



UNIVERSITÀ DI PISA

Excerpt from the Rector's decree n. 342/2023

Call for the selection of n. 24 Senior Research Fellows

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

The University of Pisa announces a call for 24 Senior Fixed-Term Research Fellows for the Departments and the Academic Fields or Academic Disciplines 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 Senior Research Fellow is required to perform lectures for a minimum of 48 up to a maximum of 96 hours per academic year, allocated as an institutional assignment for Bachelor's and Master's degree programs, Specialization Schools and PhD programs.

Contract duration: 3 years

Deadline for application: 31st of March 2023, 1 p.m.

Admission requirements:

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

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:

<https://www.unipi.it/index.php/titoli-accademici-esteri>

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.

Candidates are required to declare what follows:

1. To enjoy the full rights of citizenship in their home State
2. Not to have been convicted or found guilty of any criminal offence; in the event of any conviction, it is mandatory to provide the details of the relevant judgments and any pending criminal proceedings;
3. Not to have been dismissed or dispensed from employment by a Public Administration for persistent unsatisfactory performance; not to have been lapsed from State employment, in compliance with art. 127, first paragraph, point d) of the Consolidation Act of Provisions concerning the State civil servants approved by Presidential Decree no. 3 of 10 January 1957;

4. to be registered on the electoral roll.

Required qualifications:

to have been employed as a Fixed-Term Research Fellow for a three- year period already completed by the application's deadline; (Under the Italian Law 240/2010, article 24, subparagraph 3, point b)

or

to be a researcher, a scholar or a scientist holding the Italian National Certification for Full or Associate Professor (Under the Italian Law 240/2010 article 16);

or

to hold a Postgraduate School qualification for the relevant medical fields;

or

to have had at least a three-year period of contracts, even when not consecutive and already completed by the application's deadline, performed with:

- research grants (under the Italian Law 449/97, art 51, subparagraph 6 or the Italian Law 240/2010 article 22 or comparable academic contracts abroad)
- post PhD grants (under the Italian Law 398/1989, article 4 or comparable academic contracts abroad)
- contracts concluded in compliance with the Law no. 230 of 4 November 2005, art. 1, paragraph 14.

Please note: the above-mentioned three-year period could aggregate: Fixed-Term Research Fellowship, post PhD research grants and fellowship in foreign Universities (under DM 662/2016).

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 n. 240/2010, articles 22 and 24) for a period that, totaled 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/ric2023b1/> 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.

Information about date, time, list of candidates admitted, and the conditions of the assessment interview will be published on the University website at the following link: <https://bandi.unipi.it/public/Bandi?type=RIC> , in the specific section reserved to the selection, 45 days after the deadline for the submission of the applications (with a twenty days' notice guarantee).

The publication on the University website is to be regarded as convocation notice for the participants to the selection, who must show the day and time indicated; no further communications will be published. The failed attendance to the interview will be considered as a voluntary waiver to the selection.

Selection Committee meetings for purposes other than qualifications and publications assessment may be held remotely, in whole or in part, using a video meeting platform, in compliance with the Regulation

“Regolamento temporaneo per lo svolgimento delle sedute collegiali in modalità telematica” art. no. 2,3 and 4, referred to in the Rectoral Decree no. 491/2020 of 6 March 2020 and subsequent amendments, as well as with the Rectoral Decree no. 1099/2020 of 7 August 2020, art. 3.

Qualifications and publications assessment will be held “in-presence”, pursuant to the Rectoral Decree no. 1099/2020 of 7 August 2020, art. 1, and in compliance with the “Safety Protocol against Covid-19 Spread. Guidelines for in-presence Selection Procedures”, issued by the Rectoral Decree no. 1011/2020 of 21 July 2020.

At least one member of the Selection Committee shall be present during the qualifications and publications assessment; the other Committee members can attend the selection procedure either “in-presence” or remotely, in compliance with the Regulation “Regolamento temporaneo per lo svolgimento delle sedute collegiali in modalità telematica”.

