

E.INS s.c. a r.l.
"Ecosystem of Innovation for Next Generation Sardinia"
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www.einssardinia.eu

Fondazione senza scopo di lucro Agritech
"Centro Nazionale di Ricerca per le Tecnologie dell'Agricoltura"



ARCHITECTURE AND ENVIRONMENT

Coordinator: Prof. Fabio Bacchini

Assessment method: qualifications + interview (30+70)

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| Hiring resources | The procedure is financed within the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 02 Tourism and cultural heritage |
| Doctoral fellowships | 1 |
| Scientific area | Architecture, Design and Urbanism |
| PhD Course | Architecture and Environment |
| Fellowship title | Innovation and sustainability for the competitiveness of the tourism and cultural heritage SMEs in marginal markets |
| Theme to be developed | <p>The Ph.D. program has the main aim to strengthen the competitiveness of the tourist-cultural system of Sardinia, using as a mean of innovation the transfer of technology, the digital transition, the creation of new knowledge, and the development of innovative skills through the synergic collaboration of universities, research centers and institutions with the business sector and the society at large.</p> <p>The main purposes of the program are: a) carry on research aimed to the technological transfer and digital transformation; b) transfer to SMEs of research results that can be translated into objectively measurable technological/digital capabilities; c) enhance expertise of the human resources working in the firms involved in the program and monitor the results of the solutions implemented; d) improve data-drive innovation and evidence base in firms operating in the tourism and cultural heritage fields;</p> |

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| | e) contribute to the creation of a multi-sector digital platform able to gathering and monitoring data of the studied firms, taking actions to skills transfer, creating network synergies and detecting any critical issues that may arise in order to promptly offer efficient solutions; f) improve the presence of local communities on issues related to sustainability innovation. |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 07 Energy |
| Doctoral fellowships | 1 |
| Scientific area | Earth Sciences - Chemical Sciences |
| PhD Course | Architecture and Environment |
| Fellowship title | Valorisation of industrial quarry waste and innovative processes for the sustainable production and transformation of green hydrogen |
| Theme to be developed | The PhD student will carry out experimental and modelling activities aimed at studying new-generation systems that allow the production and transformation of hydrogen through sustainable and alternative processes to the current technologies based on the use of fossil fuels. In particular, the research activity will involve the study of processing waste (e.g. materials such as mining residues, mineral and ceramic powders, steel mill slag, etc.), their characterisation and the study of their application properties in established electrolytic technologies for the production of green hydrogen. The study will also concern the development of new processes based on the use of mechanical energy and radiant energy, and low-cost materials, for the activation of the water molecule dissociation reaction at room temperature and the consequent production of green hydrogen. |
| Stay abroad for study and research activities | The research activity will be carried out at the university laboratories and in collaboration with the companies participating in the project. |
| Foreign language | No |

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 07 Energy |
| Doctoral fellowships | 2 |
| Scientific area | Civil Engineering and Architecture |
| PhD Course | Architecture and Environment |
| Fellowship title | Energy Efficiency in Buildings |
| Theme to be developed | <p>According to the task 5.2 of the Work Package 5 (<i>Electrification and energy efficiency</i>), the general objective of proposed activities will lead to plan actions aiming to de-carbonization and to increase energy efficiency in Sardinia, with specific focus on settlements, building and construction sector, as applied to Sardinian climate and anthropogenic conditions.</p> <p>The research aims to design technological solutions for Sardinia's specific industry sectors, building and settlement demonstrators in a real industrial environment and sharing results and KPIs to promote actions in similar cases.</p> <p>The research activity will take place at University laboratories and cooperating with enterprises involved in the project.</p> |
| Stay abroad for study and research activities | No |
| Foreign language | English |

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 08 Transport |
| Doctoral fellowships | 1 |
| Scientific area | Civil Engineering and Architecture |
| PhD Course | Architecture and Environment |
| Fellowship title | Plan and design of MAAS systems for weak demand territories |
| Theme to be developed | Evaluation and definition of the conditions for the implementation of a MAAS system for weak demand territories in Sardinia. The research will be consistent and strongly integrated with the activities and objectives of Spoke 08 "Sustainable Mobility". |
| Stay abroad for study and research activities | Yes |

Foreign language

English

CULTURE, LITERATURE, TOURISM AND TERRITORY

Coordinator: Prof. Carla Bassu

Assessment method: qualifications + project + interview (30+20+50)

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| Hiring resources | The procedure is financed within the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 02 Tourism and Cultural Heritage |
| Doctoral fellowships | 5 |
| Scientific area | Humanities and Social Sciences |
| PhD Course | Culture, Literatur, Tourism and Territory |
| Fellowship title | Innovation and sustainability for the competitiveness of the tourism and cultural heritage SMEs in marginal markets |
| Theme to be developed | <p>The Ph.D. program has the main aim to strengthen the competitiveness of the tourist-cultural system of Sardinia, using as a mean of innovation the transfer of technology, the digital transition, the creation of new knowledge, and the development of innovative skills through the synergic collaboration of universities, research centers and institutions with the business sector and the society at large.</p> <p>The main purposes of the program are: a) carry on research aimed to the technological transfer and digital transformation; b) transfer to SMEs of research results that can be translated into objectively measurable technological/digital capabilities; c) enhance expertise of the human resources working in the firms involved in the program and monitor the results of the solutions implemented; d) improve data-drive innovation and evidence base in firms operating in the tourism and cultural heritage fields; e) contribute to the creation of a multi-sector digital platform able to gathering and monitoring data of the studied firms, taking actions to skills transfer, creating network synergies and detecting any critical issues that may arise in order to promptly offer efficient solutions; f) improve the presence of local communities on issues related to sustainability innovation.</p> |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | eINS - spoke 09 Environment |

