obtained from the recycling of cigarette butts

Scientific productivity

Two annual publications in journals indexed in Q1 and as many publications in scientific-popular journals are hypothesized. Furthermore, annual participation in at least one International and one domestic Congress is assumed, both linked to the research topics

Head office

Department of Agricultural, food and agro-environmental sciences

Specific didactic activity of the contract

Carrying out the practices of the courses of Plant Physiology (Agricultural Sciences, 24h) and Plant Physiology (Sciences of Herbal and health products, 16h), and tutoring activities for the preparation of the final defenses of about 10 bachelor and 2 master students per year

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 Veterinary Sciences

Admission Examination Sector 07/H4 Veterinary clinical medicine and veterinary pharmacology

Ssd VET/07 Veterinary pharmacology and toxicology

Nr. of position available: 1

Focus of research

Research topics contained in the declaration of the SSD VET/07 with particular regard to study of veterinary drugs with particular regard to the prudent use of antibiotic drugs and tools for reducing antibiotic resistance; study of the effects of toxic substances in relation to animal welfare and the environment, their influence on livestock production and the possibility of using animals as biological indicators of environmental contamination

Scientific productivity

Publications of scientific papers in national and international journals and presentations at national and international conferences.

Head office

Department of Veterinary Sciences

Specific didactic activity of the contract

Courses relevant for the SSD VET/07

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/A3 Public economics

Ssd SECS-P/03 Public economics

Nr. of position available: 1

Focus of research

Topics falling within the declaration of the SSD SECS-P03, with particular regard to the study of the public sector of the economy and its interactions with the private one, conducted above all through the application of economic analysis, also in a comparative perspective. The research topics are the formation of collective choices, the justification of public intervention, the organization of the production of public and collective goods, the territorial structure of the public sector, as well as the macro- and micro-economic aspects of public intervention in economy, through budgetary and/or regulatory policies (fiscal, environmental, health, social security policy), taxation and the study of its impact, the supply, production and financing of public services”

Scientific productivity

Production of articles in national and international journals, participation in conferences and research groups relating to the sector

Head office

Department of Economics and Management

Specific didactic activity of the contract

Courses in Italian and English at the undergraduate and graduate programmes of the Department of Economics and Management relevant to the sector

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

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

A14

Department of Philology, Literature and Linguistics

Admission Examination Sector 10/L1 English and anglo-american languages, literatures and cultures

Ssd L-LIN/12 - Language and translation - English

Nr. of position available: 1

Focus of research

The researcher's scientific activity will be carried out within the academic disciplinary field L-LIN/12, with special emphasis on responsible research and innovation that guarantees transparency and reduces the distance between science and society, while supporting diversity and inclusion. The researcher will contribute to the in-depth analysis of the evidence obtained by senior researchers at the Department of Philology, Literature and Linguistics regarding the difficulties that some learners of English with dyslexia experience in pragmatic text processing. The researcher will also be expected to collaborate on the design and implementation of projects aimed at raising awareness on these issues, at disseminating and transferring knowledge and applying research findings. The intention is to contribute significant knowledge for the advancement of academic research and for its practical applications

Scientific productivity

The research will primarily focus on the strategies potentially capable of enhancing pragmatic textual accessibility for English learners with dyslexia. Such strategies must support the inferential abilities necessary for the successful comprehension of complex textual information, which is a task that can pose challenges to learners with and without dyslexia alike. For this reason, in addition to formative and awareness raising activities, the researcher's work will be disseminated through scientific publications on the interpretation of pragmatic meanings in English texts in reputable academic journals that focus on reading comprehension and dyslexia (es. *Dyslexia*, *Annals of Dyslexia*, *Journal of Pragmatics*, *Pragmatics and Cognition*, *Journal of Research in Reading*) and on applied linguistics and English language teaching research (es. *Rassegna Italiana di Linguistica Applicata*, *Studi Italiani di Linguistica Applicata*, *Lingue e Linguaggi*, *Reading in a Foreign Language*)

Head office

Department of Filologia, letteratura e linguistica

Specific didactic activity of the contract

The researcher will give lectures and seminars grounded in original and innovative research to students of Bachelor's and Master's degree programmes which include courses tackling aspects of the pragmatic interpretation of texts and the underlying inferential processes

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 Civilisations and Forms of Knowledge

Admission Examination Sector 11/C5 History of philosophy

Ssd M-FIL/06 History of philosophy

Nr. of position available: 1

Focus of research

Experience required in the study of the genesis and historical development of philosophy, identifying theories, perspectives and results in chronologically defined historical-cultural contexts and established in relation to specific theoretical orientations whose recognition requires expertise in a specific methodology of historical and historiographic research. This expertise should be supported by specialized linguistic knowledge regarding philologically based analysis techniques, by the ability to interpret dialogue between philosophy and other fields of knowledge, including theories and practices of transmission, communication, and teaching of philosophy, as well as by the ability to reconstruct philosophical issues in their historical development along a broad chronological span, from antiquity to contemporary age

Scientific productivity

Scientific productivity will concern the following area: study of the genesis and historical development of philosophy, also in reference to other areas of knowledge, as well as critical reflections on historiographical theories and methodologies in the field of philosophical thought and its teaching. The expected results will be interpretative essays and historiographical reconstructions discussed and published in journals of national and international importance. A specific knowledge transfer and public engagement activity is also envisaged for training agencies, public institutions and local companies (stakeholders).

Head office

Department of Civilisations and Forms of Knowledge

Specific didactic activity of the contract

Teaching in the M-Fil/06 sector is anticipated, with particular expertise in the field of the history of philosophy and of the didactics of philosophy, at various levels of the school education system and also in out-of-school contexts

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

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