Admission period I: Document "Available positions and Examination procedures"

Call for Applications for the admission to the PhD programmes of the University of Udine in the Academic Year 2025/2026, 41st cycle

First Session	Opening date	Closing date	PhD study programme start
	May 13, 2025 (14.00 h p.m. Italian time)	June 20, 2025 (14.00 p.m. Italian time))	November 1, 2025

DISCLAIMER:
The official and legally binding "Available positions and Examination procedures" is in Italian only.
This document cannot be used for legal purposes and it is only meant to provide information in English on the procedure (University Chancellor's Decree n. 326 of May 12, 2025).
Please refer to the official document "Available positions and Examination procedures" published on the official register (https://www.uniud.it/it/albo-ufficiale) and on the PhD website of the University of Udine.
Any changes and integrations will be made available on the mentioned above web pages. Therefore, no personal written communication shall be provided to applicants about examinations dates, competition results and deadlines regarding the enrollment.

ART. 1 – POSITIONS AVAILABLE AND EXAMS

1. This document "Available positions and exams" shows for each doctoral programme (Tables 1-11): the number of available positions, with details (with and without scholarships and possible reserves for specific candidates' categories); the type and amount of the scholarships, with the source of funding and any reference programs and regulations; the period spent abroad (mandatory or optional); the timetable for the exams, the date of publication of the list of admitted applicants to the exams and the final ranking(s).

2. The Tables of the PhD programmes are so listed:
- Law and Innovation in the European Legal Space (Table 1)
- Computer Science and Artificial Intelligence (Table 2)
- Industrial and Information Engineering (Table 3)
- Molecular Medicine (Table 4)
- Food Science (Table 5)
- Environmental and Energy Engineering Science (Table 6)
- Agricultural and Biotechnological Sciences (Table 7)
- Mathematical and Physical Sciences (Table 8)
- Clinical and Translational Medical Sciences (Table 9)
- Art History, Film Studies, Media Studies and Music (Table 10)
- Linguistics and Literature (Table 11)

ART. 2 – SPECIFIC PROVISIONS FOR ESF SCHOLARSHIP

1. The PhD positions funded by the European Social Fund are managed by the University of Udine in accordance with the provisions of the Notice referred to in the Specific Programme 20/24 "Support for the training of the regional university system of Friuli Venezia Giulia" of the ESF+ Regional Programme 2021/2027 of the Autonomous Region of Friuli Venezia Giulia, within the framework of the accredited

PhD programmes of the University of Udine (Decree no. 9526/GRFVG of 28 February 2025 and subsequent amendments and additions) - CUP G23C25000620008. In derogation from the provisions of art. 24, paragraph 5 of the Regulations for PhD Programmes, for positions funded by the ESF, the renunciation of the scholarship shall automatically imply the withdrawal from the PhD programme.

2. In addition to the rights and duties provided by the relevant regulations for the PhD programmes (Rector's Decree n. 299 of May 5, 2025 art. 18), in accordance with the provisions mentioned in art. 1, the successful candidate for a position with scholarship from the European Social Fund Specific Program 20/24) by accepting the grant:
- undertakes to submit the reports of the activity carried out according to the modalities and terms that will be communicated by the University of Udine and in compliance with the regulatory provisions mentioned in art. 1;
- undertakes to ensure compliance with the communication and information obligations provided for in article 18 "Information and Publicity" of the Decree cited in art. 1;
- is aware that:
  - the modification of activities, project objectives and expected results, where not previously authorized, will result in the revocation of the scholarship;
  - any negative judgment of the Teaching Board and the consequent non-admission to the next year of the doctoral programme, failure to obtain the degree and withdrawal from the course entails the revocation of the scholarship;
  - must comply with the principle of "do no significant harm" to environmental objectives (DNSH);
  - the doctoral programme may be legitimately suspended for maternity leave, parental leave, serious health reasons and other causes beyond the doctoral student's control and causes of such gravity as to prevent the performance of the doctoral activity subject to the judgment of the Teaching Board and to the competent bodies of the Friuli Venezia Giulia Region;
  - the University may also recourse for the repayment of the amounts received in the following cases of scholarship renunciation:
    - at least 40% of the planned duration of the training program has not been completed if the interruption is due to the doctoral student having a new job or a new academic position;
    - regardless of the period completed, if the interruption is not attributable to the causes of suspension indicated in the preceding paragraph.

3. PhD research programs funded by the European Social Fund will ensure compliance with the horizontal priorities and the principle of DNSH (Do No Significant Harm) set out in paragraph 12 of the Notice referred to in paragraph 1.

ART. 2 – FINAL PROVISIONS

1. For all matters not governed by this document, the provisions of the Rector's Decree n. 299 of May 5, 2025 "Call of application for admission to PhD programmes at the University of Udine a.y. 2025/2026, 41st cycle" shall apply.

1.POSITIONS and EXAMS – PhD Programme in LAW AND INNOVATION IN THE EUROPEAN LEGAL SPACE

GENERAL COMPETITION

Date for the publication of admitted applicants to the oral examination	Within July 11, 2025
Date for the publication of the final ranking list	Within July 31, 2025

Examination Schedule		
Oral examination	**Date**	**July 21, 2025**
	Time	**9:30 AM (Italian time)**
	Place	**University of Udine, Department of Legal Science (DISG), via Tomadini 3 - 33100 Udine, ITALY**
	Based on the number of applicants, the oral examination may take place in more than one day. To attend the examination tests, the candidates must exhibit a valid identity document or other personal identification document (possibly the same document attached to the application), under penalty of exclusion from the selection procedure. Citizens of non-EU states must mandatorily exhibit their passport.	

Available positions: 10

Detailed description	*N.*	*Type*	*Funding*	*Annual gross amount*	*Period abroad*	*Research program*
Positions WITH SCHOLARSHIP: 9	**3**	D.R. 299/2025 art. 11 p. 2 lett. b)	University of Udine	€ 16.243,00	max 6 months optional	Area A
	3	D.R. 299/2025 art. 11 p. 2 lett. b)	Associated Institution: Univ. Trieste	€ 16.243,00	max 6 months optional	Area B
	3	D.R. 299/2025 art. 11 p. 2 lett. a)	External funding: Specific Program 20/24 ESF+ 2021/2027 of the Autonomous Region of Friuli Venezia Giulia (Decree No. 9526/GRFVG dated February 28, 2025, as amended) - CUP G23C25000620008*	€ 16.243,00	max 6 months optional	Area C
Positions WITHOUT SCHOLARSHIP: 1	**1**	D.R. 299/2025 art. 11 p. 2 lett. b)	University of Udine	-	max 6 months optional	Area D

*Scholarships funded by "External Institutions" and associated locations can be assigned subject to the successful completion of the agreement that governs their funding or the decree's issuance granting funding or approving the operation (Rector's Decree n. 299/2025 art.14 p.7).

RESEARCH PROGRAMMES

Area A – Funder: University of Udine
Programmes in all the subjects of the SSDs on which the examinations will focus (Rector's Decree n. 299/2025 – Table 1).

Area B – Funder: University of Trieste
Programmes in all the subjects of the SSDs on which the examinations will focus (Rector's Decree n. 299/2025 – Table 1).

Area C – Funder: Specific Program 20/24 ESF+ 2021/2027 Regional Programme			
Research topic	**Area of specialisation S4 and Trajectory/ies of reference**	**Organisation, methods, results and innovativeness of the project**	**Integration with networks and partnerships, spin-offs and contribution to strategic supply chains and the development of the regional production system**
The impact of disabilities and chronic diseases on the labor market and welfare systems Professor Valeria Filì, GIUR-04/A	**Specialisation Area S4:** Health, Quality of Life, Agribusiness and Bioeconomy. **Trajectories of reference:** Trajectory 3. Active & assisted living solutions and systems to support frailty.	Project Organization: Systematic study and critical analysis of normative sources and jurisprudence from a multi-level perspective, as well as collective sources; identification of solutions from the perspective of industrial relations and proposals to be presented	The proposer is the Principal Investigator (P.I.) of two PRIN projects: a) PRIN PNRR 2022 Sunrise (https://prinsunrise.uniud.it); b) PRIN Liveable 2020 (https://prinliveable.uniud.it); Member of the Active Aging Group-Uniud (https://www.uniud.it/it/ricerca/gruppi/active-ageing). Public Engagement: utilizing the results to encourage a common reflection among institutions, social partners, and the third

1.POSITIONS and EXAMS – PhD Programme in LAW AND INNOVATION IN THE EUROPEAN LEGAL SPACE

		to policymakers and social partners. Method: Legal research in labor law with inter- and multidisciplinary influences. Expected Results: Development of innovative practices and strategies suitable for balancing health and work, strengthening communities, and ensuring the sustainability of welfare systems. Innovativeness: A perspective that combines labor law, welfare, and industrial relations.	sector; raising awareness among policymakers and stimulating the adoption of organizational solutions that promote the work inclusion of vulnerable individuals, including reasonable accommodations that leverage new technologies, thereby creating a connection between the university and the entrepreneurial system.
The digitalization of museum heritage: possibilities, limits and legal models Professor Francesca Fiorentini, GIUR-11/A	**Specialisation Area S4:** Cultural heritage, design, creativity industry, tourism. **Trajectories of reference:** Trajectory 2 - Research Development Technological Innovation for Cultural and Creative Enterprises (CCI)	The research aims to explore possible trajectories of digitalization of the museum assets in the FVG Region. The research will investigate the legal issues opened up by the use of technologies for the digitalization and remote use of museum assets (e.g., in terms of intellectual property rights and the use of artificial intelligence systems). The research will also apply comparative methodology to identify good practices in the digitalization of cultural heritage that have already emerged in the Region FVG, in other Italian Regions (such as Piedmont) and other countries (such as France). Specific case studies will be those of the Sistema Museale dell'Università di Trieste and of the Archivio Scrittori e Cultura Regionale.	The deliverables of the research will include the definition of strategies and legal solutions, but also administrative and best practices solutions, in the use of technologies for the digitalization and remote accessibility of the FVG museum assets. The scientific proponent of the project, Prof. Francesca Fiorentini, is the Director of the University of Trieste's Sistema Museale di Ateneo and co-directed the project 'The Right to Cultural Heritage (HEURIGHT14)', funded by the Arts and Humanities Research Council, in the period 2015-2018.
The impact of Regulation 2024/1991 on restoration of nature in FVG Region Professor Elisabetta Bergamini, GIUR-10/A	**Area of specialization S4:** Strategy 1 Energy transition, circular economy and environmental sustainability **Trajectories of reference:** Trajectory 1: Application of the circular economy at	The research investigates the impact of Reg. UE 2024/1991 in Friuli-Venezia Giulia: involved assets (e.g., Tagliamento River), expected benefits, challenges for Institutions and how the transition towards the circular economy contributes to the restoration of nature and vice-versa.	The research project integrates with the activity of: - Local and regional environmental networks, advocating for the protection of nature (e.g., the Associazione A.C.QUU.A); - Local and national research centers that study nature restoration from the point of view of non-legal disciplines and sciences (e.g., agricultural, chemical, physical, etc.); - Local and regional institutions involved in the implementation of the Regulation;