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| Doctoral fellowships | 1 |
| Scientific area | Geography - General Sociology |
| PhD Course | Culture, Literature, Tourism and Territory |
| Fellowship title | Biocultural Networks Open theoretical and applied research of human ecology through biocultural networks with stakeholder involvement |
| Theme to be developed | <p>Research contents</p> <ul style="list-style-type: none"> - study of green infrastructure networks in general and in urban and agro-forestry areas in Sardinia - in-depth open and participatory research especially in eco-cultural-net contexts - citizen science analysis with placetelling, participatory planning and management of linear landscape and connectivity - survey of the experience, perception and value of Sardinian biocultural networks and their ecosystem and cultural services - study of participatory processes for effective sharing between the scientific, governmental and citizen communities in biocultural networks - proposals for the conservation, valorisation and participatory implementation of Sardinian green infrastructures to restore connectivity. <p>Starting from basic IT knowledge, the student will acquire further skills related to: a) territorial information systems; b) territorial participatory approaches and nature-based solutions; c) platforms supporting the sharing of environmental and cultural resources; d) database and mapping of biocultural landscapes of green infrastructures.</p> |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

ADDITIONAL OPEN POSITIONS FOR THE COURSE IN CULTURE, LITERATURE, TOURISM AND TERRITORY

No. 1 position with fellowship funded by ISRE

Research topic

Candidates wishing to apply for this position must submit a research project on the topic of "The documentation of Sardinian and Sardinian alloglossia at all levels of linguistic analysis (phonology, morphology, syntax, semantics, pragmatics and lexicon): theoretical approaches, methods, new technologies".

LIFE SCIENCES AND BIOTECHNOLOGIES

Coordinator: Prof. Leonardo Antonio Sechi

Assessment method: qualifications + interview (30+70)

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 05 Aerospace |
| Doctoral fellowships | 1 |
| Scientific area | Industrial and Information Engineering |
| PhD Course | Life Sciences and Biotechnologies |
| Fellowship title | Analysis of human motion in augmented reality environments under simulated variable gravity conditions |
| Theme to be developed | The PhD student will be required to develop, validate and apply methods for analysing human motion under simulated variable gravity conditions in an augmented reality environment generated by wearable instrumentation including visor and eye-tracking. The motion analysis will be based on measurements with wearable motion sensors to be integrated with virtual and mixed reality environment reproduction technologies. |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 05 Aerospace |
| Doctoral fellowships | 1 |
| Scientific area | Industrial and Information Engineering |
| PhD Course | Life Sciences and Biotechnologies |
| Fellowship title | Study of functional nanomaterials with radical scavenging properties |
| Theme to be developed | The PhD student is expected to develop bottom-up techniques for the synthesis of nanomaterials with reactive oxygen species (ROS) scavenging capacity. The characterisation of the synthesised nanomaterials will be done by infrared spectroscopy, spectrofluorimetry and Raman |

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| | spectroscopy, for the determination of photophysical characteristics, and by electron microscopy, atomic force microscopy and dynamic light scattering, to study morphology and characteristic dimensions. |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 05 Aerospace |
| Doctoral fellowships | 1 |
| Scientific area | Medical Sciences |
| PhD Course | Life Sciences and Biotechnologies |
| Fellowship title | Studying the influence of microgravity conditions on the pathophysiology of pathogenic microorganisms and the innate and adaptive response to infection |
| Theme to be developed | Development of in vitro systems to study the pathophysiological aspects of pathogenic microorganisms under microgravity conditions. Cellular and molecular characterisation of human-derived cells involved with mechanisms of protection against microbial infection (B lymphocytes, T lymphocytes, monocytes, dendritic cells etc.) under microgravity conditions Development of in vitro systems for studying the interactions between pathogenic microorganisms and human-derived cells, to assess the modulation of microbial pathogenicity and infection response mechanisms under microgravity conditions. |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the framework of the PNRR Project CN_000033 "National Biodiversity Future Centre - NBFC", admitted for funding by Director's Decree no. 1034 of 17 June 2022; CUP J83C22000870007 |
| Project | NBFC - spoke 04 |
| Doctoral fellowships | 1 |
| Scientific area | Biological Sciences |

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| PhD Course | Life Sciences and Biotechnologies |
| Fellowship title | Molecular approaches to monitoring the effects of environmental stressors in mammalian populations |
| Theme to be developed | To estimate quantitative indices for target species sensitive to ongoing environmental changes, through a molecular approach based on the use of modern sampling and sequencing/genotyping techniques. |
| Stay abroad for study and research activities | The project envisages the preliminary identification of target species in one or more study areas, based on a careful evaluation of the scientific literature, the sampling in nature, the laboratory analysis of the biological material collected, and finally the processing of the data acquired and the definition of a protocol for monitoring the proposed indicators. |
| Foreign language | No |

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| Hiring resources | The procedure is financed within the framework of the EBRAINS-Italy project admitted for funding by Director's Decree no. 101 of 16-06-2022, decree of granting of funding prot. no. 117 of 21-06-2022 registered with positive outcome of regularity checks by the Central Budget Office prot. 3654 of 28/06/2022 and by the Court of Auditors prot. no. 1925 of 20/07/2022; CUP B51E22000150006 |
| Project | EBRAINS |
| Doctoral fellowships | 1 |
| Scientific area | Biological Sciences |
| PhD Course | Life Sciences and Biotechnologies |
| Fellowship title | Development of a computational model of the human hippocampus and its holographic visualisation system of its neuronal activity in response to stimuli. |
| Theme to be developed | The PhD student will have to reconstruct on the NEST simulation platform a model of the human hippocampal neuronal network based on data provided by the EBRAINS-Italy project partners. This model shall include both excitatory pyramidal neurons and inhibitory interneurons and their synapses. In addition, the afferent and efferent neural projection fibres of the network connecting it to other areas of the brain should also be represented. In addition, the doctoral student will have to develop the holographic visualisation system of the structure and electrical activity of the network. |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

ADDITIONAL OPEN POSITIONS FOR THE COURSE IN LIFE SCIENCES AND BIOTECHNOLOGIES

No. 1 position without fellowship

Research topic

Candidates wishing to apply for this position must submit a research project on the topic 'Metabolites of ageing in non-transmissible diseases: decline in biological functions and the body's ability to adapt to metabolic stress'.

