Open Call for Expressions of Interest:

The MUR-funded DEPARTMENT OF EXCELLENCE L'EMBEDS (*Economics, Management and the Law in the era of Data Science*) is seeking expressions of interest concerning **four TENURE-TRACK ASSISTANT PROFESSOR positions** (R2)[1], 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. After a first successful cycle in 2018-2022, the MUR-funded Department of Excellence EMbeDS (*Economics and Management in the era of Data Science*) of the Sant'Anna School of Advanced Studies received outstanding evaluations and was awarded funding for a second cycle in 2023-2027 – ranking first in the nation among the proposals in the general area of Economic and Statistical Sciences (Area 13) with a score of 30/30.

Our name, now changed to L'EMbeDS (*Economics, Management and the Law in the era of Data Science*), signifies the thorough integration of Law within our interdisciplinary scope as we continue to pursue our mission; that is, supporting data- and computation-driven approaches in the Social Sciences. As part of an ambitious second cycle recruitment plan, we seek individuals in the early stages of their academic careers who will contribute to such mission and further expand our community and our research. Candidates will either be *experts in methodology* (e.g., **statisticians, computer scientists, modellers**) with a direct interest in applications in one or more of the L'EMbeDS research domains, or *domain experts* (e.g., **economists, management scholars, law scholars**) whose work involves the use of contemporary methodology for massive data analysis and/or intensive computation.

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, 1st (out of 75), 4th (out of 70) and 1st (out of 78) in the nation. According to the latest Times Higher Education World Young University Rankings, the School ranked 1st in Italy, 7th in Europe, and 14th 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 schools (Scuola Normale Superiore and IMT Lucca in addition to Sant'Anna), a large public university (University of Pisa) and many other public and private scientific hubs, the Pisan 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

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[1] intended for PhD holders or equivalent, who may not yet be fully independent.

airport, and high-speed railroad connections to Rome, Milan and several other Italian cities.

Profiles sought. The four positions will, respectively, privilege **economic, managerial, legal, and methodological foci**. L'EMbeDS will build upon an interdisciplinary scaffold, enabling research in core **domain themes** and, transversally to the themes, spurring innovation in **methodological tools** and **governance frameworks**. Candidates will have expertise and interests across one or, ideally, more elements of such scaffold.

Examples of relevant **domain themes** include:
- *Economies as evolving complex systems at the micro and macro levels;*
- *Industrial dynamics, competitiveness and financial markets;*
- *Economics and management of innovation, the 4th industrial revolution, studies of the sources and drivers of science, technology and innovation and their relation with the evolution of socio-economic structures and social relations;*
- *Purpose-driven organizations, knowledge transfer and the impact of research activities;*
- *Environmental and economic sustainability, including studies of the impacts of climate change on growth, inequalities, financial systems, housing markets, etc., and the study of circular economies;*
- *Social and economic sustainability, including studies of healthcare systems and their management, medical technologies, and evolving health policy and health systems challenges;*
- *Behavioral economics, public policy and public management;*
- *Behavioral finance;*
- *Behavioral law;*
- *Regulatory innovation in data governance and data driven technologies;*
- *Markets design and integration for increased resilience and efficiency.*

Examples of relevant **methodological tools** include:
- *Complexity modelling, including non-linear, dynamical and chaotic systems;*
- *Modelling and statistical techniques for networks (formation and evolution);*
- *Techniques for the design, implementation and statistical analysis of large agent-based simulations.*
- *Learning models, including online learning and online convex optimization;*
- *Algorithms for data retrieval, extraction and integration, e.g., scraping, text and natural language processing, geoanalytics, linkage techniques and multi-resolution data integration;*
- *Systems analysis and verification;*
- *Statistics and machine learning techniques for large, high-dimensional and structured data, including feature selection and screening, spatio-temporal and functional data analysis, process mining, and latent structure techniques;*
- *Robustness, techniques for stability assessment and result replicability;*
- *Synthetic and augmented data generation techniques;*
- *Causality, causal inference and non-parametric techniques;*
- *Biostatistics and statistical techniques for the assessment of health technologies, health services and outcomes.*

Examples of relevant **governance frameworks** include:
- *Human-centered Artificial Intelligence, fundamental rights and fundamental-right compliant innovation;*
- *EU legislative frameworks (AI Act, DA, DGA) and EU common data spaces for global sharing;*
- *Opportunities and challenges of Open Science and Open Culture;*
- *Adjudication and decision making in the era of Big Data and AI;*
- *Intellectual Property, contracts and liability rules for data-driven innovation.*
- *Data governance in digital markets and platforms*; *competition, regulation and consumer protection in data driven markets;*
- *Digital citizenship, digitalization of the public administration, public services and society;*
- *Cybersecurity and its regulatory and legal challenges;*

We are looking for scholars who, while being in the early stages of their academic career, show an upward trajectory and clear leadership potential. In addition to expertise and interests as described above, ideal candidates will therefore 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;
- activities that cross traditional disciplinary boundaries, as to be able to collaborate with the diverse L'EMbeDS community.

Activities to be performed. Based on the outcome of the CEI and of potential subsequent direct appointments or public competitions, successful candidates will join the faculty of the Class of Social Sciences, which is home to several academic units (three Institutes – Economics, Management, DIRPOLIS – and a growing number of Interdisciplinary Research Centers). 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 L'EMbeDS, 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 gross salary for a tenure track Assistant Professor in public Italian universities is € 44.207. 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**, indicating the code **RR–LEMBEDS** in

the subject line. Based on new 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 (economic, managerial, legal, methodological) 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. Francesca Chiaromonte, L'EMbeDS Scientific Coordinator at the email address **lembeds.coordinator@santannapisa.it**.

Timeline. We expect this CEI to be open for at least one year since its publication date; i.e. until 20/03/2024 or longer. We will start reviewing expressions of interest on **12/06/2023**, and then continue our evaluation throughout the year – with additional monitoring cut-offs tentatively **set for 20/09/2023, 20/12/2023, 20/03/2024**, 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** and the code **RR–LEMBEDS - UPDATE** in the subject line. Information on public competitions will be posted on the Sant'Anna School devoted page (https://www.santannapisa.it/en/admissions-recruitments-tenders), as well as on the L'EMbeDS website (https://www.santannapisa.it/it/dipartimenti-eccellenza/embeds/openings), 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 2023.

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 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. The aforementioned rights may be exercised by sending an email request either to the Data Controller (protocollo@sssup.legalmailpa.it) or to the Privacy Committee (privacy@santannapisa.it) of the School. Any additional queries can be addressed to the Data Protection Officer (dpo@santannapisa.it).