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	system level (area, network, supply chain)	Integration with current research activities: 1. PRIN PNRR "Empowering Citizens for Circular Economy: a HUMAN-centred law model (ECCE-HUMAN)" 2. Jean Monnet Module CoME CircLE (2023-2026) and Summer School "Consumer and Market Law in the European Circular Economy". To ensure the completion of the research project within the limited timeframe of the doctoral course, the research will be structured in the following main parts: - Study of EU Regulation 2024/1991 with a focus on the obligations foreseen for regional bodies and institutions; - Analysis of any initiatives already underway at the regional and national levels and the interaction between the two; - Analysis of the obligations arising for non-state entities and actors (e.g., businesses and foundations) and the benefits that businesses can derive from nature restoration, including in terms of greater resilience to extreme weather events (e.g., droughts or floods); - Concrete impact on the FVG (Friuli-Venezia Giulia) territory and benefits of restoring specific regional natural assets; - Study of the connection between the new Regulation and the legislation on circular economy, particularly observing how the transition towards the circular economy contributes, directly or indirectly (e.g., by reducing the number of waste products that pollute natural assets), to the restoration of the regional ecosystem, and how	- Regional companies and producers, involved in the implementation of the obligations arising from the regulation, who are already transitioning to a sustainable circular economy. In terms of impact, the research outputs will support the definition of environmental practices adopted by local and regional businesses, with the ultimate aim of inducing a virtuous change in the entrepreneurial realities of the FVG region. The results will also contribute to achieving a progressive integration between the world of research, and in particular the University, and regional companies, which will thus be able to orient their decisions in a conscious manner that respects the obligations arising from the Regulation. More generally, the research results will contribute to raising awareness among citizens, policymakers, and local authorities with the aim of having a multiplier effect on the awareness of the essential nature of the regulation, promoting the dissemination of virtuous examples currently in place at the business and local level, also through the drafting of guidelines on the main trajectories to pursue to initiate a scalable ecosystem approach within businesses and public administrations. The research project falls under trajectory 1 (Application of the circular economy at the system level) in several ways. Firstly, the circular economy is intended as applicable not only at the level of the production system but also at the ecosystem level, the protection of which is progressively integrated into the environmental obligations of businesses. Secondly, nature restoration and the implementation of the circular economy are interconnected from several points of view. On the one hand, the circular economy can be understood as a tool to promote nature restoration, as it reduces pressure on natural resources, minimizes the production of polluting waste, and promotes the recovery and reuse of waste and by-products. On the other hand, nature restoration affects the development of the circular economy, ensuring the preservation of quality natural resources and the creation of new economic opportunities. This also involves the revitalization of economic sectors such as ecotourism and nature tourism (for example, by incentivizing economic opportunities for local and regional businesses in these sectors).

1.POSITIONS and EXAMS – PhD Programme in LAW AND INNOVATION IN THE EUROPEAN LEGAL SPACE

		nature restoration facilitates the transition towards the circular economy. More generally, the research will observe how the two strategies mutually integrate.	

Area D – Funder: University of Udine
Programmes in all the subjects of the SSDs on which the examinations will focus (Rector's Decree n. 299/2025 – Table 1).

COESIONE ITALIA 21-27

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REGIONE AUTONOMA FRIULI VENEZIA GIULIA

2. POSITIONS and EXAMS – PhD Programme in COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE

GENERAL COMPETITION

Date for the publication of admitted applicants to the oral examination	Within July 9, 2025
Date for the publication of the final ranking list	Within July 31, 2025

Examination schedule		
Oral examination	**Date**	**July 18, 2025**
	Time	**8:30 AM (Itali9n time)**
	Place	**Department of Mathematics, Computer Science and Physics, (DMIF) "Sala Riunioni" – via delle Scienze 206, 33100 Udine.** **https://www.dmif.uniud.it/il-dipartimento/sedi/**
	The oral examination consists of completing an initial written test and attending a subsequent interview. The initial written test will be held at the same time for all candidates (start time 8:30 a.m. Italian time). Thereafter, the order of convocation for each candidate's interview will be scheduled. Interviews can also be organized over several days. The oral examination (written test and interview) may be taken remotely upon motivated request and in accordance with the provisions of the call (art. 9 p.4 of the Call). Detailed instructions on the organization of the oral examination will be communicated to the admitted candidates. To attend the examination tests, the candidates must exhibit a valid identity document or other personal identification document (possibly the same document attached to the application), under penalty of exclusion from the selection procedure. Citizens of non-EU states must mandatorily exhibit their passport.	

Available positions: 11						
Detailed description	***N.***	***Type***	***Funding***	***Annual gross amount***	***Period abroad***	***Research program***
Positions WITH SCHOLARSHIP: 11	**4**	D.R. 299/2025 art. 11 p. 2 lett. b)	University of Udine	€ 19,367.00	max 6 months optional	Area A
	5	D.R. 299/2025 art. 11 p. 2 lett. a)	Associated Institution: Fondazione Bruno Kessler *	€ 19,367.00	max 6 months optional	Area B
	2	D.R. 299/2025 art. 11 p. 2 lett. a)	External funding: Specific Programme 20/24 ESF+ 2021/2027 of the Autonomous Region Friuli Venezia Giulia (Decreto n. 9526/GRFVG of 28 February 2025 and subsequently amended and supplemented) - CUP G23C25000620008 *	€ 19,367.00	max 6 months optional	Area C
Positions WITHOUT SCHOLARSHIP: 0	**0**	-	-	-	-	-

*Scholarships funded by "External Institutions" and associated locations can be assigned subject to the successful completion of the agreement that governs their funding or the decree's issuance granting funding or approving the operation (Rector's Decree n. 299/2025 art. 14 p. 7).

RESEARCH PROGRAMMES

Area A – Funder: University of Udine
In accordance with PhD research topics (Rector's Decree n. 299/2025 - Table 2).

Area B – Funder: Fondazione Bruno Kessler
Integrating LMMs and ontological reasoning for the analysis of engineering diagrams
Failure analysis and safety assessment of safety-critical systems

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REGIONE AUTONOMA FRIULI VENEZIA GIULIA

2. POSITIONS and EXAMS – PhD Programme in COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE

SMT-based model checking of hybrid systems
Model-based monitoring and diagnosis for infinite-state systems
Large-scale formal verification and testing for parametric systems
Combining GeoAI and multi-modal LLM for spatial-temporal information retrieval from historical data
Place recognition in 3D points clouds

Area C – Funder: Specific Programme 20/24 ESF+ 2021/2027 Region FVG			
Research Topic	**Specialization Area S4 and Trajectory/ies of reference**	**Organisation, methods, results and innovativeness of the project**	**Integration with networks and partnerships, spin-offs and contribution to strategic supply chains and the development of the regional production system**
Multimodal LLM and Virtual Reality for patient management and rehabilitation in oncology Proff. Luca Chittaro and Vincenzo Della Mea	**Specialisation Area S4:** Health, Quality of Life, Agribusiness and Bioeconomy. **Trajectories of reference:** Trajectory 2: Innovative biomedical solutions and systems: integrated development of medical devices.	This research project aims to develop an innovative framework integrating multimodal Large Language Models (LLM), Virtual Reality (VR) and Augmented Reality (AR) to improve the management and rehabilitation of cancer patients. The goal is to provide personalized and continuous support, leveraging NLP, Vision-Language Models and predictive AI techniques for oncology telemedicine, in synergy with VR/AR applications for home rehabilitation, with particular emphasis on usability and immersive experience, to ensure long-lasting therapeutic effects and a significant improvement in patients' quality of life.	The topic of rehabilitation and management of cancer patients is increasingly relevant in the FVG region and, more generally, in Italy, also due to the aging of the population. The research will strengthen the existing collaborations between the HCI and MITEL Laboratories of the University of Udine that conduct projects with several hospitals including ASUFC and CRO of Aviano. Furthermore, HCI Lab collaborates with the "Gervasutta" Institute of Udine, while MITEL Lab with the WHO and, on cancer prediction through AI, with the European network MSCA BosomShield. The research developed by the candidate will have possible benefits for local companies involved in the medical sector.
Simulation framework for industrial digital twin and implementation of clusters of autonomous UAV robotic systems Proff. Vincenzo Riccio, Carlo Drioli, Daniele Salvati and Gian Luca Foresti	**Specialisation Area S4:** Smart Factory and Sustainable Development of Made in Italy supply chains. **Trajectories of reference:** Trajectory 1. Smart systems and machines; Trajectory 3. Solutions and technologies for process innovation.	The project aims to develop verification and validation systems for simulation software and industrial digital twins, and to study coordinated systems of mobile robotic agents with advanced sensing capacity, according to two possible lines of research: - Autonomous UAVs with advanced capabilities for acoustic scene analysis and coordination. The study focuses on clusters of UAV drones with advanced autonomy and scene analysis capabilities based on Machine Learning for the processing of data from sensor arrays and for acoustic imaging - Framework for the verification and validation of industrial Digital Twins An innovative framework is proposed to validate industrial Digital Twins, improving their reliability and safety. The approach combines testing on multiple simulators to identify interpretable failures.	Both projects arise from collaborations with local and international companies in the industrial field, such as Hexagon, Orona, Electrolux, EyeTech and from collaborations with entities in the defense and cybersecurity fields. The research groups involved, MADS and AViReS, are also involved in consortia and collaborations with international universities and research institutions, promoting the exchange of know-how and continuous updating on innovations in the fields of software engineering, computer vision and computer audition for robotics, and cybersecurity, amplifying the impact of the discoveries and the possibilities of technological transfer of the project.
Artificial Intelligence for Business Process Optimization Proff. Angelo Montanari, Giuseppe Serra, and Dr. Andrea Brunello with Dr. Luca Geatti e Nicola Saccomanno	**Specialisation Area S4:** Smart Factory and Sustainable Development of Made in Italy supply chains. **Trajectories of reference:** Trajectory 1: Solutions and technologies for product innovation;	Artificial Intelligence systems play a crucial role in monitoring and optimizing business processes. This project aims to develop more interpretable, efficient, and effective AI solutions, focusing on one or both of the following research areas: - the integration of symbolic and sub-symbolic approaches;	This topic is of fundamental importance both for high-tech impact companies and for the Data Science and Automatic Verification Lab and the Artificial Intelligence Lab of UNIUD. For this reason, the student will be able to develop their project by benefiting from the network of companies and institutions involved in the PNRR iNEST project, as well as from strategic industrial companies in the Friuli-Venezia Giulia region. The project will be