AGRICULTURAL SCIENCES

Coordinator: Prof. Severino Zara

Assessment method: qualifications + interview (30+70)

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| Project | e.INS - spoke 02 Tourism and cultural heritage |
| Doctoral fellowships | 1 |
| Scientific area | Agriculture |
| PhD Course | Agricultural Sciences - Curriculum Microbial Biotechnology and Food Technology |
| Fellowship title | Innovation and sustainability for the competitiveness of the tourism and cultural heritage SMEs in marginal markets |
| Theme to be developed | <p>The Ph.D. program has the main aim to strengthen the competitiveness of the tourist-cultural system of Sardinia, using as a mean of innovation the transfer of technology, the digital transition, the creation of new knowledge, and the development of innovative skills through the synergic collaboration of universities, research centers and institutions with the business sector and the society at large.</p> <p>The main purposes of the program are: a) carry on research aimed to the technological transfer and digital transformation; b) transfer to SMEs of research results that can be translated into objectively measurable technological/digital capabilities; c) enhance expertise of the human resources working in the firms involved in the program and monitor the results of the solutions implemented; d) improve data-drive innovation and evidence base in firms operating in the tourism and cultural heritage fields; e) contribute to the creation of a multi-sector digital platform able to gathering and monitoring data of the studied firms, taking actions to skills transfer, creating network synergies and detecting any critical issues that may arise in order to promptly offer efficient solutions; f) improve the presence of local communities on issues related to sustainability innovation.</p> |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Project | e.INS - spoke 03 AgriVet |

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| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Agrometeorology and Ecophysiology of Agricultural and Forestry Systems |
| Fellowship title | Evaluation and monitoring of the relationships between fire and ecosystem services in agro-livestock farms |
| Theme to be developed | The planned activities concern the assessment of impacts on farm ecosystem services due to forest fires. The assessment will cover both effects on the quantity and quality of ecosystem services and economic impacts. Both aspects will be assessed at both the company and territorial levels. The doctoral candidate will have to apply a fire risk assessment methodology to areas to be defined in accordance with the activities of Spoke 03 and according to the general objectives of the same Spoke. A preliminary study of the territory will be carried out and then methodologies will be applied to assess the factors competing with the fire risk (hazard, vulnerability and exposure) in order to quantify reliable indicators and assess the strengths and weaknesses of the production systems, also useful for planning efficient adaptation strategies. |
| Stay abroad for study and research activities | No |
| Foreign language | English |

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| Project | e.INS - spoke 03 Agrivet |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Desertification and Land Degradation |
| Fellowship title | Integrated application of agronomic field and modelling methodologies for the assessment of ecosystem services associated with Mediterranean forage and agro-pastoral systems |
| Theme to be developed | The PhD research work will be carried out within the project activities of SPOKE 03: "APPàre: smart and secure livestock farm APPLICATIONS to boost data-driven innovation along the food chain - AgriVet". In particular, it will be instrumental in achieving milestones M1, M2, M5 and M8. The research topics focus on the development of methodological and research approaches for the identification of agronomic and management options for fodder systems with a strong technological and digital component oriented towards the maximisation of agro-livestock production with |

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| | <p>minimum impact on the environment and on the use of natural resources. The target agro-livestock holdings where the research activities will be carried out are geared towards dairy sheep and beef cattle breeding. The primary research objective will be to develop an agro-environmental analysis framework with particular reference to the relationships between management practices and associated ecosystem services (mainly fodder production and carbon sequestration) through the integration of field analysis, modelling and remote sensing approaches. The analytical framework developed will be instrumental in the evaluation of innovative animal product production systems and their sustainable intensification. The research has the ambition to create the prerequisites to support the formulation of regional-scale environmental policies for eco-innovation and eco-design in the agro-livestock sector.</p> |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 03 Agrivet |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Monitoring and Control of Agricultural and Forest Ecosystems in the Mediterranean Environment |
| Fellowship title | Monitoring, defence and quality of agricultural production for pre- and post-processing livestock feeding. |
| Theme to be developed | <p>The PhD research work will concern the monitoring and study of the main biotic adversities affecting fodder agricultural productions used as raw material for processing into products (e.g. silage) for animal feed. This includes the study of indicators on the density of populations of phytophagous insects and pathogens and on the quality of the resulting plant and animal productions (e.g. milk). The study of the use of micro-organisms as biological control agents with an eco-sustainable approach will also be developed. A specific line of work will concern the study of the quality of innovative silage products in pre- and post-processing, detecting the presence of contamination by pathogens, microbiological products used in pest control, and the potential antagonistic effect of probiotic agents used in the transformation process. Particular attention will be given to the potential of the latter in detoxifying mycotoxins produced by pathogens.</p> |

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| Stay abroad for study and research activities | No |
| Foreign language | English |

