



# Sant'Anna

Scuola Universitaria Superiore Pisa

## **Open Call for Expressions of Interest:**

The [Interdisciplinary Research Center on Sustainability and Climate](#) is seeking expressions of interest concerning one of more academic positions, which we expect to fill in the near future through either public competitions or direct appointments (chiamate dirette), according to Italian Law. This call is designed to explore potential candidates and their interest in joining our community and precedes the potential formal opening of any position (see below for details on timeline and procedure).

## **General Description and Information.**

The Interdisciplinary Research Center on Sustainability and Climate is a transdisciplinary research area that operates in the fields of Social and Experimental sciences. The Center fosters research, teaching, and the development of innovative solutions to issues related to sustainability and the pressing challenge of climate change.

Given the complexity of environmental problems, climate change and the transition to net-zero, disciplines that examine the various objects of research in a compartmentalized can only provide partial solutions. Without a trans-disciplinary research strategy, there is little hope of effectively addressing the global challenges dictated by sustainability and climate change. We need stronger collaborations between developed and developing human societies and interaction between theoretical and applied scientific disciplines to bridge the gap between theory, practice, and policy. Experts need to dialogue with each other, and from the dialogue and exchange, they can find effective ways to address critical issues together.

As part of an ambitious first cycle recruitment plan, we seek individuals in the early stages of their academic careers as well as at more advanced stages who are willing to contribute to such mission and to further expand our community and our research.

In the most recent Italian research quality evaluation (VQR 2015-2019) the Sant'Anna School had excellent results, with the three areas of Economics, Management and Law ranked, respectively, 1<sup>st</sup> (out of 75), 4<sup>th</sup> (out of 70) and 1<sup>st</sup> (out of 78) in the nation. According to the latest Times Higher Education World Young University Rankings, the School ranked 1<sup>st</sup> in Italy, 7<sup>th</sup> in Europe, and 14<sup>th</sup> in the world among universities under 50 years of age. In addition to its renowned undergraduate and Master-level programs, the School has well established PhD programs in Economics, Management and Law, and is a partner of several multi-institution graduate programs, including the national PhD in AI & Society established in 2021 and administered by the University of Pisa. The School is also among the most successful Italian academic institutions in terms of external research funding, with a record amount of over 68 million euros obtained in 2022, including funds from the National Plan for Recovery and Resilience (PNRR). With three special-statute schools (Scuola Normale Superiore and IMT Lucca in addition to Sant'Anna), a large public university (University of Pisa), a major research area of the National Research Council and many other public and private scientific hubs, the Pisa area offers an outstanding research environment – as well as a very rich cultural scene and excellent quality of life, in the heart of the historic heritage and natural beauty of the Tuscany region. Pisa has an international airport, and high-speed railroad connections to Rome, Milan and several other Italian cities.

## **Profiles sought.**

Positions may concern a wide range of disciplines but they will be characterized by a disposition to interdisciplinary and transdisciplinary work and to innovation both in the contents and in the methodology of research.

The following are examples of relevant research strands that may be of interest for future openings. Proposals of different research strands are welcomed.



- 1) Interdisciplinary research to develop **technological solutions to facilitate the process of decarbonization and adapt infrastructures and systems to the impacts of climate change**. Relevant examples on how to further expand the research on this topic include, but are not limited to, the following issues:
  - exploring advanced technologies for capturing carbon emissions from industrial processes and power generation, contributing to the reduction of greenhouse gases in the atmosphere;
  - identifying agricultural technologies and practices that can withstand climate change effects, ensuring food security and reducing agriculture's environmental impact;
  - investigating advanced solution and technologies to reduce carbon emissions through hydrogen and efuels production, storage and use, including fuel cells and electrolyzers and for biofuels production and use, including technologies for biomass and waste to syngas-biogas.
- 2) Interdisciplinary research exploring **renewable energy technologies, focusing on innovative applications in energy systems and transition strategies**. Relevant examples on this research strand include, but are not limited to, the following issues:
  - exploring and developing smart grid technologies to optimize the use and distribution of renewable energy in industrial, agricultural and urban systems;
  - investigating new materials and technologies for energy storage that support the effective use of renewable energy in industrial, agriculture and tertiary applications;
  - leveraging data analytics and machine learning to optimize energy use in industrial, agriculture and tertiary settings, contributing to more efficient and sustainable production processes;
  - developing efficient and scalable energy storage technologies to address the intermittency issues of renewable energy sources.
- 3) Interdisciplinary research adopting **experimental science approaches to promote sustainable production and consumption, aiming towards a circular and regenerative economy**. Relevant examples on this research strand include, but are not limited to, the following issues:
  - using information engineering to develop tools and strategies for sustainable and circular supply chain management, in the industry and agriculture focusing on minimizing waste and maximizing resource efficiency;
  - reducing water usage and waste in agricultural/industrial processes, contributing to the principles of a circular economy and sustainable resource management;
  - exploring ways to implement and measure circular economy models in the primary (raw materials extraction, agriculture, etc.) and manufacturing (e.g electronics, mechanical, food industry, etc.) industry focusing on product design for easy disassembly, recycling, and material recovery;
  - developing smart systems using IoT and AI for efficient resource management in industries, agriculture and tertiary sector including real-time monitoring and optimization of energy and material use.



