



Summary of the Rector's Decree no. 751 of November, 4, 2022

**CALL FOR APPLICATIONS FOR FOURTEEN ASSISTANT PROFESSOR POSITIONS
in the frame of NRRP (National Recovery and Resilience Plan) - Next Generation EU
(NGEU)**

The Sant'Anna School of Advanced Studies - Pisa (Sant'Anna School) announces a call for the recruitment of **fourteen assistant professors** (ricercatori a tempo determinato) with full time temporary contract pursuant to Italian Law no. 240/2010, art. 24 paragraph 3 letter A. These positions will be recruited **in the frame of the interventions included in the NRRP (National Recovery and Resilience Plan) - Next Generation EU (NGEU)**.

ACADEMIC CLASS OF SOCIAL SCIENCES

Institute of Management

- **Three positions in the Academic recruitment field 13/B2 Management - Academic discipline SECS-P/08 Management:** two positions for the development of the *National Biodiversity Future Center – NBFC* (Spoke 7 - Activity 5) and one position for the development of *BRIEF - Biorobotics Research and Innovation Engineering Facilities (WP6 Consumption-Oriented Green Innovation Tools platform for Life Cycle Assessment)*.

Supervisor: Professor Andrea Piccaluga, Francesco Testa and Marco Frey.

Research activities: The researchers will participate in the activities of the National Biodiversity Future Center (NBFC) and in particular in the activity of Spoke 7 - Activity 5 and the activities of the BioRobotics Research and Innovation Facilities (BRIEF) and in particular in the activity of COGITO Laboratory (Consumption-Oriented Green Innovation Tools platform for Life Cycle Assessment). More concretely:

- 1) The researchers, involved in NBFC, will carry out several activities including services into the field of innovation and circular economy to researchers working in the field of biodiversity. In addition, they will be engaged in project management, people management, research enhancement, collaboration with companies, etc.
 - 2) The researchers involved in NBFC will also participate in a more theoretical and research-oriented activity that will lead to the identification of models to assess the impact of industrial and business investments and activities on biodiversity through metrics, best practices, international comparisons, and appropriate models and tools.
 - 3) The researcher of the research infrastructure (BRIEF) will be involved in structuring a IT set of supporting tools for the eco design of products, packaging, services and technologies, based on environmental footprint dataset, impact categories characterisation and emission factors and data on consumer expectations and perception on product environmental qualities.
- **One positions in the Academic recruitment field 13/B1 Business Administration and Accounting Studies - Academic discipline SECS-P/07 Business**



Administration and Accounting Studies for the development of the *National Biodiversity Future Center – NBFC*.

Supervisor: Professor Lino Cinquini.

Research activities: Methodologies and tools for biodiversity impact assessment of farm investments and support for the identification of biodiversity impact metrics, financial and non-financial, and thus targets.

Development of approaches to assess and communicate the impact of industrial and commercial investments and activities on biodiversity through parameters, best practices, international comparisons and appropriate models and tools.

Development of assessment exercises to evaluate the financial dimension of industrial and commercial activities on biodiversity by case studies. In particular, data will be collected for the impact (such as the SDGs, creation of new opportunities, promotion of integral human development, construction of resilient communities and inclusion of stakeholders). Process design and methodologies of collecting and reporting business information on biodiversity according to the accountability rules of European Sustainability Reporting Standards (ESRS) will be also considered.

The researcher may carry out teaching activities in English on the topics covered by the call in the Master of Science in Innovation Management and in the PhD in Management at Scuola Sant'Anna.

- **One positions in the Academic recruitment field 13/D3 Demography and Social Statistics - Academic discipline SECS-S/05 Social Statistics** for the development of the *Tuscany Health Ecosyste – THE (Spoke 10)*.

Supervisor: Professor Sabina Nuti.

Research activities: The researcher will participate in the Tuscany Health Ecosystem (THE) activities, and in particular in Spoke 10 “Population Health”. The researcher will be part of a very active team focused on the study of the social and healthcare dynamics in the population starting from scientific evidence through the analysis of data. An interpretive work for a comparison with the different stakeholder will be simultaneous with survey design, data analysis and the study of suitable statistic models.

The researcher will in any case be involved in the following activities:

1) organizational, such as the management of research projects, people, and collaboration with project partners and stakeholders;

2) to contribute to the publication of scientific papers in international journals and informative reports;

3)) data collection around Tuscany; to carry out a theoretical and research-oriented activity;

4) multidisciplinary team-work.