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 03 Agrivet |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum in Animal Science and Technology |
| Fellowship title | Applications of life cycle analysis Life Cycle Assessment and Lyfe Cycle Costing for monitoring the environmental performance of livestock systems. |
| Theme to be developed | The PhD research work will be carried out within the project activities of SPOKE 03: "APPàre: smart and secure livestock farm APPLICATIONS to boost data-driven innovation along the food chain - AgriVet". In particular, it will be instrumental in achieving milestones M1, M4, M5 and M8. The research topics focus on the creation of suitable tools to stimulate the widespread use of life cycle analyses for the estimation of environmental impact indicators and economic profitability of livestock farms, in particular dairy sheep and beef cattle. The primary research objective will be to develop a simplified tool capable of collecting information on the milk and meat production process to perform a biological and economic life cycle analysis (Life Cycle Assessment and Life Cycle Costing) in order to estimate the environmental impact in terms of ecological footprint (carbon footprint, water footprint, acidification, eutrophication, particulate matter, etc.), potential carbon sequestration in the farming systems and ecosystem services provided. The tool will be functional for the collection of farm indicators, the estimation of the impact of good zootechnical practices implemented in extensive and mixed systems with a high degree of multifunctionality. The research includes the creation of guidelines and actions for the capillary application of the tool. Territorial level information aimed at scenario simulation and the formulation of regional environmental policies for eco-innovation and eco-design of the livestock sector will be obtained. |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Project | e.INS - spoke 03 Agrivet |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Monitoring and Control of Agricultural and Forest Ecosystems in the Mediterranean Environment |
| Fellowship title | Physico-chemical and biological indicators for soil health assessment in extensive and semi-extensive livestock systems |
| Theme to be developed | <p>Definition of an adequate set of soil quality and health indicators, effectively responding to the different soil types characterising the agro-pastoral and agroforestry landscapes of Sardinia. Initially, it will be considered a broad and interdisciplinary set of parameters to be assessed at selected farms, in the field or on specially taken soil samples, aimed at evaluating</p> <ul style="list-style-type: none"> - soil degradation and functionality (morphological, physical and hydrological indicators) according to consolidated field survey protocols; - the physical-chemical fertility and productive potential (e.g. pH, CSC, total C and N content, available P and K, DOC, quantification of the quantity and quality of humic substances extracted) - the functionality of the microbial communities in the selected soils through the quantification of basal soil respiration and enzymatic activities for which the indicator can be assumed to respond to the soil health conditions observed in the field (dehydrogenase, urease, protease and β-glucosase activity). |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 07 Energy |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences - Chemical Sciences |

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| PhD Course | Agricultural Sciences - Curriculum Animal Science and Technology |
| Fellowship title | Sustainability of bioenergy supply chains |
| Theme to be developed | <p>The overall objective of the proposed activities is to promote and support the reduction of climate altering gas emissions, increase energy production from renewable sources and improve the sustainability of agro-energy production. The main topics to be developed are</p> <ul style="list-style-type: none"> - Assessment of the energy, environmental impact of bioenergy supply chains; - Study of logistics for the collection and transport of agricultural residual biomass; - Study of systems for the quantification, forecasting and scheduling of biomass; - Energy valorisation of contaminated biomass from phytoremediation activities; - Valorisation of residues from biofuels production (biochar, sludge, etc.) for improving the functionality of degraded soils (contaminated or agricultural); - Valorisation of biomass for the production of biofuels and molecules of industrial interest using chemical methods with a low environmental impact. |
| Stay abroad for study and research activities | No |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the framework of the PNRR Project CN_000022 "National Centre for Agricultural Technology - AGRITECH", admitted for funding by Director's Decree no. 1032 of 17 June 2022; CUP B63D21015240004 |
| Project | Agritech – spoke 08 |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Agrometeorology and Ecophysiology of Agricultural and Forestry Systems |
| Fellowship title | Analysis of environmental and socio-economic implications for the assessment and optimisation of the sustainability of innovative and circular supply chains |
| Theme to be developed | Systemic design and optimisation of the sustainability of bio-based products obtained with circular technologies, integrating the assessment of environmental and socio-economic sustainability with circular economy criteria. Through the adoption of a coherent set of environmental and socio-economic metrics combined with circularity indicators, Life Cycle Thinking (LCT) models should be developed to provide a sound diagnostic basis on the environmental and socio-economic performance of the explored supply chains. |

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| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the framework of the PNRR Project CN_000022 "National Centre for Agricultural Technology - AGRITECH", admitted for funding by Director's Decree no. 1032 of 17 June 2022; CUP B63D21015240004 |
| Project | Agritech - spoke 04 |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Desertification and Land Degradation |
| Fellowship title | Innovative and low-impact agronomic strategies for soil and water conservation, carbon balance optimisation and maximisation of natural resource use efficiency |
| Theme to be developed | The PhD research work will be carried out within the project activities of Spoke 4 'Multifunctional and resilient agriculture and forestry systems for the mitigation of climate change risks'. In particular, it will be instrumental in achieving the deliverables and milestones related to Task 4.2.2. Innovative soil management using different resilient leguminous cover crops aimed at reducing agricultural inputs and improving soil quality and biodiversity in agro-forestry systems (olive groves and arboreal pastures) will be studied. The main components of the agri-environmental system (soil, herbaceous and tree components) will be evaluated and monitored to a) determine soil gas exchange and water content evolution; b) assess the contribution of herbaceous species in biomass accumulation; c) quantify the weed suppressive effect and evaluate low impact techniques for weed control (c) analysing the microbial diversity and mycorrhizal potential of the soil to enhance its fertility; (d) analysing the efficiency of the root system in acquiring/transferring nutrients from the soil to the plant; (e) validating multispectral imaging to assess tree physiology aimed at improving water use efficiency and optimising resource use in agro-forestry systems within innovative soil management. |
| Stay abroad for study and research activities | No |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the framework of the PNRR Project CN_000022 "National Centre for Agricultural Technology - AGRITECH", admitted for funding by Director's Decree no. 1032 of 17 June 2022; CUP B63D21015240004 |
| Project | Agritech - spoke 04 |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Monitoring and Control of Agricultural and Forest Ecosystems in the Mediterranean Environment |
| Fellowship title | Identification, characterisation and production of pesticide based on plant products (extracts, essential oils, biomasses) |
| Theme to be developed | <p>The research work to be carried out during the PhD falls within the themes of SPOKE 04 of the National Centre for the Development of New Technologies in Agriculture (AGRITECH). The theme of the research will focus on the search for alternatives to synthetic chemistry for the containment of phytopathogens, in accordance with the "Green Deal" promoted by the European Commission with regard to plant protection products. In particular, the potential of plant-derived products derived from agricultural and industrial waste will be explored.</p> <p>Essential oils from different plant matrices, such as production waste from fruit and aromatic plants from the Mediterranean and temperate environments, which are still rich in antioxidants and antimicrobial substances, will be extracted and further purified to test their antimicrobial activity against different classes of fungal pathogens of forest plants.</p> |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the framework of the PNRR Project CN_000022 "National Centre for Agricultural Technology - AGRITECH", admitted for funding by Director's Decree no. 1032 of 17 June 2022; CUP B63D21015240004 |
| Project | Agritech - spoke 07 |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Crop Productivity |
| Fellowship title | Innovative properties of aromatic species resilient to climate change for the recovery of marginal areas in Sardinia. |