- 4) Interdisciplinary research exploring **new concept and solutions for a deep, rapid and sustained reductions in greenhouse gas emissions** in line with 1.5 °C pathways taking into account the Paris Agreement and the different national circumstances, pathways and approaches. Relevant examples on this research strand include, but are not limited to, the following issues:
- Accelerating efforts globally towards net zero emission energy systems, utilizing zero - and low-carbon fuels such as, for example, hydrogen syngas and biochar;
  - Transitioning away from fossil fuels in energy and industrial systems, in a just, orderly and equitable manner, also addressing energy poverty, such as, for example, waste and biomass to biofuels and biochemicals pathways;
  - Accelerating the reduction of emissions from transport on a range of pathways, such as, for example, the production and use of sustainable aviation and maritime fuels, the development of infrastructures for and rapid deployment of, zero and low-emission vehicles;

In addition to expertise and interests as described above, ideal candidates will have a record of:

- high-level scientific publications (e.g., ANVUR A-ranked, ISI and/or Scopus indexed journals; top national and international book publishers);
- contributions to externally funded research projects at the national and European level;
- research abroad and/or participation to international research teams;
- research involving cooperation with non-academic entities, like public institutions and private companies;
- activities that cross traditional disciplinary boundaries, as to be able to collaborate with the diverse CISC community.

Candidates can be in different academic stages. We are looking for potential candidates for a position of Assistant Professor, Associate Professor or Full Professor.

**Activities to be performed.** Based on the outcome of the CEI and of potential subsequent direct appointments or public competitions, successful candidates will join either the class of

- Social Sciences, which works in the fields of Economics and Management, Law and Political Science, or
- Experimental Sciences, which works in the fields of Agricultural Sciences and Plant Biotechnology, Medicine, Industrial and Information Engineering.

They will be expected to teach, advise and mentor undergraduate and graduate students; develop an independent, externally funded research program; publish successfully; contribute to ongoing research and training activities; actively participate in the Interdisciplinary Center, its mission and interdisciplinary endeavours, as well as to the community and missions of the Sant'Anna School at large. Knowledge of the Italian language is not required ex ante, but the ability to teach in English is mandatory.

### **Terms and Conditions.**

The starting yearly gross salaries in public Italian universities are: for a tenure track Assistant Professor € 44.207. For an Associate Professor € 53.700 and for a Full Professor € 76.470 and can be increased based on seniority and qualified research results. The severance pay is equal to one month of gross salary for each year of employment. As employer, the Sant'Anna School pays contributions to both the Italian social security and the Italian public health systems. Individuals who



have conducted at least two years of research abroad may also qualify for a temporary reduced taxation regime (pursuant art. 44 of Italian Law 78/2010, taxation may be restricted to 10% of their Italian income for a period ranging from 5 to 12 years, depending on their family status).