In the event of “in-presence” selection procedures also attended remotely by one or more Committee member, it shall be specified that the session is held “in-presence”, allowing however one or more Committee member to attend remotely and indicating the possible operating procedures for attendance; the selection minutes must include both the names of the members “in presence” and remotely connected, along with the operating platform used.

In order to ensure a limited access to the premises where the qualifications and publications assessment is carried out, auditors shall be allowed in (in compliance with the aforementioned Safety Protocol) only upon written request to be emailed at least two days before the selection procedure to concorsi_ricercatori@unipi.it. Live Streaming will be provided at <https://www.unipi.it/index.php/concorsi-gare-e-bandi> (see the relevant section) to guarantee the publicity of the qualifications and publications assessment.

Upon the Selection Committee approval, candidates living abroad and therefore unable to attend the “in-presence” interview at the University of Pisa, will be interviewed via web, prior their identification by approved international universities or research centers. The Selection Committee is appointed to assure the duly examination of the candidates and shall collect their ID copy.

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://bandi.unipi.it/public/Bandi?type=RIC>

Selection code A1

Department of Chemistry and Industrial Chemistry

Academic Recruitment Field 03/A2 Models and Methods for Chemistry

Academic Discipline CHIM/02 Physical Chemistry

Nr. of position available: 1

Focus of research

Research activities within the scope of the AD CHIM/02 with special reference to the study of the structural and dynamic properties, at a molecular and supramolecular level, of complex systems (having an organic, inorganic or hybrid nature) in solid phases through spectroscopic experimental methods.

Scientific productivity:

Publications on international peer-reviewed scientific journals, access to competitive research calls, dissemination of research results in national and international conferences, development of methods and protocols for experiments and data analysis, attainment of a full scientific autonomy also through the supervision of Master and PhD students.

Head office: Department of Chemistry and Industrial Chemistry

Specific teaching activity of the contract

Courses pertinent to the disciplines of the physical chemistry scientific area.

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

Candidates may present a maximum number of 15 scientific publications.

Selection code A2

Department of Civilisations and Forms of Knowledge

Academic Recruitment Field 11/C4 Aesthetics and Philosophy of Languages

Academic Discipline **M-FIL/05** Philosophy and Theory of Language

Focus of research

Study of the different forms and articulations of the theoretic investigation on language and communication and of the role of the linguistic and communicative dimension in the context of other significant aspects of human experience, with a particular focus on representational and inferential formal semantics.

Scientific productivity

Participation in national and international conferences. Publication of papers in national or international journals.

Head office: Department of Civilisations and Forms of Knowledge

Specific teaching activity of the contract

Philosophy of Language and Philosophy of Communication courses aimed at students of bachelor's and post graduate Master's degree in Philosophy and Studies in Performing Arts and Communication (DISCO).

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

Candidates may present a maximum number of 12 scientific publications.

Selection code A3

Department of Civilisations and Forms of Knowledge

Academic Recruitment Field 11/C5 History of Philosophy

Academic Discipline **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, as well as by the ability to reconstruct philosophical issues in their historical development especially from Renaissance to Early modern 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. The expected results will be interpretative essays and historiographical reconstructions discussed and published in journals of national and international importance.

Head office: Department of Civilisations and Forms of Knowledge

Specific teaching activity of the contract

Teaching in the M-Fil/06 Academic Discipline is anticipated, with particular expertise in the field of the history of philosophy.

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

Candidates may present a maximum number of 12 scientific publications.

Selection code A4

Department of Civilisations and Forms of Knowledge

Academic Recruitment Field 10/C-1 Cinema, Music, Performing Arts, Television and Media Studies

Academic Discipline **L-ART/06** Cinema, Photography and Television

Nr. of position available: 1

Focus of research

The research activity shall be related to the Academic Discipline L-ART/06, that is to say on theoretical as well as historical aspects of audio-visual media, focusing on cinema and television, but taking into account also photography and new visual technologies, according to a perspective both diachronic and synchronic, and considering the techniques and specificities of particular products such as electronic arts and experimental films.