2. POSITIONS and EXAMS – PhD Programme in COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE

	Trajectory 3: Solutions and technologies for process innovation.	- the adoption of advanced techniques for intelligent resource management.	aligned with the themes and objectives of the Friuli-Venezia Giulia Green Deal.
EyeAI: Deep Learning to Revolutionize Nutritional Analysis with Egocentric Computer Vision Proff. Niki Martinel e Christian Micheloni	**Specialisation Area S4:** Health, Quality of Life, Agribusiness and Bioeconomy. **Trajectories of reference:** Trajectory 1: Systems and solutions for health maintenance and care support: nutraceuticals, dietary supplements, functional foods, medical nutrition and functional cosmetics; Trajectory 3: Active & assisted living solutions and systems for supporting frailty.	This research integrates nutrient estimation from food images with egocentric visual tracking to advance computer vision. Addressing challenges like occlusion and multiple ingredient recognition, we'll employ transformer architectures, self-supervised learning, and domain adaptation techniques. The multi-modal approach combines images with textual metadata for robust dietary assessment models. Expected outcomes include novel benchmarking frameworks, state-of-the-art deep learning models, and public prototypes bridging AI, nutrition science, and egocentric vision.	This research aligns with FVG and Italy's AI priorities, supporting digital transformation through partnerships with regional agri-food SMEs, IP4FVG, and Area Science Park. The project addresses regional needs for preventive healthcare tools, AI-powered food labeling, and digital health innovations while contributing to Italy's National AI Strategy. Applications include telehealth platforms, food-logging apps, and smart manufacturing, reinforcing Italy's leadership in AI-powered perception systems and strengthening its European AI role.
Audio-tactile augmented reality for the creative industry Prof. Federico Fontana	**Specialisation Area S4**: Cultural heritage, design, creativity industry, tourism. **Trajectories of reference:** Trajectory 2: Research Development Technological Innovation for Cultural and Creative Enterprises (CCI).	The project proposes to design and validate bone conduction 3D audio models and their integration with haptic feedback elements, to be implemented in augmented reality devices on the market in order to optimize immersion through the rendering of multisensory cues. The innovative nature of the research has already been recognized by Otto Mønsted Fond and Schweizerischer Nationalfonds, funders of grants for synergic projects underway.	The international scholarships are carried out respectively with Zürcher Hochschule der Künste ICST in Zurich and Aalborg Universitet CREATE in Copenhagen, already leader of projects on the theme of multisensory virtual reality. Thanks to the laboratory resources present at the Lab Village in Udine and at CEPO in Pordenone, the research will also have territorial application implications regarding the use of devices for augmented reality, already planned for e.g., the Museo del Mare in Trieste and the events at Pordenone Città della Cultura 2027.

3. POSITIONS and EXAMS – PhD Programme INDUSTRIAL AND INFORMATION ENGINEERING

GENERAL COMPETITION

Date for the publication of admitted applicants to the oral examination	within July 11, 2025
Date for the publication of the final ranking list	within July 31, 2025

Examination schedule		
Oral examination	**Date**	**July 22, 2025**
	Time	**09:30 AM (Italian time)**
	How to conduct the examination	**The oral examination will be held online.**
	Based on the number of applicants, the oral examination may take place in more than one day. To attend the examination tests, the candidates must exhibit a valid identity document or other personal identification document (possibly the same document attached to the application), under penalty of exclusion from the selection procedure. Citizens of non-EU states must mandatorily exhibit their passport.	

Available positions: 7

Detailed description	*N.*	*Type*	*Funding*	*Annual gross amount*	*Period abroad*	*Research program*
Positions WITH SCHOLARSHIP: 7	**2**	D.R. 299/2025 art. 11 c. 2 lett. b)	University of Udine	€ 19,367.00	max 6 months optional	Area A
	1	D.R. 299/2025 art. 11 c. 2 lett. a)	External funding: University of Udine – DPIA – Project HEU ERC STG, Project acronym BREAKDOWN, Project number: 101162848 CUP G23C24001880006*	€ 19,367.00	max 6 months optional	Area B
	4	D.R. 299/2025 art. 11 c. 2 lett. a)	External funding: Specific Programme 20/24 ESF+ 2021/2027 of the Autonomous Region Friuli Venezia Giulia (Decree n. 9526/GRFVG of 28 February 2025 and subsequently amended and supplemented) – CUP G23C25000620008*	€ 19,367.00	max 6 months optional	Area C
Positions WITHOUT SCHOLARSHIP: 0	**0**	-	-	-	-	-

*Scholarships funded by "External Institutions" and associated locations can be assigned subject to the successful completion of the agreement that governs their funding or the decree's issuance granting funding or approving the operation (Rector's Decree n. 299/2025 art.14 p.7).

RESEARCH PROGRAMMES

Area A – Funder: University of Udine

In accordance with PhD research topics (Rector's Decree n. 299/2025 - Table 3).

Area B – Funder: University of Udine – DPIA, Project HEU ERC STG, Project acronym BREAKDOWN

Research Topic: Multiscale fatigue characterisation and modelling of metallic alloys

The project focuses on the experimental characterization of the microstructure of metallic alloys and their fatigue behavior to understand the mechanisms influencing their structural durability. Numerical techniques and theoretical approaches will be used in parallel to analyze and model fatigue damage at the microstructural level. Strong knowledge of solid mechanics and fracture mechanics is required, as these are essential for interpreting results and developing reliable predictive models. The study is part of a broader project funded by the European Research Council (ERC) titled: *Wide-ranging probabilistic physics-guided machine learning approach to break down the limits of current fatigue predictive tools for metals – BREAKDOWN.*

Area C – Funder: Specific Programme 20/24 ESF+ 2021/2027 FVG Region

Research Topic	**Specialization Area S4 and Trajectory/ies of reference**	**Organisation, methods, results and innovativeness of the project**	**Integration with networks and partnerships, spin-offs and contribution to strategic supply chains and the development of the regional production system**
AI for Sailboat Sailing Prof. Andrea Fusiello	**Specialization Area S4:** Sustainable Waterborne Mobility and its land Connections. **Trajectories of reference:** Trajectory 2: SMART MOBILITY - smart technologies, systems and	The project involves the development of an intelligent system based on computer vision and artificial intelligence to analyze sails and other sailing parameters in real time and suggest optimal adjustments. A demonstrator	The submitter collaborates on Artificial Vision topics with Italian (PoliMI) and foreign (CTU Prague) colleagues. He is an active member of the scientific community as Associate Editor and participates in the organization

3. POSITIONS and EXAMS – PhD Programme INDUSTRIAL AND INFORMATION ENGINEERING

	solutions for ships, shipyards, ports and their land connections.	tested on real boats is expected, with strong potential for technology transfer. The project is innovative in applying computer vision to real-time sail adjustment. The methodology combines computer vision techniques, aerodynamic modelling and artificial intelligence with expert rules derived from professional sailors.	of conferences. The initiative integrates with the activities of the Sailing Lab (UniUD) and with already ongoing projects (BRIGANTINE - Interreg Italy-Croatia, strategic university project ESPeRT-AMARE). The project will be developed in synergy with Olimpic Sails, a company based in Muggia and specialized in the production of high-performance sails. The solution can be adopted in sports, recreational and educational settings, improving safety, performance and accessibility of navigation. Applicable to other maritime fields as well (sailing drones, autonomous vehicles), it will contribute to the development of smart technologies for sustainable mobility on water. The PhD responds to the needs of nautical supply chains, strengthening integration with local companies active in boating, shipyards and on-board electronics. It fosters technology transfer through demonstrators and experimental prototypes, potentially exploitable in educational and industrial contexts.
Probabilistic approaches for fatigue assessment in metals produced by 3D printing Prof. Enrico Salvati	**Specialization Area S4:** Intelligent Factory and Sustainable Development of Made in Italy Supply Chains. **Trajectory of reference** Product innovation solutions and technologies.	The project is investigating metal products manufactured using additive technologies with a focus on mechanical fatigue, a critical property for their reliability. 3D printing introduces microstructural heterogeneities that make it difficult to predict their performance. The use of AI and semi-empirical models has improved prediction, but integration with probabilistic methods is needed. Research is aimed at improving knowledge and promoting industrial adoption.	The project fosters integration into research networks at territorial, national and international level, promoting scientific and industrial partnerships to develop the use of metal 3D printing. The spin-offs include the adoption of the method by companies to improve design and sustainability. The PhD research theme responds to the needs of strategic regional supply chains and aims to strengthen the link with the production system and technology transfer.
Understanding Chain-of-Thought: Interpretability of LLM for industrial applications Prof. Lauro Snidaro	**Specialization Area S4:** Intelligent Factory and Sustainable Development of Made in Italy supply chains. **Trajectories of reference** Trajectory 1. Solutions and technologies for product innovation; Trajectory 3. Solutions and technologies for process innovation; Trajectory 5. Innovation of social systems and valorisation of human resources in manufacturing.	Intermodal LLM and LVM are a breakthrough for SMEs: while training large Deep Learning models is costly, innovative AI applications can be developed by prompting pre-trained foundational models. This entails known risks (hallucinations, prompt-specific outputs). In order to enable its real use, this research focuses on understanding the generation of content by LLM by analysing the 'reasoning' of chain-of-thought prompting.	This project builds on our previous research investigating the innovative use of LLM for information extraction and fusion. It covers several avenues for advancing human-machine interaction for intelligent products and manufacturing. It aligns with FVG's S4 strategy by promoting ongoing collaboration on this topic with the medical/manufacturing industry [Incitti et al: Leveraging LLMs for Knowledge Engineering from