### **CEI procedure.**

Interested individuals should submit their expressions of interest to the email address [scouting@santannapisa.it](mailto:scouting@santannapisa.it), indicating the code CI-CISC in the subject line. Based on regulations governing CEI procedures at the Sant'Anna School, candidates are required to fill the self-assessment questionnaire reported in the Annex, indicating the focus (Decarbonization, energy, circular economy and reduction of greenhouse gas emission, as described above, or other) that best fits their profile. Candidates may also include a statement describing their research and motivating their interest (3-page maximum), as well as a CV. Receipt of materials will be acknowledged by email by the offices, and all correspondence and materials will be kept strictly confidential (see below for a full Privacy Statement). Candidates whose profiles are deemed relevant will be contacted by email on a rolling basis and may be invited to visit the School in person to give a talk and meet students, researchers and faculty in our community. Inquiries concerning the CEI should be addressed to Prof. Marco Frey, CISC Coordinator at the email address [sostenibilita-clima@santannapisa.it](mailto:sostenibilita-clima@santannapisa.it).

### **Timeline.**

We expect this CEI to be open for at least one year since its publication date; i.e. until 20/12/2024 or longer. We will start reviewing expressions of interest on 15/05/2024, and then continue our evaluation throughout the year – with additional monitoring cut-offs tentatively set for July 2024 and September 2024, when we will decide whether to initiate procedures for public competitions or direct appointments procedures for one or more of the positions we plan to fill. Because of the extended period covered by the CEI, interested individuals who wish to provide updates to their self-evaluation, statement and/or CV subsequently to their first filing of an expression of interest can do so at any time through the process, using again the email address [scouting@santannapisa.it](mailto:scouting@santannapisa.it) and the code CI-CISC - UPDATE in the subject line. Information on public competitions will be posted on the Sant'Anna School devoted page (<https://www.santannapisa.it/en/admissionsrecruitments-tenders>), as well as on the CISC website (<https://www.santannapisa.it/en/centro-ricerca-interdisciplinare-sostenibilita-clima>), with explicit reference to the CEI they are connected to. Each recruitment procedure, once activated, may take several months – but our aim is to welcome one or more of our new colleagues at the Sant'Anna School before the end of calendar year 2025.

### **Equal opportunities.**

The Sant'Anna School of Advanced Studies is an equal opportunity/affirmative action employer. Women and underrepresented minorities are especially encouraged to apply.

### **Disclaimer.**

This is not yet a job vacancy advertisement. Based on the expressions of interest collected through this call, the Sant'Anna School of Advanced Studies will determine whether and when to proceed – opening public competitions (pursuant art. 24 or art. 18 of the Italian Law 240/2010) or enacting direct appointments (pursuant art. 1 par. 9 of Italian Law 230/2005), subject to the Italian regulation for academic employment.

### **Privacy statement.**

1. The EU Regulation 2016/679 on General Data Protection Regulation (hereinafter GDPR) and the Italian Privacy Code (Legislative Decree 196/2003, as modified by Legislative Decree 101/2018) are applicable to the processing of personal data provided by individuals replying to



this CEI. Advanced Studies), a public university institution located in Piazza Martiri della Libertà 33, Pisa – in the person of the Rector pro tempore.

2. Based on the CEI procedure, personal data (e.g., name, career and contact information, CV, etc.) will be collected by the School via email and processed for the evaluation of the expressions of interest.
3. Personal data will be processed under article 6, sub e) GDPR to perform tasks of public interest within the institutional activities of the School, including archiving and analyzing such data for statistical purposes.
4. Personal data will be stored only for the time strictly necessary to achieve the purposes for which they have been collected; moreover, special provisions for the storage of documents by public institutions will be applied.
5. The subjects whose data are being collected may exercise the following rights: - to access their personal data, in the cases and in the ways referred to in art. 15 GDPR; - to rectify, remove or restrict the processing of their personal data, in the cases and in the ways referred to in art. 16-18 GDPR (removal is not permitted for data included in documents that must be kept by the School to guarantee transparency in public activities); - to have portability of their personal data, in the cases and in the ways referred to in art. 20 GDPR; - to object to the processing of their personal data, under art. 21 GDPR; - to submit a complaint to the Italian Data Protection Authority.
6. The aforementioned rights may be exercised by sending an email request either to the Data Controller ([protocollo@sssup.legalmailpa.it](mailto:protocollo@sssup.legalmailpa.it)) or to the Privacy Committee ([privacy@santannapisa.it](mailto:privacy@santannapisa.it)) of the School. Any additional queries can be addressed to the Data Protection Officer ([dpo@santannapisa.it](mailto:dpo@santannapisa.it))