ACADEMIC CLASS OF EXPERIMENTAL AND APPLIED SCIENCES

Plant Sciences Research Center

- **One position in the Academic recruitment field 07/A1 - Agricultural Economics and Appraisal - Academic discipline AGR/01 Agricultural Economics and Rural Appraisal** for the development of the *National Biodiversity Future Center – NBFC*.
Supervisor: Professor Mario Enrico Pè.
Research activities: The research for which this researcher is being sought aims to enhance biodiversity by placing it at the center of the process of ecological transformation, necessary for the realization of sustainable development, including agriculture. This will be achieved through the analysis of specific case studies in some agri-food supply chains. The research activity involves the development and analysis of living labs on a territorial scale to study the adaptation of agro-ecosystems to climate change, analyzing the effects of biodiversity at different levels and at different spatial and temporal scales, with a focus on farms and agri-food chains of reference. Following participatory approaches, several methodologies will be applied. In particular, a mapping of stakeholders and agri-food supply chains and a life cycle assessment (LCA) will be conducted to assess the environmental, social and economic footprint of biodiversity in cropping systems, agricultural practices, and conservation and processing methods. In addition to skills in Agricultural Economics, the researcher should have an interdisciplinary outlook, proven experience in qualitative and quantitative data collection and analysis, and an ability to interact with different stakeholders and researchers from different disciplines, from agronomy to product storage and processing techniques.

Crop Science Research Center

- **Two positions in the Academic recruitment field 07/B2 Arboriculture and Forest Systems - Academic discipline AGR/03 Arboriculture and Fruitculture** for the development of the *National Research Centre for Agricultural Technologies – AGRITECH*.
Supervisor: Professor Luca Sebastiani and Pietro Tonutti.
Research activities: The researchers will be involved and actively coordinate fundamental and applied research activities focused on the physiological and molecular responses to specific environmental and abiotic stresses that may occur during cultivation and after harvest in specific horticultural crops and biomass trees. By means of "multiomics" approach, with special emphasis on transcriptomics and metabolomics platforms and protocols, the research activities to be carried out in woody (i.e. grapevine, apple, olive and poplar) and herbaceous (tomato) plants.



Comparative studies on the effects of environmental stress (drought-salinity and organic and inorganic xenobiotics) and agronomic management will be set-up in field and controlled environment and the effects on physiology and production parameters (quantitative-qualitative) will be evaluated. The post-harvest activity has the goal of better understanding the overall responses and the metabolic and compositional implications of specific storage protocols (low temperature, altered atmosphere composition) applied in apples, kiwifruit and tomato. The knowledge of the physiological mechanisms related to responses to stress and production techniques will also be used/useful for genetic improvement and breeding programs. The activities will take place within the national project AGRITECH.

The researchers will be involved in training and teaching activities for undergraduate students in the field of Agricultural Sciences and Plant Biotechnology, PhDs students in the Agrobiosciences and Agrobiodiversity doctoral programme, Masters and Seasonal Schools activities at the Sant'Anna University.

The researchers will be involved in third mission activities in order to disseminate scientific knowledge and transfer the results of the research outside the academic context, contributing to the social and cultural of the country.

BioRobotics Institute

- **One position in the Academic recruitment field 08/B2 Structural mechanics - Academic discipline ICAR/08 Structural mechanics** for the development of the *Tuscany Health Ecosystem – THE (Spoke 8)*.

Supervisor: Professor Antonio De Simone.

Research activities: The appointed candidate will conduct independent and original research in a multidisciplinary framework at the intersection between theoretical/computational mechanics and applications to bioinspired microrobotics. The main line of research will be the development of mathematical models and numerical algorithms for biological and bioinspired systems characterized by fluid-structure interactions and multi-physics coupling. The need to solve complex nonlinear problems in the large deformation regime will require the development of high-performance-computing techniques. The appointed candidate should be able to take care of both aspects concerning mathematical and numerical modeling, as well as those concerning the management of the required computational resources. The appointed candidate should be able to interact with researchers in the fields of theoretical and computational mechanics, robotics, and bio-engineering. The appointed candidate should be able to teach topics in computational mechanics and multiphysics numerical simulation at the level of both master students (e.g., Master in Bionics Engineering) and of PhD students.

- **Two positions in the Academic recruitment field 09/G2 Bioengineering - Academic discipline ING-INF/06 Electronic and Informatic Bioengineering:** one position for the development of the *Tuscany Health Ecosystem (Spoke 8)* and one position for the development of *MNESYS - A Multiscale integrated approach to the study of the nervous system in health and disease*.



Supervisor: Professor Silvestro Micera, Calogero Maria Oddo and Dr Alberto Mazzoni.