3. POSITIONS and EXAMS – PhD Programme INDUSTRIAL AND INFORMATION ENGINEERING

			Technical Manuals. FUSION 2024, IEEE].
eXplainable Reinforcement Learning for safe workspaces Operator 4.0 Prof. Lauro Snidaro	**Specialisation Area S4:** Intelligent Factory and Sustainable Development of Made in Italy supply chains **Trajectories of reference** Trajectory 3. Solutions and technologies for process innovation; Trajectory 5: Innovation of social systems and human resource development in manufacturing.	Reinforcement learning (RL) opens up promising prospects for self-learning robotic control. However, in the Industry/Operator 4.0 paradigm, robots will leave their safety cages behind to share workspace with human collaborators, requiring context and situational awareness in order not to harm them. To enable safe collaboration between human and robot, this project will study the eXplainable RL (XRL) to understand robot performance.	This research builds on the experience of context and situation-aware systems (Snidaro et al.: Context-Enhanced Information Fusion, 2016), in synergy with ongoing and planned projects and research towards situation-aware XRL (e.g., FWF SITCON project) [Salfinger: RL Meets Cognitive Situation Management, CogSIMA 2020, IEEE]. Continuing collaboration on use cases with the local manufacturing industry (e.g., Video Systems Srl) aligns with FVG's S4 strategy.
Advanced sensors, In-Mold Electronics and digital twin for intelligent monitoring Prof. Ruben Specogna	**Specialisation Area S4:** Intelligent Factory and Sustainable Development of Made in Italy supply chains. **Trajectory of reference** Solutions and technologies for product innovation.	The project envisages the development of innovative sensors, including torque sensors, devices based on flexible electronics for human-machine interfaces (HMI), sensors integrated via advanced In-Mold Electronics (IME) technologies, and sensors powered by energy harvesting systems. Sensors will be supported by digital twins for predictive monitoring and energy optimisation through advanced experimental techniques and simulations.	The project promotes the integration of the proponent into regional, national and international research networks, stimulating scientific and industrial partnerships oriented towards the development and application of advanced sensor technology, flexible electronics for HMI, In-Mold Electronics (IME), energy harvesting and digital twin. Expected spin-offs include the adoption of technologies by regional companies to accelerate design, reduce development time, increase energy efficiency and improve product reliability. The project responds to the needs of strategic regional S4 supply chains, strengthening the connection between research and the regional production system, and fostering technology transfer.

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REGIONE AUTONOMA FRIULI VENEZIA GIULIA

4. POSITIONS and EXAMS– PhD Programme in MOLECULAR MEDICINE

GENERAL COMPETITION

Date for the publication of admitted applicants to the oral examination	Within July 11, 2025
Date for the publication of the final ranking list	Within July 31, 2025

Examination schedule		
Oral examination	**Date**	**July 22-23, 2025**
	Time	**09:30 AM (Italian time)**
	Place	**Department of Medicine (DMED), Seminar Room – Piazzale Kolbe 4, 33100 Udine ITALY**
	Based on the number of applicants, the oral examination may take place in more than one day. To attend the examination tests, the candidates must exhibit a valid identity document or other personal identification document (possibly the same document attached to the application), under penalty of exclusion from the selection procedure. Citizens of non-EU states must mandatorily exhibit their passport.	

Available positions: 7

Detailed description	*N.*	*Type*	*Funding*	*Annual gross amount*	*Period abroad*	*Research program*
Positions WITH SCHOLARSHIP: 6	**4**	D.R. 299/2025 art. 11 p. 2 lett. b)	University of Udine	€ 17,805.00	max 6 months optional	Area A
	2	D.R. 299/2025 art. 11 p. 2 lett. a)	External funding: Specific Programme 20/24 ESF+ 2021/2027 of the Autonomous Region Friuli Venezia Giulia (Decreto n. 9526/GRFVG of 28 February 2025 and subsequently amended and supplemented) - CUP G23C25000620008*	€ 17,805.00	max 6 months optional	Area B
Positions WITHOUT SCHOLARSHIP: 1	**1**	D.R. 299/2025 art. 11 p. 2 lett. b)	University of Udine	-	max 6 months optional	Area C

*Scholarships funded by "External Institutions" and associated locations can be assigned subject to the successful completion of the agreement that governs their funding or the decree's issuance granting funding or approving the operation (Rector's Decree n. 299/2025 art.14 p.7).

RESEARCH PROGRAMMES

Area A – Funder: University of Udine
Research programmes: 1,2,3,4,5

1. OCT4 in Ovarian Cancer: Implications for Tumour Progression and Therapeutic Strategies (supervisor prof. Roberta Benetti)

Epithelial ovarian carcinoma (EOC) is often diagnosed at an advanced stage and is the leading cause of gynaecological cancer mortality. The poor prognosis is related to chemoresistance, tumour heterogeneity, genomic instability and an immunosuppressive tumour microenvironment (TME). Understanding the mechanisms of immune regulation and genomic stability is therefore essential for developing precision therapies.

Our preliminary data highlight the role of the transcription factor OCT4 and its processed pseudogene hOCT4P3 in EOC aggressiveness. OCT4 promotes tumour self-renewal, chemoresistance and shapes an immunosuppressive TME, impairing anti-tumour immune responses and reducing patient survival. Furthermore, our results suggest that OCT4 plays a crucial role in maintaining genomic stability, further contributing to tumour progression. In contrast, long non-coding RNA (lncRNA) encoded by the hOCT4P3 pseudogene counteracts EOC aggressiveness by targeting a silencing complex to the OCT4 gene, suggesting a key role in both immune modulation and genomic integrity.

Objectives:

a. To understand hOCT4P3-mediated immune modulation and genomic stability: To analyse OCT4 silencing and its impact on immune responses and genomic integrity in the TME.
b. Reversing OCT4-induced immunosuppression, chemoresistance and genomic instability: Develop strategies to disrupt OCT4-dependent signalling pathways to restore immune surveillance and improve genomic stability.
c. Validate immune and genomic modulation in patient cohorts: Establish hOCT4P3/OCT4 as prognostic biomarkers, correlating their activity with immune infiltration, resistance mechanisms and genomic stability.

This study aims to reprogram immunosuppressive and genomically unstable TME, improving therapeutic outcomes and enabling personalised strategies for high-risk EOC patients.

2. Precision epigenetic editing to overcome chemoresistance in advanced colorectal cancer (supervisor prof. Eros Di Giorgio, co-supervisor prof. Valentina Rapozzi)

Although it is well established that epigenetic and metabolic reprogramming of cancer characterises the development of resistance to chemotherapeutic agents, epigenetic drugs have so far found little therapeutic use.

In this project we intend to use three-dimensional organoids of relapsed or metastatic colorectal cancer that have developed resistance to FOLFOX combination therapy and KRAS-ON and OFF inhibitors as an experimental model in order to:

a. a.map the epigenetic modifications (super-enhances, G4s and R-loops) that characterise resistance patterns;

4. POSITIONS and EXAMS– PhD Programme in MOLECULAR MEDICINE

b. describe the alternative metabolic cycles based on arginine metabolism that make resistance models less glucose-dependent;
c. characterise the re-sensitisation achieved by using two epidrugs identified in the laboratory to be effective in overcoming resistance to FOLFOX and KRAS inhibitors.

The objectives will be achieved by employing genome editing techniques (to switch off certain epigenetic regulators and open or close genomic regions subjected to complex regulation), molecular and biochemical characterisations and NGS approaches.
The activity will be carried out at the Biochemistry laboratory of the Department of Medicine of the University of Udine and will benefit from the collaboration with the University of Bordeaux, which offers the candidate the possibility of international experience.

3. Regulators and repair factors impacting stress induced DNA & RNA modifications in cancer (supervisors proff. Gianluca Tell and Giulia Antoniali)

DNA and RNA are the master instructional and regulatory molecules that control human cellular and organismal health. While the DNA and RNA sequences are essential for providing genetically driven instructions (DNA, mRNA) and regulatory or functional molecules (lnRNA, tRNA, miRNA), base modifications of both DNA and RNA add a disease-driven or developmental level of gene regulation and RNA function. The stability and functional potential of these base modifications or epigenomic regulators are mediated by protein complexes and pathways that have evolved to "repair" DNA and RNA bases. The primary enzymatic pathway for the "repair" of base modifications is the "Base Excision Repair" or BER pathway. Our goal will be to identify the complete protein interactome among these critical BER factors in cancer cells (ovarian and lung) upon disease-relevant genotoxic conditions. To address the role of genotoxicants on G-quadruplex (RG4) containing miRNAs secondary structure formation and stability and the existence of repair or quality control mechanisms impacting miRNA maturation/function, we propose the following key milestones: (1) Understand the role of BER enzymes on RG4-miRNA processing and quality control affecting gene expression in the models proposed, using biochemical/biophysical characterization of the isolated complexes and NGS sequencing approaches in cells and EVs; (2) Identify small molecules interfering with BER proteins/RG4-miRs complexes using high-throughput screening assays, biochemical/biophysical assays and in silico structural tools; (3) Validate the efficacy of the inhibitors in cells (2D) and patients-derived organoids (3D). These findings will represent a starting point for the development of novel therapeutic agents.
Through this Project, we will uncover protein-protein, protein-DNA, and protein-RNA complexes, along with functional outcome analysis, that will yield novel analytical tools important for the development of biomarkers (protein, gene expression) for patient diagnosis, monitoring, treatment, and stratification.

4. Identification of Biomechanical and Matrix Components in Transthyretin Fibrillogenesis (supervisor prof. Alessandra Corazza)

Systemic transthyretin (ATTR) amyloidosis is a progressive disease characterized by the extracellular deposition of amyloid fibrils composed of dissociated and partially unfolded transthyretin (TTR) tetramers. This accumulation, in combination with components of the extracellular matrix (ECM), compromises the structural and functional integrity of tissues, leading to organ dysfunction and, in severe cases, multi-organ failure. ATTR is increasingly recognized as an underdiagnosed but clinically relevant cause of restrictive cardiomyopathy. This research project aims to characterize the role of the ECM and local mechanical forces in the molecular mechanisms underlying TTR amyloidogenesis in cardiac tissue. Conformational changes and structural dynamics responsible for tetramer dissociation and fibril formation will be investigated using high-resolution Nuclear Magnetic Resonance (NMR) spectroscopy, integrated with a module for the controlled application of shear forces, to mimic the biomechanical conditions of the cardiac microenvironment. The extracellular component will be modeled using decellularized myocardial tissue obtained from murine models of ATTR amyloidosis, to recreate a physiologically relevant three-dimensional environment. The synergistic effect of mechanical stress and ECM presence on the kinetics of TTR aggregation will also be evaluated.The project is conducted in collaboration with the Biochemistry Laboratory of the University of Pavia and the National Amyloidosis Centre (NAC, UCL, London), which will provide isotopically labeled (triple-labeled) TTR proteins for advanced structural analyses and will contribute to the development and implementation of biochemical assays to assess amyloidogenic potential. The NAC will also supply decellularized tissues from murine models.