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| Theme to be developed | Task 7.2.1. Identification of sustainable animal derived resources, crops, ornamental and medicinal plants |
| Stay abroad for study and research activities | No |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the framework of the PNRR Project CN_000022 "National Centre for Agricultural Technology - AGRITECH", admitted for funding by Director's Decree no. 1032 of 17 June 2022; CUP B63D21015240004 |
| Project | Agritech - spoke 07 |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Crop Productivity |
| Fellowship title | Identification of cereal cultivars and cropping systems suitable for their cultivation in marginal areas of Sardinia |
| Theme to be developed | Task 7.2.1. Identification of sustainable animal derived resources, crops, ornamental and medicinal plants |
| Stay abroad for study and research activities | No |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the framework of the PNRR Project CN_000022 "National Centre for Agricultural Technology - AGRITECH", admitted for funding by Director's Decree no. 1032 of 17 June 2022; CUP B63D21015240004 |
| Project | Agritech - spoke 05 |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Animal Sciences and Technologies |
| Fellowship title | Study of the genetic and genomic basis of biodiversity and of the resilience and environmental adaptation traits of native Sardinian cattle breeds |
| Theme to be developed | Analysis of genetic and genomic data of native Sardinian cattle breeds to study their biodiversity and resilience and environmental adaptation traits under extensive farming conditions in marginal areas |
| Stay abroad for study and research activities | Yes |

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| Foreign language | English |
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| Hiring resources | The procedure is financed within the framework of the PNRR Project CN_000033 "National Biodiversity Future Centre - NBFC", admitted for funding by Director's Decree no. 1034 of 17 June 2022; CUP J83C22000870007 |
| Project | NBFC - spoke 04 |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Agrometeorology and Ecophysiology of Agricultural and Forestry Systems |
| Fellowship title | Models for quantifying the economic value of ecosystem services |
| Theme to be developed | The research falls within the scope of activities 4.1, 4.2 of the National Biodiversity Future Centre. Specifically, the theme to be developed is the economic valuation of the main ecosystem services - with particular regard to agro-environmental systems - identified within some of the vast areas of the project through the application of estimation methods to arrive at the value of the service on the basis of the importance attributed by the community to the asset. Furthermore, the research will be aimed at assessing the main socio-economic impacts of the ecosystem services produced at various levels (territorial, production chain, etc.). |
| Stay abroad for study and research activities | No |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the framework of the PNRR Project CN_000033 "National Biodiversity Future Centre - NBFC", admitted for funding by Director's Decree no. 1034 of 17 June 2022; CUP J83C22000870007 |
| Project | NBFC - spoke 4 |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Agrometeorology and Ecophysiology of Agricultural and Forestry Systems |
| Fellowship title | Modelling for climate change adaptation |
| Theme to be developed | Estimate the resilience of natural ecosystems to climate change by predicting their future changes in different possible future pathways, and identify adaptation strategies. Models of |

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| | management scenarios and best practices, as well as interactions of various types with territories, will also be developed to support the integration of climate change adaptation concepts into landscape planning and programming. |
| Stay abroad for study and research activities | No |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the framework of the PNRR Project CN_000033 "National Biodiversity Future Centre - NBFC", admitted for funding by Director's Decree no. 1034 of 17 June 2022; CUP J83C22000870007 |
| Project | NBFC - spoke 04 |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Monitoring and Control of Agricultural and Forest Ecosystems in the Mediterranean Environment |
| Fellowship title | Monitoring and modelling of pathogens spillover from honey bees to wild bees |
| Theme to be developed | The PhD project aim is to define pathogen transmission models from honey bees to wild bees. The three-year investigation includes: site identification in relation to honey bee colonies density; monitoring and collection of honey bee and wild bee samples; detection of the main hive pathogens through molecular analyses, and finally, testing pathogens spillover models from honey bee to wild bees in relation to hive density and landscape structure. |
| Stay abroad for study and research activities | Si |
| Foreign language | Inglese |