Scientific productivity

The objectives of scientific productivity are aligned with the indications of evaluation aimed at obtaining the national scientific qualification and the VQR. The scientific production shall demonstrate continuity in time and be relevant at a national as well as international level.

Head office: Department of Civilisations and Forms of Knowledge

Specific teaching activity of the contract

Teaching activities shall refer to the Corso di studi in Discipline dello spettacolo e della comunicazione, with particular reference to the following courses, all belonging to the AD L-ART/06: History of radio, TV and electronic arts, Film and the arts.

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

Candidates may present a maximum number of 12 scientific publications.

Selection code A5

Department of Economics and Management

Academic Recruitment Field 13/B2 Management

Academic Discipline **SECS-P/08** Management

Nr. of position available: 1

Focus of research

The issues included in the declaratory judgement of the Academic Discipline SECS-P/08

Scientific productivity

Publications in prestigious journals and participation to national and international research projects

Head office: Department of Economics and Management

Specific teaching activity of the contract

Courses mainly related to the AD SECS-P/08 “Economia e gestione delle imprese”, offered by the Department of Economics and Management.

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

Candidates may present a maximum number of 12 scientific publications.

Selection code A6

Department of Pharmacy

Academic Recruitment Field 03/C1 Organic Chemistry

Academic Discipline **CHIM/06** Organic Chemistry

Nr. of position available: 1

Focus of research

Scientific activity will cover topics specific to the Academic Discipline CHIM/06, in particular the development of efficient and environmentally friendly synthetic methodologies, also based on stereoselective approaches for the obtainment of organic compounds also biologically active and of new organic materials.

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 meetings, filing of patents.

Head office: Department of Pharmacy

Specific teaching activity of the contract

Courses in the field of Organic Chemistry for training activities of the AD CHIM/06 for the Bachelor and Master's degree courses of the University of Pisa.

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

Candidates may present a maximum number of 15 scientific publications.

Selection code A7

Department of Philology, Literature and Linguistics

Academic Recruitment Field 10/L1 English and Anglo-American Languages, Literatures and Cultures

Academic Discipline L-LIN/12 Language and Translation - English

Nr. of position available: 1

Focus of research

The phonological, morphological, syntactic, lexical, textual and pragmatic structures of the English language, from both a synchronic and a diachronic perspective; the levels and registers of oral and written communication; the theories and practices of translation - _literary and nonliterary, general and specialized, and its applications to multimediality (including translation and interpreting as in art. 1 L.478/84.

Scientific productivity

Publications in peer-reviewed journals at national and international level; publications in scientific volumes.

Head office: Department of Philology, Literature and Linguistics

Specific teaching activity of the contract

BA and MPhil degree courses; participation in the doctoral seminars active in the Department.

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

Candidates may present a maximum number of 12 scientific publications.

Selection code A8

Department of Physics

Academic Recruitment Field 02/A1 Experimental Physics of Fundamental Interactions

Nr. of position available: 1

Focus of research

Research activities in the fields of the Academic Recruitment Field 02/A1.

Scientific productivity

Contributions advancing the state of art of research in the field. Full scientific independence, possibly including the supervision of BSc, MSc, and PhD theses. Publication of research in peer-reviewed, international journals. Presentation of research results in national and international conferences.

Head office: Department of Physics

Specific teaching activity of the contract

Courses on basic physics and specialist courses in experimental physics of fundamental

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

Candidates may present a maximum number of 12 scientific publications.

In the application, candidates should attach a summary of their previous research.