Research activities: the call intends to select two researchers active in the fields of rehabilitation bioengineering, and neuroengineering with particular attention to translational aspects. In the first case, the selected person must be able to develop “soft” wearable and implantable systems for the recovery and assistance of sensory and motor functions. In the second case she/he will deal with computational neuroscience and neuroengineering and in particular with the processing of neural signals and the development of computational models of neural systems.

Regarding teaching, the selected people will have to focus on topics of neuroengineering, computational neuroscience, robotic neurorehabilitation and the Institute participating both in the PhD program in Biorobotics and in the other relevant courses in which the Institute of BioRobotics is involved.

The people selected will have to work on one or more research activities: neurorehabilitation, wearable or soft robotics, neuroengineering, computational neuroscience. They will have to demonstrate the ability to work or control a research team, to be included in a network of international collaborations. They will have to show documented publication activity in international scientific journals.

- **One position in the Academic recruitment field 09/G2 Bioengineering - Academic discipline ING-INF/34 Industrial Bioengineering** for the development of the *Tuscany Health Ecosystem – THE (Spoke 3)*.

Supervisor: Professor Francesco Greco.

Research activities: The appointed candidate will carry out a multidisciplinary and original research program about the development of epidermal electronics (ultrathin printed wearable sensors on skin). Tattoo physical sensors and electrodes for surface electrophysiology will target the monitoring of health state and interfaces for bionics – e.g. prostheses. Research will focus on: optimizing the sensor-skin interface with a careful selection of materials and printing/fabrication strategies; extend the typology of tattoo sensors; optimizing the connections to external units for data reading/elaboration; investigate new applications of tattoos in bioengineering. Teaching (in PhD in Biorobotics and M.Sc. Bionics Engineering) will include topics related to Organic Bioelectronics and Sensors in Bioengineering.

The appointed candidate must possess established research expertise within one or more of the following: advanced materials fabrication and characterization; organic, printed, wearable electronics; sensors; electrophysiology; bionic interfaces. Important criteria for the selection are: knowledge of state of art in epidermal electronics; team work skills; established international collaborations; proven record of publications in international scientific journals; patents.



Telecommunications, Computer Engineering, and Photonics Institute

- **One position in the Academic recruitment field 09/H1 Information Processing Systems - Academic discipline ING-INF/05 Information Processing Systems** for the development of the *National Research Centre for Agricultural Technologies – AGRITECH*.

Supervisor: Dr Valentina Colla.

Research activities: The researcher will develop scientific and didactical activity on Artificial Intelligence techniques and advanced optimization and control tools for the joint processing and use of data from heterogeneous monitoring systems for the purpose of detecting the health of the plants, the quantity and quality of the product, the identification of any conditions of stress and planning of specific interventions. The researcher will be involved in training and teaching activities for undergraduate students in the field of Agricultural Sciences and Plant Biotechnology and Engineering, PhDs students in the AgroBioSciences and Agrobiodiversity and Emerging Digital Technologies doctoral programme, Masters and Seasonal Schools activities at Sant'Anna School of Advanced Studies. The researcher will be involved in third mission activities in order to disseminate scientific knowledge and transfer the results of the research outside the academic context, contributing to the social and cultural of the country.

Institute of Mechanical Intelligence

- **One position in the Academic recruitment field 09/A2 Applied Mechanics - Academic discipline ING-INF/13 Applied Mechanics** for the development of *Tuscany Health Ecosystem (Spoke 9)*.

Supervisor: Professor Antonio Frisoli.

Research activities: The research activity will take place within the Human-Robot Interaction area of the Institute of Mechanical Intelligence and will be oriented to the conception, design, implementation and control of new robotic devices for advanced human-machine interaction and for telerobotics in service robotics applications for telemedicine and telepresence.

In the field of telemedicine and telepresence, the candidate will deal with the design, development and experimental validation respectively of new robotic and control solutions for telemedicine systems for remote ultrasound clinical examination in remote areas and innovative solutions for advanced telemanipulation for remote physical interaction.

As far as teaching is concerned, the candidate will contribute to frontal and laboratory teaching activities in robotics courses provided to ordinary students and the PhD in Emerging Digital Technologies.



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Duration of the contracts: three years.

Salary: 36.839,85 € gross per year.

Admission Requirements:

Candidates must satisfy the following requirements:

- to hold a PhD or equivalent.

If the PhD degree or equivalent qualification has been awarded abroad, candidates must provide the documents which certify that these qualifications are considered equivalent according to the Italian law in force (equipollence/equivalence-recognition of degrees). If candidates do not comply with the requirement while submitting the application, they will be admitted to the selection under condition and, if winners, they have to submit all necessary documents certifying that their qualifications are considered equivalent according to the Italian law in force by the date of the signature of the contract.

- to have an excellent knowledge of both written and spoken English.