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| Hiring resources | <p>The procedure is funded under the following projects:</p> <ul style="list-style-type: none"> – MIRRI Project EN PNRR IR00005 "Strengthening the MIRRI Italian Research Infrastructure for Sustainable Bioscience and Bioeconomy" Mission 4, Education and Research under the PNRR. Legge Obiettivo N Thematic PNRR. M4C2 - From research to enterprise - 3.1: Fund for the realisation of an integrated system of research and innovation infrastructures; Lead partner University of Turin; admitted for funding by Directorial Decree no. 114 of 21-06-2022, CUP D13C22001390001 – Technical-scientific cooperation agreement within the "Hermàion 2.0" project financed by PSR Sardinia 2014-2020 Call for Proposals - Sub- |
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| | measure 16.2 "Support for pilot projects and the development of new products, practices, processes and technologies"; CUP H62C20000570009 |
| Project | SUS-MIRRI.IT |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Agricultural Sciences - Curriculum Microbial Biotechnology and Food Technology |
| Fellowship title | Assessment, characterisation and preservation of microbial biodiversity in complex ecosystems |
| Theme to be developed | <p>The PhD research work will be carried out in the framework of the activities of the SUS-MIRRI project "Strengthening the MIRRI Italian Research Infrastructure for Sustainable Bioscience and Bioeconomy" and of the technical-scientific collaboration agreement within the "Hermàion 2.0" project, with the aim of assessing, characterising and preserving the microbial diversity of complex ecosystems.</p> <p>In particular, the research will concern:</p> <ul style="list-style-type: none"> – Isolation, identification and technological and biochemical characterisation of microbial communities present during spontaneous fermentation of matrices of agri-food interest – Evaluation of the effect of different preservation methods (freezing, freeze-drying, etc.) on the taxonomic composition and metabolic activity of microbial communities in complex ecosystems. – Development and characterisation of starters made up of synthetic microbial communities for fermentations of industrial interest. <p>The results obtained will have an impact both on the implementation of the UNISS microbial collection and on the production activities of the stakeholders involved in the projects funding the PhD scholarship.</p> |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the framework of the ITINERIS (Italian Integrated Environmental Research Infrastructures System) project, submitted to the Notice no. 3264 of 28/12/2021 "Strengthening and Creation of IR within the National Recovery and Resilience Plan (PNRR)", was admitted for funding with D.D no. 130 of 21/06/2022 |
| Project | Work package 6 |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |

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| PhD Course | Agricultural Sciences - Curriculum Agrometeorology and Ecophysiology of Agricultural and Forestry Systems |
| Fellowship title | Monitoring and modelling of carbon fluxes in the ICOS network |
| Theme to be developed | Study of carbon and energy fluxes in natural, agricultural and urban ecosystems in order to highlight differences and similarities in terms of diurnal and seasonal physiology, water use, carbon emissions and sinks and analysis of the main drivers influencing their behaviour. Development/application of innovative techniques (both local and large-scale) and more advanced protocols for monitoring and assessing the role of ecosystems, and NbS, including management options, in climate change mitigation and adaptation. An important database will be the monitoring sites included in the ICOS network. |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

ADDITIONAL OPEN POSITIONS FOR THE COURSE IN AGRICULTURAL SCIENCES CURRICULUM ANIMAL SCIENCES AND TECHNOLOGIES

No. 1 position without fellowship

Research topic

Candidates wishing to apply for this position must present a research project on the topic " Evaluation of the energy and economic potential of biomass from marginal areas " .

BIOMEDICAL SCIENCES

Coordinator: Prof. Margherita Maioli

Assessment method: qualifications + interview (30+70)

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| Hiring resources | The procedure is financed within the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 01 Medicine |
| Doctoral fellowships | 1 |
| Scientific area | Medical Sciences |
| PhD Course | Biomedical Sciences - Curriculum Hygiene and Public Health |
| Fellowship title | Epidemiology and telemedicine aimed at preventive medicine |
| Theme to be developed | <p>The doctoral candidate is expected to carry out the following activities</p> <ul style="list-style-type: none">● Descriptive and inferential analysis of health data for the study of individuals examined in the context of the activities envisaged by the Medicine Spoke;● Development of risk prediction models;● Support for the definition of health monitoring and surveillance strategies;● Preparation and dissemination of results reports;● Contribution to the development of scientific articles. <p>One of the objectives of the study proposed by the spoke is to generate and analyse prospective observational data for epidemiological research and careful monitoring of the population's health status. It is therefore of primary importance that individuals</p> <p>Contribution to the development of scientific articles.</p> <ul style="list-style-type: none">● Preparation and dissemination of results reports;● Contribution to the development of scientific articles. <p>One of the objectives of the study proposed by the spoke is to generate and analyse prospective observational data for epidemiological research and careful monitoring of the population's health status. It is therefore of primary importance that individuals in the field of epidemiology and health research are involved in the project from the outset.</p> |
| Stay abroad for study and research activities | No |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
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| Project | e.INS - spoke 01 Medicine |
| Doctoral fellowships | 1 |
| Scientific area | Medical Sciences |
| PhD Course | Biomedical Sciences - Medical Physiopathology Curriculum |
| Fellowship title | Definition of a specialist care pathway dedicated to the complex patient with immunodeficiency, integrated into the territory and in synergy with national and international reference centres. |
| Theme to be developed | <p>The project carried out by the Medicine Spoke envisages a detailed study of the immune system at both humoral and cellular levels in a conspicuous number (tens of thousands of individuals). Such analyses are likely to reveal immunodeficiency profiles of various kinds.</p> <p>Given the intrinsic complexity of the patient with immunodeficiency, it is called for the identification of an efficient pathway involving the various disciplines concerned in the management of the disease from both a diagnostic and a therapeutic point of view. At the same time, it is asked to develop a project that enables, through the use of digitalised platforms and telemedicine, the creation of an integrated network between the various regional realities and national and international reference centres. All aimed at improving patient prognosis and optimising the use of resources.</p> |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 02 Tourism |
| Doctoral fellowships | 2 |
| Scientific area | Biomedical Sciences |
| PhD Course | Biomedical Sciences - Curriculum Medical Physiopathology |
| Fellowship title | Innovation and sustainability for the competitiveness of the tourism and cultural heritage SMEs in marginal markets |
| Theme to be developed | <p>The Ph.D. program has the main aim to strengthen the competitiveness of the tourist-cultural system of Sardinia, using as a mean of innovation the transfer of technology, the digital transition, the creation of new knowledge, and the development of innovative skills through the synergic collaboration of universities, research centers and institutions with the business sector and the society at large.</p> |