5. Investigating the role of B cells and mast cells metabolism in colorectal cancer-associated immune responses (supervisor prof. Carlo Pucillo)

The study will focus on the relationship between B-lymphocytes and mast cells (MCs) in colorectal cancer (CRC), shedding light on the mechanisms of cell-cell communication in the tumour microenvironment (TME), a mechanism that may underpin novel therapies. After an initial characterisation of the molecular markers of MCs and B-cell subtypes under normal conditions and in CRC, the main focus will be on understanding how to reprogram MCs and B-cells to foster an anti-tumour microenvironment.
The PhD student will characterise B-cells and mast cells in patient-derived CRC biopsies using state-of-the-art technologies such as single-cell RNA sequencing and metabolomics analysis. The project will explore new unexplored areas of biomedical research by identifying the molecular signatures of MCs and B-cells critical for neoplastic pathology. The contribution of these cells in antitumour immunity will be tested in vitro by CD8 lymphocyte-mediated lysis of tumour cells on organoids or tumour cell lines. This system will provide an experimental model to test new immunomodulatory strategies and to study how reprogramming of mast cells or tumour-associated B lymphocytes can influence antitumour immunity.

Area B – Founder: Specific Programme 20/24 ESF+ 2021/2027 Region FVG			
Research Programmes: 6,7,8,9,10			
Research Topic	**Specialization Area S4 and Trajectory/ies of reference**	**Organisation, methods, results and innovativeness of the project**	**Integration with networks and partnerships, spin-offs and contribution to strategic supply chains and the development of the regional production system**

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6.Reprogramming Tumour Resistance: FAK as a Therapeutic Lever in Neuroendocrine Tumours Prof. Teresa Gagliano	**Specialization Area S4:** 4.Health, Quality of Life, Agrifood and Bioeconomy. **Trajectory/ies of reference:** 4.Solutions and systems for innovative therapies: integrated development of drugs and biopharmaceuticals (biotech) for personalized and sustainable medicine.	This PhD project explores the therapeutic targeting of focal adhesion kinase (FAK) in gastrointestinal neuroendocrine tumours (GI-NETs), using primary patient-derived cultures and GI-NET cell lines (GOT1, COLO320DM). The project employs PROTACs and advanced gene silencing strategies to disrupt FAK activity. Utilizing 2D and 3D culture systems, high-resolution imaging, and multi-omics analyses—including transcriptomics, epigenomics, and proteomics—it aims to uncover FAK's role in driving oncogenic, transcriptional, and epigenetic signalling. A key focus is the tumour microenvironment (TME), with particular attention to the role of FAK in fibroblasts. Through co-culture models and functional assays, the project will investigate how fibroblast-specific FAK signalling influences tumour progression, therapy resistance, and cellular communication within the TME. Understanding this crosstalk will help identify novel stromal targets and reveal how FAK shapes the tumour-supportive niche. The project is expected to generate insights that support the development of personalized, mechanism-based therapies for GI-NET patients and provide a foundation for future clinical translation.	The project integrates into international cooperation (COAST and PhD Network) and direct interaction with expert in the field (Prof. Castaño, University of Córdoba) and regional (Endocrinology ASUFC) networks, establishing scientific, clinical, and industrial partnerships to develop diagnostic biomarkers and innovative therapies transferable to healthcare. The doctorate meets strategic professional needs (S4), building advanced skills in molecular medicine, translational oncology, and pharmaceuticals, fostering collaboration with regional biotech firms and research entities.
7.Unravelling molecular mechanisms of cardiac extracellular matrix remodelling Prof. Antonio Paolo Beltrami	**Specialization Area S4:** 4.Health, Quality of Life, Agrifood and Bioeconomy. **Trajectory/ies of reference:** 4.Solutions and systems for innovative therapies: integrated development of drugs and biopharmaceuticals (biotech) for personalized and sustainable medicine.	Heart transplantation is often the last option for patients with end-stage heart failure (ESHF), but 20% of patients are removed from transplant lists annually due to a shortage of donor organs, severe heart dysfunction, or death before a suitable graft is available. Cardiometabolic disease (CMD) plays a key role in the progression of heart disease, including ischemic and non-ischemic conditions like dilated cardiomyopathy (DCM). Identifying therapeutic targets to delay ESHF progression and reduce transplant dependency could improve outcomes and ease pressure on transplant services. Disruptions in the mechanical link between the contractile apparatus and the collagen matrix impair force transmission, causing cardiac dilation and increased end-systolic volume. Matrix remodelling also increases stiffness, altering diastolic function. Preliminary data indicate ECM-related pathways are dysregulated in cardiac fibroblasts from ESHF, highlighting the importance of ECM remodelling in cardiovascular diseases. This project aims to: 1) Isolate ECM from cardiac regions: Biopsies from donor and recipient hearts will be decellularized, and effectiveness will be evaluated. 2) Conduct MS-based proteomics: Samples will undergo mass spectrometry to analyse proteomic changes in the ECM linked to heart failure. 3) Map metabolic signatures using MALDI imaging: MALDI will detect and localize metabolic patterns in the ECM.	The project aligns with the S4 area Health, Quality of Life, Agri-food, and Bioeconomy, targeting innovative therapies for personalized medicine. It addresses end-stage heart failure by identifying ECM molecular targets using advanced proteomics and imaging. The research fosters tech transfer, clinical innovation, and regional collaboration, strengthening ties with biotech firms and research hubs, and boosting Friuli Venezia Giulia's biomedical and economic growth.
8.Studying the contribution of mast cells to ovarian cancer-associated immunity Prof. Barbara Frossi	**Specialization Area S4:** 4.Health, Quality of Life, Agrifood and Bioeconomy. **Trajectory/ies of reference:** 4.Solutions and systems for innovative therapies: integrated development of drugs and biopharmaceuticals (biotech) for personalized and sustainable medicine.	Ovarian cancer (OC) is one of the deadliest cancers in women, and the most lethal among gynecologic tumors. Immunotherapy represents an opportunity but to date OC patients do not appear to benefit from current protocols. Therefore, a better understanding of composition of the tumor immune microenvironment especially in its immune components, could unveil mechanisms of immune suppression in a useful way to develop new therapeutic approaches. Among innate immune cells that infiltrate ovarian cancer tissue, mast cells (MCs) are	The project is set in a context of already established scientific collaborations with other research groups in academic and research centers of excellence at national and international level. The results of the study could have a significant impact, laying the foundations for new targeted therapies against ovarian cancer. These results may be extended to other tumors characterized by a similar immune response, further amplifying the impact of the project.

4. POSITIONS and EXAMS– PhD Programme in MOLECULAR MEDICINE

		present in significant numbers, but their role remains to be elucidated. Starting from peritoneal biopsies of high grade serous ovarian carcinoma, the PhD student will characterize through multiparameter cytofluorimetric analysis the phenotype and activation status of MCs infiltrating the tumor. The contribution of MCs in anti-tumor immunity will be tested in vitro by means of co-cultures of MCs and patient derived organoids or tumoral ovarian cell lines treated with different drugs. Furthermore, patients experiencing recurrence will be longitudinally followed to monitor changes in the numbers and phenotype of MC in tumor microenvironment and the responsiveness of patient derived organoids to in vitro stimulation. The comparison of molecular profiles, in vitro response to drugs and clinical-pathological data will allow the definition of pattern capable of predicting the response of the primary tumor for the identification of those patients who may benefit from specific treatment.	At the end of the course, the PhD student will have acquired highly qualifying expertise in immunology, cancer genomics and biotechnology, thereby addressing regional requirements and enhancing the collaboration between research and industry.
9.Role of the Extracellular Matrix and Mechanical Forces in Transthyretin Amyloidosis Prof. Alessandra Corazza	**Specialization Area S4:** 4.Health, Quality of Life, Agrifood and Bioeconomy. **Trajectory/ies of reference:** 4.Solutions and systems for innovative therapies: integrated development of drugs and biopharmaceuticals (biotech) for personalized and sustainable medicine.	In patients suffering from systemic amyloidosis, the progressive accumulation of amyloid fibrils together with components of the extracellular matrix leads to organ dysfunction, impaired quality of life and is often fatal. Twenty different proteins have currently been identified as components of systemic amyloid fibrils, most of which are hereditary. The most common forms of systemic amyloidosis result from the aggregation and deposition of wild-type or variant transthyretin or monoclonal immunoglobulin light chains (AL). ATTR amyloidosis is now recognised as one of the most common causes of heart failure. The project aims to investigate the role of the extracellular matrix and mechanical forces in the formation of transthyretin (TTR) amyloid fibres at the level of the heart. Structural and dynamic changes that can lead to partial unfolding and fibre formation will be analysed using a highly innovative, high-resolution nuclear magnetic resonance (NMR) instrument equipped with a shear force generation system. In addition to the role of mechanical forces, the role of the extracellular matrix will also be investigated using decellularized heart tissue from a mouse model of ATTR.	The Biochemistry Laboratory of the University of Pavia and the National Amyloidosis Centre (NAC, UCL, London) will provide the triply labeled proteins and collaborate on amyloidogenicity assays. The NAC will supply decellularized tissues from mouse models of TTR Amyloidosis. The PhD student will also be trained in the aforementioned laboratories, addressing the development needs of integration with national and international research organizations (S4). The results will help to understand the still unclear mechanism of fibrillogenesis, a crucial factor for therapy.
10.Cyclophilin D as the source of novel biomarkers for neurodegeneration Prof. Giovanna Lippe	**Specialization Area S4:** 4.Health, Quality of Life, Agrifood and Bioeconomy. **Trajectory/ies of reference:** 4.Solutions and systems for innovative therapies: integrated development of drugs and biopharmaceuticals (biotech) for personalized and sustainable medicine.	Cyclophilin D (CypD) is a crucial activator of the mitochondrial permeability transition pore (mPTP) that plays a central role in alterations of mitochondrial structure and function and is implicated in several diseases, including neurodegenerative disorders. The project aims to characterize the post-translational modifications and the interactions network of CypD in the physiological and pathological contexts, in order to discover novel biomarker for neurodegeneration within the mitochondrial proteome. The advisor is already involved in this topic for which obtained funding (PRIN2022).	The research will be run using recombinant proteins, neuronal and glial cell lines and iPS cells obtained from Alzheimer patients, thanks to the collaboration with Dr. A. Rybak (Max Delbrück Center, Berliner Institut für Medizinische Systembiologie, Germany). The evaluation of mitochondrial function and cell viability made in Udine will be supported by proteomic analyses for the characterization of PTMs and protein interactors of CyPD thanks to the collaboration with Dr. D. Canetti (Centre for Amyloidosis, University College London, UK). The results may contribute to the valorization of "drug discovery" platforms for human and to the development of innovative therapies in the clinical field.