Others Requirements

Candidates must supply:

- their PhD thesis
- no more than 12 publications

Who Can't Apply

- Those who, at the date of the deadline for application, are or have been professors or assistant professors who achieved tenure.
- Those who, at the date of the application deadline, are related, within the fourth degree, by blood or by marriage or by civil union or are married to professors of Sant'Anna School, or to the Rector (Rettore) or to the Managing Director (Direttore Generale), or to a member of the Board of Directors (Consiglio di Amministrazione) of Sant'Anna School.

Application

Candidates are requested to apply online at the web page:

<https://pica.cineca.it/santanna/2022-rtda-08/>

Deadline: NOVEMBER, 23, 2022

For technical support for the application please contact CINECA support via the link you find at the bottom of the page <https://pica.cineca.it/santanna>

For further information about the call, please contact the Personnel Department Office (Tel. +39-050-883.575/258, e-mail infodocenti@santannapisa.it).

The following documents must be supplied as pdf files during the online application:



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- 1) Curriculum Vitae signed and dated;
- 2) copy of Identification Document (e.g. passport);
- 3) copy of your PhD thesis;
- 4) copy of your publications, not exceeding the number of 12 and list of the submitted publications;
- 5) all academic and professional qualifications, other accomplishments, awards and any additional information which can be useful for the evaluation of the applicant. All documents, certificates and letters submitted should be saved in pdf format;

To apply candidates need have a mail address, a printer and a scanner because they have to print, sign and upload the scanned copy of the application.

They will be able to withdraw their application until the deadline, if they need to change a submitted application, they have to withdraw it and submit a new one.

Selection process and calendar:

The evaluation committee will be appointed by the Director of the Scuola Sant'Anna for each selection. A restricted number of applicants, to be admitted to a final interview, will be selected by the committee, on the basis of cv's, publications and qualifications.

The time of the interview between the Committee and the admitted candidates, the list of the admitted candidates and the link for the interview will be announced in this web page on December, 21, 2022 <https://>

The interview between the Committee and the admitted candidates will be held according this calendar

Academic Recruitment Field	Academic Discipline	The date of the interview
13/B2 - Management	SECS-P/08 – Management	12/01/2023
13/B1 - Business Administration and Accounting Studies	SECS-P/07 - Business Administration and Accounting Studies	../01/2023
13/D3 – Demography and Social Statistics	SECS-S/05 - Social Statistics	11/01/2023
07/A1 - Agricultural Economics and Appraisal	AGR/01 - Agricultural Economics and Rural Appraisal	11/01/2023
07/B2 - Arboriculture and Forest Systems	AGR/03 - Arboriculture and Fruitculture	11/01/2023
08/B2 - Structural mechanics	ICAR/08 - Structural mechanics	13/01/2023



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09/G2 Bioengineering	-	ING-INF/06 Eletronic Informatic Bioengineering Elettronica Informatica	- and e	12/01/2023
09/G2 Bioengineering	-	ING-IND/34 Industrial Bioengineering	09/G2 -	12/01/2023
09/H1 - Information Processing Systems		ING-INF/05 Information Processing Systems	-	13/01/2023
09/A2 - Applied Mechanics		ING-IND/13 Applied Mechanics	-	

No further information will be given to candidates

If necessary, the HR Department will contact applicants only via the email address designated on applications

We inform that under the article 13 of the EU General Data Protection Regulation n. 679/2016 and the Italian Legislative Decree 30 June 2003 ("Privacy Code regarding the protection of personal data"), Sant'Anna School of Advanced Studies (hereinafter the "School") is a registered Data Controller. On its behalf, the internal processor is the Human Resources Department Head, e-mail: privacy@santannapisa.it personal data will be processed by other instructed, therefore authorized, School employees.

Applicants are due to read the Privacy Notice published on the web site www.santannapisa.it/privacynotice

Fixed term employment contracts are enforced under the Law 240/2010, art. 24, par. 3, lett. b).

For further information about the Institute of Management please refer to <https://www.santannapisa.it/en/institute/management>

For further information about the Plant Sciences Research Center please refer to <https://www.santannapisa.it/it/centro-di-ricerca/scienze-delle-piante>

For further information about the Crop Science Research Center please refer to <https://www.santannapisa.it/en/istituto/crop-science-research-center-csrc>

For further information about the BioRobotics Institute please refer to <https://www.santannapisa.it/en/institute/biorobotics>

For further information about the Telecommunications, Computer Engineering, and Photonics Institute (TeCIP) please refer to <https://www.santannapisa.it/en/institute/tecip>

For further information about the Institute of Mechanical Intelligence please refer to <https://www.santannapisa.it/en/institute/mechanical-intelligence>



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