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| | <p>The main purposes of the program are: a) carry on research aimed to the technological transfer and digital transformation; b) transfer to SMEs of research results that can be translated into objectively measurable technological/digital capabilities; c) enhance expertise of the human resources working in the firms involved in the program and monitor the results of the solutions implemented; d) improve data-drive innovation and evidence base in firms operating in the tourism and cultural heritage fields;</p> <p>e) contribute to the creation of a multi-sector digital platform able to gathering and monitoring data of the studied firms, taking actions to skills transfer, creating network synergies and detecting any critical issues that may arise in order to promptly offer efficient solutions; f) improve the presence of local communities on issues related to sustainability innovation.</p> |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Directorial Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | eINS - spoke 10 Biopharmacology |
| Doctoral fellowships | 3 |
| Scientific area | Chemical Sciences - Biological Sciences |
| PhD Course | Biomedical Sciences - Curriculum Neuroscience |
| Fellowship title | Design, formulation and biological evaluation of synthetic and natural molecules with biological activity on diseases with high territorial impact. |
| Theme to be developed | <p>The general objective of the proposed activities is to obtain a library of data concerning synthetic and natural bioactive molecules on diseases that are particularly impacting on the territory of Sardinia.</p> <p>The main topics to be developed concern</p> <ul style="list-style-type: none"> - Context analysis of the territory on pathology and available therapies. - Identification of Targets. - Drug design by means of computational analysis (QSAR and QM descriptors for therapeutic candidates). - Molecular dynamics simulations of selected ligand-target complexes to provide detailed interaction maps. - Synthesis of active molecules and identification of natural molecules. - Analysis of molecular and structural information. - Identification of lead compounds. - In vitro and preclinical pharmacological studies on lead compounds. - Drug Delivery: Pharmacokinetic analysis and development of innovative formulation and bioavailability systems. |

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| Stay abroad for study and research activities | No |
| Foreign language | English |

JURIDICAL SCIENCES

Coordinator: Prof. Giuliana Giuseppina Carboni

Assessment method: qualifications + written + interview (30+35+35)

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| Hiring resources | The procedure is financed within the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 02 Tourism and cultural heritage |
| Doctoral fellowships | 1 |
| Scientific area | Law |
| PhD Course | Legal Sciences |
| Fellowship title | Innovation and sustainability for the competitiveness of the tourism and cultural heritage SMEs in marginal markets |
| Theme to be developed | <p>The Ph.D. program has the main aim to strengthen the competitiveness of the tourist-cultural system of Sardinia, using as a mean of innovation the transfer of technology, the digital transition, the creation of new knowledge, and the development of innovative skills through the synergic collaboration of universities, research centers and institutions with the business sector and the society at large.</p> <p>The main purposes of the program are: a) carry on research aimed to the technological transfer and digital transformation; b) transfer to SMEs of research results that can be translated into objectively measurable technological/digital capabilities; c) enhance expertise of the human resources working in the firms involved in the program and monitor the results of the solutions implemented; d) improve data-drive innovation and evidence base in firms operating in the tourism and cultural heritage fields; e) contribute to the creation of a multi-sector digital platform able to gathering and monitoring data of the studied firms, taking actions to skills transfer, creating network synergies and detecting any critical issues that may arise in order to promptly offer efficient solutions; f) improve the presence of local communities on issues related to sustainability innovation.</p> |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 08 Transport |
| Doctoral fellowships | 1 |
| Scientific area | Legal Sciences |
| PhD Course | Legal Sciences |
| Fellowship title | Mobility and insularity between European law and Member State law. What model for the Region of Sardinia? |
| Theme to be developed | The candidate admitted to the PhD programme will specifically deal with the following topics: 1) Insularity 2) Relations between Union and national law 3) Territorial financial relations |
| Stay abroad for study and research activities | Yes |
| Foreign language | English, French, Spanish |

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 08 Transport |
| Doctoral fellowships | 4 |
| Scientific area | Legal Sciences |
| PhD Course | Legal Sciences |
| Fellowship title | Mobility and Transport Infrastructure for Environmentally and Socially Sustainable Development |
| Theme to be developed | Each of the doctoral candidates will deal specifically with one or more of the following topics: 1) Legal profiles of advanced mobility systems; 2) Transport infrastructures: legal profiles of construction and management; collaborations and integrations between transport facility management; 3) Organisation of services and labour management in transport infrastructures; 4) Territorial continuity, public service obligations, continuing mobility and access to infrastructures; 5) Transport services and infrastructures: legal profiles of access and pricing; 6) Legal profiles of modal integration; |

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| | 7) PRM and blind or visually impaired passengers. |
| Stay abroad for study and research activities | Yes |
| Foreign language | English, French, Spanish |

ADDITIONAL OPEN POSITIONS FOR THE COURSE IN LEGAL SCIENCES

No. 1 position without a fellowship

Research topic

Applicants wishing to apply for this position must take a written test on the topic of 'Limitations of property liability and creditor protection'.

No. 1 position without fellowship

Research topic

Candidates wishing to apply for this position must take a written test on the topic of "The development of civil mediation in the light of judicial reform".