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11. Liquid biopsy in colorectal carcinoma: towards a dynamic precision medicine (supervisor prof. Fabio Puglisi)

Liquid biopsy represents an evolving frontier in precision oncology. In colorectal carcinoma (CRC), its use is progressively extending beyond the advanced stage, encompassing screening, minimal residual disease assessment, response monitoring and early identification of resistance mechanisms. This project aims to explore the potential of liquid biopsy in CRC patients, with the objective of integrating its use in clinical practice through a translational approach. Several molecular markers, including circulating tumour DNA (ctDNA) and other components of free circulating genetic material, will be analysed to assess their biological significance and clinical utility in specific scenarios of the treatment pathway. The focus will be on the possibility of personalising therapeutic and surveillance strategies, with the aim of contributing to more timely and targeted medicine.

5. POSITIONS and EXAMS – PhD Programme in FOOD SCIENCE

GENERAL COMPETITION

Date for the publication of admitted applicants to the oral examination	Within July, 7 2025
Date for the publication of the final ranking list	Within July, 31 2025

Examination schedule		
Oral examination	**Date**	**July 16, 2025**
	Time	**9:00 AM (Italian time)**
	Place	**Department of Agricultural, Food, Environmental and Animal Sciences (DI4A) – via Sondrio 2/A, 33100 Udine**
	Based on the number of applicants, the oral examination may take place in more than one day. To attend the examination tests, the candidates must exhibit a valid identity document or other personal identification document (possibly the same document attached to the application), under penalty of exclusion from the selection procedure. Citizens of non-EU states must mandatorily exhibit their passport.	

Available positions: 5

Detailed description	*N.*	*Type*	*Funding*	*Annual gross amount*	*Period abroad*	*Research program*
Positions WITH SCHOLARSHIP: 5	**3**	D.R. 299/2025 art. 11 p. 2 lett. b)	University Udine	€ 17,805.00	max 6 months optional	Area A
	2	D.R. 299/2025 art. 11 p. 2 lett. a)	External funding: Regional Programme (PR) ESF+ 2021/2027 of the Autonomous Region Friuli Venezia Giulia (Decreto n. 9526/GRFVG of 28 February 2025 and subsequently amended and supplemented) - CUP G23C25000620008*	€ 17,805.00	max 6 months optional	Area B
Positions WITHOUT SCHOLARSHIP:	**0**	-	-	-	-	-

*Scholarships funded by "External Institutions" and associated locations can be assigned subject to the successful completion of the agreement that governs their funding or the decree's issuance granting funding or approving the operation (Rector's Decree n. 299/2025 art. 14 c. 7).

RESEARCH PROGRAMMES

Area A – Funder: University of Udine

1. Development of novel technologies to ensure safety, improve quality and extend the shelf-life of foods;
2. Development of technological strategies to improve the bioaccessibility of nutrients and bioactive compounds;
3. Development of innovative "green" packaging for food safety;
4. Innovative methods for diagnostics, for the study of biodiversity and of the particular technological and pro/postbiotic attitudes of microorganisms of food and health interest;
5. Strategies for prevention and reduction of microbial contamination;
6. Development of innovative methods and tools for food safety evaluation and/or processing systems suitable to guarantee health protection, food traceability, as well as monitor environmental, processing and packaging contaminants (biotic and abiotic) in foods;
7. Development and production, also by fermentative processes, of bioactive molecules, their transformations and impact on human health;
8. Development of processes for the transformation of waste products into food / ingredients / bioactive molecules.

Area B – Funder: Specific Programme 20/24 ESF+ 2021/2027 Region FVG

Research Topic	**Specialization Area S4 and Trajectory/ies reference**	**Organisation, methods, results and innovativeness of the project**	**Integration with networks and partnerships, spin-offs and contribution to strategic supply chains and the development of the regional production system**
Sustainable transformation of triglycerides and fermentation products Prof. Walter Baratta	**Specialization Area S4:** Health, life quality, agri-food and bioeconomy. **Trajectories reference:** Trajectory 1: Systems and solutions for health maintenance and care support: nutraceuticals food supplements, functional foods, medical nutrition and functional cosmetics; Trajectory 6: Enhancing the potential of the territory by supporting the development of smart and resilient local	The aim of this project is to develop green methodologies for obtaining high added value products from renewable sources and involving hydrogen. In particular, from the hydrogenation of non-edible oils it is possible to obtain long-chain alcohols that are used as biodegradable detergents. Conversely, from fermentation products (i.e. ethanol, lactic acid) higher alcohols, solvents, aromas and amino acids can be prepared via hydrogen transfer reactions.	The research is focused on the optimization of processes for the transformation of natural products into widely used products involving hydrogen, aiming to reduce the environmental impact within a circular economy. The activity is part of an ongoing collaboration with the English industry Johnson Matthey on the reduction of long-chain esters, and with the Polytechnic University of Munich and Serichim of Torviscosa, through a strong synergy between university and industry, which will promote the

5. POSITIONS and EXAMS – PhD Programme in FOOD SCIENCE

	communities in full respect of biodiversity, mountain, rural and coastal ecosystems (including their ecosystem services) and by integrating into economic, social and environmental development the concepts of circularity and sustainability of extended bio-economic value chains (i.e. including logistics, distribution and marketing). This can be achieved through the production of bioenergy from renewable sources, new bio-based products, the development of value chains, including social value chains with the use of innovative technologies (including bio-refineries), the development of sustainable and climate-resilient infrastructures and the adoption of nature-based solutions (NBS).		competitiveness of Italian researchers in the European research area.
Impact of extracellular vesicles (EVs) of probiotics strains on human health Prof. Lucilla Iacumin	**Specialization Area S4:** Health, life quality, agri-food and bioeconomy. **Trajectories of reference:** Trajectory 1: Systems and solutions for health maintenance and care support: nutraceuticals, food supplements, functional foods, medical nutrition and functional cosmetics; Trajectory 4: Solutions and systems for innovative therapies: integrated development of medicines and biopharmaceuticals (biotech) for personalised and sustainable medicine.	The study of the characteristics of extracellular vesicles (EVs) produced by probiotic microorganisms is still poorly explored. The aim is to characterize their cargo, antimicrobial, antioxidant, immunomodulatory, antitumor, and regulatory activities in Gaucher cells. This project is linked to a previous PhD thesis titled EFFECT OF Lactiplantibacillus plantarum ON IL-10 PRODUCTION IN GAUCHER CELLS: ENZYME REGULATION, and is integrated with the ongoing PRIN projects - Future Meat and LR-19/2000 Lben.	Networks and partnerships with: Centre for Rare Diseases-Ud, ICGEB-TS, CNR-AV/RM, UNIPD, UNIMOL, UNINA, UNIVR, RBI (Zagreb), SUN (SA), CNRST (Morocco), African Genome Center (Morocco), DANSTAR Ferment AG, Turval Laboratories. The results aim at innovations in nutrition and personalized medicine, with interests from pharmaceutical/ probiotics/ functional foods industries. The PhD student will therefore develop cutting-edge interdisciplinary skills for technology transfer and the development of the regional production sector.
Bioactive peptides in dairy products, bioactivities and effect on gut microbiota Prof. Nadia Innocente	**Specialization Area S4:** Health, life quality, agri-food and bioeconomy. **Trajectory of reference:** Trajectory 1. Systems and solutions for health maintenance and care support: nutraceuticals, food supplements, functional foods, medium nutrition and functional cosmetics.	Development of functional dairy products, through the production of bioactive peptides, assessment of their functionalities, effects on gut microbiota and on food characteristics. Steps: • Screening of the peptide profile of dairy products (fermented milks, cheese) • Identification and adjunction of microbial cultures able to produce peptides with specific bioactivities • Identification of proteolytic enzymes, able to produce biopeptides, and possible delivery systems	The development of functional foods plays a central role in the context of public health promotion. Therefore, the research project aims to increase the value of dairy products, coming from the regional area, through the production on site of bioactive peptides benefic for the organisms. In terms of a possible industrial application, the adoption of an integrated approach, from the identification of the best strategies to produce bioactive peptides, to the application in the final product, is proposed.

6. POSITIONS and EXAMS – PhD Programme in ENVIRONMENTAL AND ENERGY ENGINEERING SCIENCE

GENERAL COMPETITION	
Date for the publication of admitted applicants to the oral examination	Within July 4, 2025
Date for the publication of the final ranking list	Within July 31, 2025

Examination schedule		
Oral examination	**Date**	**July 15, 2025**
	Time	**10:00 AM (Italian time)**
	Place	Polytechnic Department of Engineering and Architecture (DPIA), Sala Riunioni Bianca (Meeting room "Sala Bianca") DPIA – via delle scienze 206, 33100 Udine.
	Based on the number of applicants, the oral examination may take place in more than one day. To attend the examination tests, the candidates must exhibit a valid identity document or other personal identification document (possibly the same document attached to the application), under penalty of exclusion from the selection procedure. Citizens of non-EU states must mandatorily exhibit their passport.	

Available positions: 6

Detailed description	*N.*	*Type*	*Funding*	*Annual gross amount*	*Period abroad*	*Research program*
Positions WITH SCHOLARSHIP: 6	**4**	DR 299/2025 art. 11 p. 2 lett. b)	University of Udine	€ 19,367.00	max 6 months optional	Area A
	2	DR 299/2025 art. 11 p. 2 lett. a)	External funding: Regional Programme (20/24 FSE+ 2021/2027 of the Autonomous Region Friuli Venezia Giulia (Rector's Decree n. 9526/GRFVG of 28 February 2025 and subsequently amended and supplemented.) - CUP G23C25000620008*	€ 19,367.00	max 6 months optional	Area B
Positions WITHOUT SCHOLARSHIP:	**-**	-	-	-	-	-

*Scholarships funded by "External Institutions" and associated locations can be assigned subject to the successful completion of the agreement that governs their funding or the decree's issuance granting funding or approving the operation (Rector's Decree n. 299/2025 art.14 p.7).