Selection code A9

Department of Physics

Academic Recruitment Field 02/C1 Astronomy, Astrophysics, Earth and Planetary Physics

Academic Discipline: **FIS/05** Astronomy and Astrophysics

Nr. of position available: 1

Focus of research

Research activities in the fields of the Academic Recruitment Field 02/C1, AD FIS/05 “Astronomy and astrophysics”

Scientific productivity

Contributions advancing the state of art of research in the field. Full scientific independence, possibly including the supervision of BSc, MSc, and PhD theses. Publication of research in peer-reviewed, international journals. Presentation of research results in national and international conferences.

Head office: Department of Physics

Specific teaching activity of the contract

Courses on basic physics and specialist courses in astronomy and and astrophysics

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

Candidates may present a maximum number of 12 scientific publications.

In the application, candidates should attach a summary of their previous research.

Selection code A10

Department of Law

Academic Recruitment Field 12/C1 Constitutional Law

Academic Discipline IUS/08 Constitutional Law

Nr. of position available: 1

Focus of research

The main object of the research will be the study of the constitutional organization of the State, individual and collective fundamental rights, and the relationship between the domestic and supranational legal systems, according to an interdisciplinary method, taking into account the plural dimension of sources of law and judicial protection.

Scientific productivity

Production of a monographic work and essays or contributions in peer-reviewed journals and collective works related to the research area and the teaching subjects.

Head office: Department of Law

Specific teaching activity of the contract

Teaching, supplementary teaching and assistance to students in the AD IUS/08, in the «Laurea magistrale a ciclo unico in Giurisprudenza» and «Laurea magistrale in Diritto dell'Innovazione per l'impresa e le istituzioni» courses, for each academic year connected.

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

Candidates may present a maximum number of 12 scientific publications.

Selection code A11

Department of Law

Academic Recruitment Field 12/H3 Philosophy of Law

Academic Discipline IUS/20 Philosophy of Law

Nr. of position available: 1

Focus of research

The selected researcher shall conduct investigations related to the specified disciplinary area. The research, therefore, should focus on either the “theoretical, ontological, axiological, deontological and epistemological dimension of the law”, or the fields of “general theory of law and the State, legal sociology, the legal problems in bioethics and legal computer science”, or both. Particular attention should be devoted to the historical-philosophical aspects of the aforementioned topics.

Scientific productivity

The researcher shall publish monographic works and/or peer-reviewed articles, organise national and international conferences, present papers and reports at national and international conferences, participate in seminars and research meetings at universities and other research institutions, in Italy and abroad, related to the aforementioned research field and the teaching subjects associated with it.

Head office: Law Department of the University of Pisa

Specific teaching activity of the contract

Direct teaching in curricular subjects, supplementary teaching activity, and other services for students related to the subject area IUS/20.

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

Candidates may present a maximum number of 12 scientific publications.

Selection code A12

Department of Civil and Industrial Engineering

Academic Recruitment Field 08/B2 Structural Mechanics

Academic Discipline ICAR/08 Structural Mechanics

Nr. of position available: 1

Focus of research

The selected candidate is expected to carry out scientific research at international level, both at fundamental level and oriented towards the applications in Civil and Industrial Engineering. The research activity, which will be concerned with the themes peculiar to the AD ICAR/08, will make constant reference to the methods of mathematical-physics and will address topics of the mechanics of solids, structures and materials, with particular attention to classical and more recently developed themes, within the ongoing lines of research in the department.

Scientific productivity

The scientific activity foresees the participation and the management and scientific coordination of research projects and collaboration at national and international level, funded by public or private bodies, the preparation of scientific papers for publication on international journals or for presentation during national and international Conferences.

Head office: Department of Civil and Industrial Engineering

Specific teaching activity of the contract

The teaching commitment will consist of bachelor and master courses in the AD ICAR/08 of the School of Engineering of Pisa, up to the completion of the teaching tasks as established by the University regulations; it may also include teaching in doctoral and post-graduate specialization courses.

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

Candidates may present a maximum number of 12 scientific publications.