No. 1 position without a fellowship

Research topic

The candidate who intends to compete for this position must take a written test on the topic of "The patentability of biotechnological inventions between scientific discovery and industrial application".

VETERINARY SCIENCE

Coordinator: Prof. Fiammetta Berlinguer

Assessment method: qualifications + interview (30+70)

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 03 Agrivet |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Veterinary Sciences - Curriculum Production Quality and Safety of Food of Animal Origin |
| Fellowship title | Development of product innovation in eco-sustainable sheep milk supply chains |
| Theme to be developed | <p>The research project aims at the adoption of technological innovations to ensure the Food Safety of fresh cheeses made from sheep's milk. The proposed solutions are focused on the use of technological innovations to be applied to processes and products, industrial biotechnologies included among the Key Enabling Technologies (KETs), central in the EU development strategy and consistent with green and blue economy. Innovations may concern cheeses made from sheep's milk, or by-products of dairy processing (whey and scotta). The objective of the implementation of technological innovation will be to reduce or eliminate the development of altering or pathogenic microorganisms to such an extent as to avoid cases of food-borne illness (e.g. listeriosis) or the withdrawal of the product from the market. The development of the project will be ensured through a partnership with two leading dairy companies. The production processes of some products will therefore be evaluated and one of these will be identified in consultation with the partner companies. The research is consistent with the strategy of the PNRR - e.INS / Ecosystem of Innovation for Next Generation Sardinia project. It also falls within the Agrifood specialisation area, proposing technological solutions for food production, preservation and quality. The project has an impact on the dairy chain that, territorially rooted in primary production, nevertheless results in exportable production, with access to large-scale markets. It is a supply chain characterised by enabling factors such as the presence of leading companies, a high level of integration and the projection of products onto international markets. The sheep dairy sector is characterised by a fragmented production context where a limited number of leading companies play a decisive role in driving research and innovation, with horizontal dissemination of results among companies of smaller size and turnover.</p> |
| Stay abroad for study and research activities | Yes |

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| Foreign language | English |
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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 03 Agrivet |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Veterinary Sciences - Curriculum Reproduction, Pathology, Breeding and Animal Welfare |
| Fellowship title | Evaluation of the clinical-pathological status and welfare of sheep: multidisciplinary, innovative and eco-sustainable management of infectious, parasitic and metabolic diseases. Valutazione dello stato clinico-patologico e del benessere degli ovini: management multidisciplinare, innovativo ed ecosostenibile delle malattie infettive, parassitarie e metaboliche. |
| Theme to be developed | A combined multidisciplinary approach based on clinical evaluation of sheep farms, as well as on the screening for infectious and parasitological diseases will generate data feeding a database for programming an integrate and innovative, web-based management application for disease prevention and control. PhD students will develop the project in a multidisciplinary environment, with both in laboratory and field (sheep farms) approach, and focusing on the four basal aspects of the research 1) infectious 2) clinical 3) pathological 4) parasitological. The PhD will also be encouraged to spend some time (6 months) abroad to deepen his/her knowledge on the research topics. |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed under the eINS Ecosystem Of Innovation For Next Generation Sardinia admitted for funding by Director's Decree no. 1056 of 23 June 2022, registered by the Court of Auditors on 26 July 2022; CUP J83C21000320007 |
| Project | e.INS - spoke 03 Agrivet |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Veterinary Sciences - Curriculum Reproduction, Pathology, Breeding and Animal Welfare |

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| Fellowship title | New solutions and processes to enhance environmental sustainability in traditional farming systems in Sardinia by increasing fertility in ruminants |
| Theme to be developed | The adoption of sustainable livestock practices can contribute to climate change mitigation and adaptation while improving farm economic performance. The challenge is to facilitate the transition to new farming systems that are ecologically and economically sustainable. Among the strategies available for this purpose, improving reproductive efficiency is among the most effective, because increased reproductive success is capable of maintaining production levels while employing fewer animals. Limiting unproductive animals leads to an overall improvement in farm efficiency and reduction of greenhouse gas emissions. The objective of the research is therefore to test the application of new solutions and processes using a digitized farm management system to increase the reproductive performance of the herd. The expected result is a reduction in the ratio of CO ₂ emissions to liters of milk produced. This system will have positive effects on economic sustainability and green transition of livestock farms and contribute to the achievement of European decarbonization targets in accordance with the SNSI and the National Research Plan. |
| Stay abroad for study and research activities | Yes |
| Foreign language | English |

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| Hiring resources | The procedure is financed within the framework of the PNRR Project CN_000022 "National Centre for Agricultural Technology - AGRITECH", admitted for funding by Director's Decree no. 1032 of 17 June 2022; CUP B63D21015240004 |
| Project | Agritech |
| Doctoral fellowships | 1 |
| Scientific area | Agricultural and Veterinary Sciences |
| PhD Course | Veterinary Sciences - Curriculum Production, Quality and Safety of Food of Animal Origin |
| Fellowship title | Innovative approaches for the control of antibiotic and anthelmintic resistance |
| Theme to be developed | Improvement of animal production and products of animal origin through the use of new multidisciplinary approaches to reduce antibiotic and anthelmintic resistance in dairy sheep farming. |
| Stay abroad for study and research activities | No |
| Foreign language | English |

**ADDITIONAL OPEN POSITIONS FOR THE COURSE IN VETERINARY SCIENCES
CURRICULUM REPRODUCTION, PATHOLOGY, BREEDING AND ANIMAL WELFARE**

No. 1 position reserved for Foreign Scholars from Lebanese University

Research topic

Candidates wishing to apply for this position must present a research project on the topic "Epidemiology, control and prevention of parasitic zoonoses in Lebanon".