RESEARCH PROGRAMMES
Area A – Funder: University of Udine
In line with PhD research topics (University Chancellor's Decree n. 299/2025 - Table 6)

Section C – Funder: Regional Programme 20/24 ESF+ 2021/2027			
Research Topic	**Specialization Area S4 and Trajectory/ies of reference**	**Organisation, methods, results and innovativeness of the project**	**Integration with networks and partnerships, spin-offs and contribution to strategic supply chains and the development of the regional production system**
Additive manufacturing processes for producing surface treatments and coatings for aluminium alloys Prof. Francesco Andreatta	**Specialization Area S4**: Smart factory and sustainable development of made-in-Italy supply chains. **Trajectories of reference**: Trajectory 1. Solutions and technologies for product innovation - point 5: Innovative materials and treatments and coatings; Trajectory 3. Solutions and technologies for process innovation - point 2: High value-added production.	The project aims at the development of surface treatments and coatings for Al alloys produced by additive manufacturing (AM). The objective is to understand the influence of the microstructure of the alloys on the surface treatment processes and on the corrosion behavior of these materials. This aspect is highly innovative as there is a significant knowledge gap in this sector, even more marked in the case of the development of new alloys for AM.	The principal investigator has experience in the study of ferrous and non-ferrous alloys produced by AM (11 articles) with collaborations at local, national and international level: • LAMA laboratory, University of Udine • University of Bergamo • Vrije Universiteit Brussel (VUB) • Electro Optical Systems (EOS), Turku, Finland • AIDRO Hydraulics & 3D Printing, Taino, Italy The technical-scientific output of the project aims to promote the use of materials produced through AM in various strategic sectors at regional level (for example heat exchange and biomedical sectors).

6. POSITIONS and EXAMS – PhD Programme in ENVIRONMENTAL AND ENERGY ENGINEERING SCIENCE

Development of advanced catalysts and materials for the production of energy carriers from renewable sources Prof. Marta Boaro	**Specialization Area S4**: Energy transition, circular economy and environmental sustainability. **Trajectory of reference**: Trajectory 3 - Maximum energy-efficient systems for industry.	Development of heterogeneous catalysts for green hydrogen, methanol from CO2 and CH4 and ammonia, with a multidisciplinary approach based on catalyst nanostructuring, suitably functionalised supports, eco-friendly synthesis and use of hybrid (photo-thermo-electrochemical) methods for both synthesis and process activation. Achievements in synergy with PNRR and EU projects (INEST, NEST, H2 Valley) for decarbonisation and efficiency improvement of energy intensive industrial sectors.	Advanced materials characterisation through the research group's network of collaborations. The development of innovative materials and processes will have a positive impact on other areas of S4 (maritime mobility, agribusiness, bio-economy) and on the growth of sustainability and resilience of the regional production system. The partnership with Confindustria will assess the industrial scalability of the results, optimising energy-intensive supply chains.
Dynamics of micro- and nano-plastics in turbulent flow Prof. Cristian Marchioli	**Specialization Area S4**: Health, Quality of Life, Agribusiness and Bioeconomy. **Trajectory of reference**: Trajectory 5 - Development of an integrated bi-economic approach for increasing the value of territorial resources by fostering the safety (safety and security) of production and the resilience of regional business system value chains, through the integration of innovation interventions on sustainable and circular supply chains capable of bringing value to the consumer.	Aim: Develop advanced dispersion models of marine and atmospheric Micro/NanoPlastics (MNPs). Through simulations based on A.I. and high-performance computing, the dispersion mechanisms of MNPs (e.g., from synthetic textiles) will be studied. The models will enable the development of monitoring and prevention measures to minimize environmental pollution of MNPs, promoting sustainable development and circular economy.	Outcomes: - understand the impact of MNPs on soil fertility or coastal/lagoon areas in FVG using non-empirical physics-based prediction techniques. -promote industrial innovation by improving the environmental sustainability of MNP-producing materials, correlating dispersion and physico-chemical-geometric properties. - become (Uniud) a reference for the FVG industrial sector thanks to the modelling and numerical skills developed. networks involved: Marie Curie DN, ERCOFTAC.
Recovery of critical raw materials: speciation and separation processes Prof. Andrea Melchior	**Specialization Area S4:** Energy transition, circular economy and environmental sustainability. **Trajectory of reference**: Application of the circular economy at system level (area, network, supply chain).	"Critical raw materials" (CRM) are chemical elements economically and strategically important for the European economy, whose recycling is highly desirable. The aim of the research is to study systems for the selective separation of CRM from liquid samples deriving from the treatment of end-of-life materials (e.g. batteries) based on the combination of "green solvents" with support materials. This research is integrated into an international network of which the proposing group is part.	The proposed project integrates with Horizon Europe projects on the topic of recycling of critical raw materials that involve various European partners. The fallout from the generation of new knowledge relevant to the recycling of CRM has the potential to generate new entrepreneurial initiatives in the region in the field of recovery of high added value materials from high-tech waste. Furthermore, the young person in training will develop research skills in a qualified context and through international collaborations involving public and private entities.
Modelling and simulation of emulsions Prof. Alessio Roccon	**Specialization Area S4:** Intelligent Factory and Sustainable Development of Made in Italy supply chains. **Trajectory of reference**: Trajectory 1 - Solutions and technologies for product innovation.	The objective of the project is to develop a simulation tool based on a multi-marker technique capable of describing emulsions: metastable mixtures composed of two immiscible fluids. By leveraging simulations based on machine learning techniques and high-performance computing, the project will investigate the fundamental mechanisms governing emulsion stability, their rheology, their behavior under different conditions, and their interaction with turbulent flows.	Outcomes: 1) Improve the design process of the physicochemical properties (e.g., stability, viscosity, shelf life) of products based on emulsion technology. 2) Enhance the quality and performance of emulsion-based products (pharmaceuticals, food & beverage, insulators). 3) Become a reference point for the FVG industrial sector through advanced modeling and simulation expertise. Networks involved: Uniud Lab Village, MIT, ERCOFTAC

7. POSITIONS and EXAMS – PhD Programme AGRICULTURAL SCIENCES AND BIOTECHNOLOGY

GENERAL COMPETITION

Date for the publication of admitted applicants to the oral examination	Within July 9, 2025
Date for the publication of the final ranking list	Within July 31, 2025

Examination schedule		
Oral examination	**Date**	**July 18, 2025**
	Time	**09:00 AM (Italian time)**
	Place	Department of Agricultural, Food, Environmental and Animal Sciences (DI4A), Bees room (B2-46) – via delle Scienze n. 206, 33100 Udine, ITALY
	Based on the number of applicants, the oral examination may take place in more than one day. To attend the examination tests, the candidates must exhibit a valid identity document or other personal identification document (possibly the same document attached to the application), under penalty of exclusion from the selection procedure. Citizens of non-EU states must mandatorily exhibit their passport.	

Available positions: 7						
Detailed description	***N.***	***Type***	***Funding***	***Annual gross amount***	***Period abroad***	***Research program***
Positions WITH SCHOLARSHIP: 7	**4**	DR 299/2025 art. 11 p. 2 lett. b)	University of Udine	€ 17,805.00	max 6 months optional	Area A
	3	DR 299/2025 art. 11 p. 2 lett. a)	External funding: Regional Programme (PR) ESF+ 2021/2027 of the Autonomous Region Friuli Venezia Giulia (Decreto n. 9526/GRFVG of 28 February 2025 and subsequently amended and supplemented) - CUP G23C25000620008*	€ 17,805.00	max 6 months optional	Area B
Positions WITHOUT SCHOLARSHIP: 0	**0**	-	-	-	-	-

*Scholarships funded by "External Institutions" and associated locations can be assigned subject to the successful completion of the agreement that governs their funding or the decree's issuance granting funding or approving the operation (Rector's Decree n. 299/2025 art.14 p.7).

RESEARCH PROGRAMMES

Area A – Funder: University of Udine
Curriculum A. Biology and plant production
1. Mountain agrosilvopastoral systems: result-based payments for ecosystem services *(supervisor: Ivana Bassi, co-supervisor: Elisa Marraccini)*
Curriculum B. Biology and livestock science
2. Living together in a complex and changing world: predator-prey dynamics in a human-dominated landscape (supervisor: Stefano Filacorda, co-supervisor: Francesco Nazzi)
Curriculum C. Biology of pathogens and plant protection
3. Molecular characterization of secondary metabolites by strawberry bodyguard-yeasts (supervisor: Alessandra Di Francesco)
4. Current challenges for honeybees and wild bees: the role of climate change in relation to nectar resources and interspecific competition (supervisor: Francesco Nazzi, co-supervisor: Desiderato Annoscia)

Area B – Funder: Specific Programme 20/24 ESF+ 2021/2027 Region FVG			
Research Topic	**Specialization Area S4 and Trajectory/ies of reference**	**Organisation, methods, results and innovativeness of the project**	**Integration with networks and partnerships, spin-offs and contribution to strategic supply chains and the development of the regional production system**
1.Investigation of the epidemiological characters of grapevine yellows for the development of sustainable control strategies.	**Specialization Area S4:** Health, Quality of Life, Agribusiness and Bioeconomy. **Trajectory of reference:** Trajectory 5: Development of an integrated bio-economic approach to increase the value of territorial	Vine yellows, flavescence dorée (FD) and blackwood (LN), are diseases associated with phytoplasmas. Their control is based on the insecticidal control of vectors (e.g. Scaphoideus titanus for FD) and the elimination of	Vine yellows are a constant concern for the wine industry. Within the framework of the Compulsory Control Decree against FD, the Phytosanitary Services rely on the collaboration of Research Institutions, Technical Assistance