Selection code A13

Department of Civil and Industrial Engineering

Academic Recruitment Field **09/A1** Aeronautical and Aerospace Engineering and Naval Architecture

Academic Discipline **ING-IND/03** Flight Mechanics

Nr. of position available: 1

Focus of research

The research activity involves typical themes of Flight Mechanics, with special reference to the preliminary design, flight performance and trajectory of advanced space vehicles. The analysis and test methods will be mainly performed through modeling and simulation.

Scientific productivity

The scientific activity is devoted to writing scientific papers on international peer-reviewed journals, to presenting its main results at national and international conferences, to participating to national and international research programs in cooperation with national or international universities/agencies and private companies. The focus is on spacecraft trajectories of vehicles driven by propellantless propulsion systems.

Head office: Department of Civil and Industrial Engineering

Specific teaching activity of the contract

Didactic and servicing activity in the AD ING-IND/03 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 15 scientific publications.

Selection code A14

Department of Energy, Systems, Territory, and Construction Engineering

Academic Recruitment Field 09/E1 Electrical Engineering

Academic Discipline **ING-IND/31** Electrical Engineering

Nr. of position available: 1

Focus of research

Research activities in the areas of applied electromagnetics; more in detail: theoretical and experimental aspects and the development of applications; analysis, synthesis, numerical modeling and automatic design of equipment, devices and electrical systems; plasma engineering, thermonuclear fusion, particle accelerators, electrothermics, electromagnetic compatibility; quality, safety and environmental impact of electrical applications; signal processing circuits, adaptive circuits and neural networks, power electronics and electricity conversion.

Scientific productivity

The scientific activity involves participation in research projects financed by public or private entities, the preparation of scientific articles for national and international publications, both in international journals and scientific conferences and the filing of industrial patents.

Scientific productivity must be consistent with the AD ING-IND/31.

Head office: Department of Energy, Systems, Territory, and Construction Engineering

Specific teaching activity of the contract

The teaching activity will be carried out within the mainframe of the AD ING-IND/31, and will consist of lectures activities for the students, according to the needs of the teaching programs. Tutoring activity in the preparation of thesis and doctoral theses. The total annual commitment for the teaching activities, supplementary teaching and service to students will follow the University regulations.

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

Candidates may present a maximum number of 12 scientific publications.

Selection code A15

Department of Energy, Systems, Territory, and Construction Engineering

Academic Recruitment Field 08/A2 Sanitary and Environmental Engineering, Hydrocarbons and Underground Fluids, Safety and Protection Engineering

Academic Discipline **ICAR/03** Sanitary and Environmental Engineering

Nr. of position available: 1

Focus of research

Research activities within the scope of the AD ICAR/03 with special reference to waste management and valorization with reference to anaerobic digestion of residual organic matrices with recovery of energy and materials; technical management of landfills with particular reference to biogas and leachate management; characterization and remediation of contaminated soils and sediments with particular attention to landfill mining, electrokinetic remediation techniques, natural remediation techniques; Life cycle analysis and assessment of impacts on water, air and soil component - in general, all research topics pertaining to sanitary- environmental engineering; commitment to actively contribute to the experimental and management activities of the sanitary-environmental engineering laboratory.

Scientific productivity:

At least # 9 articles published or accepted for publication in indexed international journals with impact factor during the three-year term of the contract.

Head office: Department of Energy, Systems, Territory, and Construction Engineering

Specific teaching activity of the contract

Waste management and environmental remediation; environmental impact assessment, other possible teaching activities within the scope of the AD.

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

Candidates may present a maximum number of 12 scientific publications.

Selection code A16

Department of Energy, Systems, Territory, and Construction Engineering

Academic Recruitment Field 09/B3 Business and Management Engineering

Academic Discipline **ING-IND/35** Business and Management Engineering

Nr. of positions available: 1

Focus of research:

The domain of research includes issues of design of management processes, of organizations, of management systems and business operations (manufacturing, logistics, marketing, quality), economics and management of innovation, productivity analysis, management of Information and Communication Technologies (ICT), relationship with the market.

In general, the research domain is defined with respect to the topics included in the official description of the Academic Discipline Management Engineering.

Scientific productivity:

The scientific activity will result in participation to national and international research projects, publication of articles in international and indexed journals, presentation of paper to national and international scientific conferences. Scientific production must be consistent with the reference to the AD ING-IND 35.

Head office: Department of Energy, Systems, Territory, and Construction Engineering.

Teaching activity of the contract:

Basic and advanced courses within the AD ING-IND 35. Supervision of undergraduate and PhD dissertations. The total amount of time devoted to overall teaching activities is regulated by the University of Pisa

Candidates may present a maximum number of 12 scientific publications.

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

Selection code A17

Department of Information Engineering

Academic Recruitment Field 09/G1 Systems and Control Engineering

Academic Discipline **ING-INF/04** Systems and Control Engineering

Nr. of positions available: 1

Focus of research

Research activities related to the Academic Discipline **ING-INF/04** Systems and Control Engineering

Scientific productivity

Advances in the state of the art in the topics within the Academic Field 09/G1, documented by high quality publications in peer reviewed journals; capability of acquiring funds for scientific and technological research and development at the local, national, and international level.

Head office: Department of Information Engineering.

Teaching activity of the contract

Basic and advanced courses within the AD **ING-INF/04**.

Candidates may present a maximum number of 12 scientific publications.

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

Selection code A18

Department of Information Engineering

Academic Recruitment Field 09/H1 Information Processing Systems

Academic Discipline **ING-INF/05** Information Processing Systems

Nr. of positions available: 1

Focus of research

Research activities related to the Academic Discipline **ING-INF/05** Information processing systems.

Scientific productivity

Publication of papers on qualified international scientific journals; participation to international conferences; involvement in national and international research projects.

Head office: Department of Information Engineering

Teaching activity of the contract

Teaching activity in courses of the AD **ING-INF/05** Information processing systems. Management of the teaching activities and projects.

Candidates may present a maximum number of 12 scientific publications.

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

Selection code A19

Department of Mathematics

Academic Recruitment Field 01/A2 Geometry and Algebra

Academic Discipline **MAT/02** Algebra

Nr. of positions available: 1

Focus of research

Study of properties and classification of algebraic structures, both commutative and noncommutative, including the computational techniques, as well as 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: Pisa, except for academic trips organised by the Department.

Teaching 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 may present a maximum number of 12 scientific publications.

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

Selection code A20

Department of Mathematics

Academic Recruitment Field 01/A2 Geometry and Algebra

Academic Discipline **MAT/03** Geometry

Nr. of positions 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

Teaching 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 may present a maximum number of 12 scientific publications.

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

Selection code A21

Department of Clinical and Experimental Medicine

Academic Recruitment Field 05/F1 Experimental Biology

Academic Discipline **BIO/13** Experimental Biology

Nr. of positions available: 1

Focus of research

Research activities within the framework of the Academic Discipline BIO/13 and concerning the integrated study of the cell and living organisms, regarding the basic mechanisms involved in the following processes: expression, duplication and transmission of genetic information, development, differentiation, cell proliferation, biogenesis of organelles and cellular structures, interaction between cells, biological bases of behaviour and evolution.

Biotechnology and general and molecular genetics applications of knowledge in the above processes are a relevant aspect of the field. The use of all advanced biological technologies, including recombinant technologies and the use of transgenic animals, is essential to the achievement of the stated objectives.

Scientific productivity

Publication of scientific results in peer reviewed international journals, quoted in PubMed.

Head office: Department of Clinical and Experimental Medicine

Teaching activity of the contract:

Teaching activity in courses of the AD BIO/13.

Candidates may present a maximum number of 12 scientific publications.

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

Selection code A22

Department of Agricultural, Food and Agro-Environmental Sciences

Academic Recruitment Field 07/A1 Agricultural Economics and Appraisal

Academic Discipline **AGR/01** Agricultural Economics and Appraisal

Nr. of positions available: 1

Focus of research

Scientific activity in the fields of economic, political, management and estimation aspects of production, processing, distribution, market and consumption of products in the primary sector (agriculture, forestry and fisheries), the agri-food economy and agro-biotechnology, their relations with the other components of the socio-economic and environmental system, and the problems of technical assistance.

Scientific productivity

At least 2 indexed articles/year, of which 1 in range A

Head office: Department of Agricultural, Food and Agro-Environmental Sciences

Teaching activity of the contract

Rural and environmental appraisal, agricultural economics, agricultural and food policy, management of agricultural holdings, economic aspects of land planning and management and the rural environment, interactions between systems agricultural and sustainable development.

Candidates may present a maximum number of 12 scientific publications.

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

Selection code A23

Department of Agricultural, Food and Agro-Environmental Sciences

Academic Recruitment Field 07/F1 Food Science and Technology

Academic Discipline **AGR/15** Food Science and Technology

Nr. of positions available: 1

Focus of research

The biological, chemical, physical and technological issues that underlie the operations and processes of the agri-food chain, from the procurement of raw materials to the marketing, distribution and administration of food products, including the development of new products and new processes. The object of study will be in particular: the composition and analytical characterization of simple and processed food products; food technology operations and processes; the technology of conditioning, packaging and distribution of food; the shelf-life of the products; cleaning and sanitizing of systems; the evaluation of the sensory properties of the ingredients, raw materials and processed products; the use and control of additives and residues; the management, control and certification of the quality, safety and environmental sustainability of food and processes; the treatment of waste from the food industry; nondestructive analysis for quality control (from raw matter to end product) as well as the sustainable development and management of the different steps of a food and beverages production process.

Scientific productivity

Publications of Scientific papers in national and international journals; attendance to national and international conferences; participation to national and international projects as Principal Investigator.

Head office: Department of Agricultural, Food and Agro-Environmental Sciences

Teaching activity of the contract:

Teaching activities in AD AGR/15 as part of the training courses provided by the Department of Agricultural, Food and Agro-Environmental Sciences:

- Advanced Grape and Wine Constituent and Non-Destructive Analysis (3 CFU co-teaching out of a total of 6 within the CDL Sustainable Innovation in Viticulture and Enology)
- Unit operations in food preparation (6 CFU co-teaching out of a total of 9 within the CDL BQA)

The activity will consist of lectures and practical lessons, as well as supervision of undergraduate and doctoral students and seminar activities.

Candidates may present a maximum number of 14 scientific publications.

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

Selection code A24

Department of Agricultural, Food and Agro-Environmental Sciences

Academic Recruitment Field 07/E1 Agricultural Chemistry, Agricultural Genetics and Pedology

Academic Discipline **AGR/07** Agricultural Genetics

Nr. of positions available: 1

Focus of research

The research will focus on the structure, function, expression, heredity and evolution of genes and genomes, in procaryotes and eucaryotes of agricultural interest, in order to integrate experimental data with general rules and to set up strategies and methodologies of genetic, molecular and biotechnological procedures aimed at promoting proper agricultural activity, sustainable use of high quality agricultural and forestry products, and the diversification and exploitation of finished products.

Scientific productivity

Scientific articles in international journals; participation to national and international congresses; participation to calls for national and international projects.

Head office: Department of Agriculture, Food and Agro-Environmental Science.

Teaching activity of the contract

Teaching activities in Italian language concerning the disciplines related to the AD AGR/07, with reference to the use of molecular biology and bioinformatics in agricultural genetics, for students in the degree and master's degree programs of the Department of Agriculture, Food and Environmental Science.

Candidates may present a maximum number of 18 scientific publications.

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