7. POSITIONS and EXAMS – PhD Programme AGRICULTURAL SCIENCES AND BIOTECHNOLOGY

Curriculum Pathogen biology and plant protection Prof. Marta Martini Prof. Paolo Ermacora	resources by favouring the safety and security of production and the resilience of the regional entrepreneurial system's value chains, through the integration of innovation interventions on sustainable and circular supply chains capable of bringing value to the consumer.	inoculum source plants (e.g. nettle and bindweed for LN). The project aims to deepen our knowledge of the epidemiology of yellows, also in order to hypothesis new control strategies and identify alternative means to synthetic products (e.g. application of biocontrol agents), to safeguard human health and the environment (e.g. pollinators and natural enemies).	Services and winegrowers. Part of the PhD project activities will be carried out in collaboration with ERSA FVG and winegrowers. In the context of precision agriculture, the timely monitoring of vectors and phytoplasmas will enable effective and differentiated control strategies with a view to sustainability.
2. Feeding strategies for reducing environmental impacts in cattle breeding *Animal Biology and Breeding Curriculum* Prof. Mauro Spanghero, co-supervisor Prof. Alberto Romanzin	**Specialization Area S4:** Health, Quality of Life, Agribusiness and Bioeconomy. **Trajectory of reference:** Trajectory 5. Development of an integrated bi-economic approach to increase the value of territorial resources by favouring the safety and security of production and the resilience of the regional entrepreneurial system's value chains, through the integration of innovation interventions on sustainable and circular supply chains capable of bringing value to the consumer.	The project aims to provide an innovative experimental contribution to the knowledge of emissions from cattle farms useful for the development of effective animal feeding strategies for impact mitigation. The project uses innovative survey methodologies ranging from in vitro ruminal fermentation to direct on-farm measurements, without any negative impact on animal welfare. The project is integrated with an ongoing survey activity with the Association of Livestock Farmers of Friuli (AAFVG) on dairy cattle farms and with an activity to assess excretions from farms in collaboration with the FVG Environment Directorate (Central Directorate for Environmental Protection, Energy and Sustainable Development, Autonomous Region FVG)	The proposing party coordinates experimental programmes with territorial bodies that deal with animal breeding (AAFVG) and issues concerning environmental pollution from livestock farms (Direzione Ambiente). The proposer also coordinates Uniud's research group within the framework of the Ecosystem INEST (PNRR), which deals with the reuse of bio-resources with a view to the circular economy of agrifood chains. The results obtained will make it possible to prepare innovative feeding strategies to ensure environmental sustainability of livestock breeding units with a view to the issuing of environmental authorisations for breeding and/or certification of animal products on an environmental basis. The cattle breeding sector is one of the most important in the regional primary production system (35,000 dairy cows bred, 2.6 million quintals of milk/year, 26 dairies of Montasio PDO cheese). The sector requires innovation and technology transfer to territorial research centres to solve the environmental impact problems of livestock farming and this is a need expressed with high priority by local communities.
3. Bio-based solutions to improve crop nutrition and resilience to climate change *Biology and Plant Production Curriculum* Prof. Laura Zanin	**Specialization Area S4:** Health, Quality of Life, Agribusiness and Bioeconomy **Trajectory of reference:** Trajectory 6.	The project concerns the development of bio-based solutions through the combined use of various biostimulant compounds (algae extract, humic substances, beneficial microorganisms, biofertilisers) that will be applied as seed/pellet bio-coating in order to support and promote the resilience of selected crop varieties to water and nutrient limitations. This solution will be tested on different species and crop varieties (such as leguminous and grapevine); the plant response to the treatment will be assessed through changes in hyperspectral reflectance using phenotyping techniques.	The student will benefit from the facilities developed within the AGRITECH project (PhenoSPACE facility). The scientific lecturer will introduce the PhD student into an active and dynamic research group, where projects with national and international (academic and private) groups (HORIZON BIO2, PRIN2022PNRR, INTERREG ITA-AUS CEDRIC, CMI-Roullier Group, AGRITECH National Research Centre) are ongoing. Furthermore, the main ongoing collaborations concern the University of Verona, Uni. Vienna BOKU, CNR, Uni. Ljubljana, Uni. Innsbruck and ICGEB.

8. POSITIONS and EXAMS– PhD Programme MATHEMATICAL AND PHYSICAL SCIENCES

GENERAL COMPETITION

Date for the publication of admitted applicants to the oral examination	Within July 11, 2025
Date for the publication of the final ranking list	Within July 31, 2025

Examination schedule		
Oral examination	**Date**	**July 21, 2025**
	Time	**9:00 AM (Italian time)**
	How to conduct the examination	The oral examination will be held online.
	Based on the number of applicants, the oral examination may take place in more than one day. To attend the examination tests, the candidates must exhibit a valid identity document or other personal identification document (possibly the same document attached to the application), under penalty of exclusion from the selection procedure. Citizens of non-EU states must mandatorily exhibit their passport.	

Available positions: 8

Detailed description	*N.*	*Type*	*Funding*	*Annual gross amount*	*Period abroad*	*Research program*
Positions WITH SCHOLARSHIP: 8	**4**	DR 299/2025 art. 11 p. 2 lett. b)	University of Udine	€ 17,805.00	max 6 months optional	Area A
	1	DR 299/2025 art. 11 p. 2 lett. a)	External funding: National Institute for Nuclear Physics (INFN)*	€ 17,805.00	max 6 months optional	Area B
	3	DR 299/2025 art. 11 p. 2 lett. a)	External funding: Regional Programme (PR) ESF+ 2021/2027 of the Autonomous Region Friuli Venezia Giulia (Decreto n. 9526/GRFVG of 28 February 2025 and subsequently amended and supplemented) - CUP G23C25000620008*	€ 17,805.00	max 6 months optional	Area C
Positions WITHOUT SCHOLARSHIP:	**0**	-	-	-	-	-

*Scholarships funded by "External Institutions" and associated locations can be assigned subject to the successful completion of the agreement that governs their funding or the decree's issuance granting funding or approving the operation (Rector's Decree n. 299/2025 art.14 p.7).

RESEARCH PROGRAMMES

Area A – Funder: University of Udine
In line with PhD research topics (University Chancellor's Decree n. 299/2025 – Table 8)

Area B – Funder: National Institute for Nuclear Physics (INFN)
Specific research program on topics of interest to INFN

Section C – Funder: Regional Programme 20/24 ESF+ 2021/2027			
Research Topic	**Specialization Area S4 and Trajectory/ies of reference**	**Organisation, methods, results and innovativeness of the project**	**Integration with networks and partnerships, spin-offs and contribution to strategic supply chains and the development of the regional production system**
Computational and data-driven methods for advanced models of sustainable processes Prof. Dimitri Breda	**Specialisation Area S4:** Smart industry and sustainable innovation of Made in Italy supply chains **Trajectories of reference:** -Solutions and technologies for process innovation; -Sustainable development and commercial resilience for regional Made in Italy supply chains.	The project aims to introduce efficient computational practices in the regional industrial/non-academic areas through advanced numerical methods, including data-driven and dimensional reduction of large data in the context of complex dynamical systems, with models that can serve as a basis for applications of interest in sustainable innovation	The proponent is actively involved in both national (INdAM/GNCS, MUR-PRIN) and international (IFAC, EU-MSCA-DN) working groups and collaborative research networks that deal with topics in the field of supply chains and sustainable processes, as well as complex systems and their control strategies in general. The methodologies under investigation are largely transversal to the specific

8. POSITIONS and EXAMS– PhD Programme MATHEMATICAL AND PHYSICAL SCIENCES

		(http://cdlab.uniud.it/projects/fse-grants).	application context and will result in the writing of employable software.
Upgrade of the Solar Concentrator Installed at the Azienda Agraria of the University of Udine Prof. Marina Cobal	**Specialisation Area S4:** Energy Transition, Circular Economy, and Environmental Sustainability. **Trajectories of reference:** Application of the Circular Economy at the System Level, Energy-Efficient Buildings.	The Linear Mirror, the solar concentrator developed at UniUD and installed at the local Azienda Agraria, is a valuable research tool. This project aims to enhance its performance by increasing its power and upgrading the control system, making it a cutting-edge technology capable of providing sustainable energy solutions across various industrial sectors. The project relies on a support team with the expertise needed to drive this research forward in the PhD timeframe.	The proponent is the Director of the School of Introduction to Renewable Energies in Udine, with industrial contacts and affiliations with INFN (a national network of 14 research institutes) and CERN (an international laboratory in Geneva). He is also Vice President of the International Trieste Foundation, whose activities focus on sustainability. The project will enhance the solar concentrator, making it more powerful and autonomous, useful for producing hot air and water for industry. PhD students will collaborate with UniUD's Azienda Agraria and local industrial sectors.
Entropy calculation methods for machine learning algorithms Prof. Federico Fogolari	**Specialisation Area S4:** 2.Intelligent Factory and Sustainable Development of Made in Italy supply chains. **Trajectory of reference:** 1. Solutions and technologies for product innovation.	Entropy is a fundamental concept of information science. The classification performed by machine learning (ML) algorithms uses the entropy content of the learning data. Over the course of 3 years, the PhD student will learn deep learning techniques, in collaboration with Prof. Serra, AI Lab Uniud, and will explore the theory and practice of entropy calculations in thermodynamic systems for ML.	The proposing subject has collaborations internal and external to Uniud on these topics. ML algorithms based on physics are applicable even in the absence of large amounts of learning data and the connection between input and output can be interpreted. The job market is currently struggling to find ML skills. The ability to link methods and results to the information content of the systems will allow the PhD to critically innovate methods and products in the industrial and research fields.
Analytical methods for the modelling of tensegrities and soft robots Prof. Paolo Gidoni	**Specialisation Area S4:** Intelligent Factory and Sustainable Development of Made in Italy supply chains. **Trajectory of reference:** Solutions and technologies for product innovation.	The aim of the project is to develop advanced analytical methods and prove theoretical results supporting the modelling, design and control of soft robotics and/or tensegrity-based devices. Tools from calculus of variations, qualitative theory of dynamical systems and geometrical mechanics will be employed.	Soft materials (such as biopolymers, natural fibers and other smart materials) and elastic metamaterials based on tensegrity are flourishing as a paradigm in the design of robotic devices, due to their general properties of compliance and dexterity, and possibly of biocompatibility and lightness. However, the modelling of such materials increases the mathematical complexity required: such issue will address in the project.
Mathematics for the Evolutionary Therapy Prof. Rossana Vermiglio	**Specialisation Area S4:** Health, Quality of Life, Agribusiness and Bioeconomy. **Trajectory of reference:** Solutions and systems for innovative therapies: integrated development of drugs and biopharmaceuticals (biotech) for personalized and sustainable medicine.	Evolutionary therapy is a therapeutic approach based on the concept of dynamically adapting treatment to the changing characteristics of the tumor or microbial infection. Instead of following a fixed treatment schedule, this strategy involves altering the treatment in response to the disease's evolution, which develops resistance mechanisms over time. The central idea is to anticipate and address the tumor's evolution by proactively modifying therapies to prevent or counteract drug resistance. This technique requires the use of mathematical and numerical models to predict and guide changes in treatment, based on clinical data and the evolving behavior of the tumor. The goal is to control tumor growth in the long term, improving the chances of treatment success compared to traditional therapies. The aim of the project is to analyze the use of mathematical and numerical models to support therapeutic decisions for certain tumors or other microbial diseases. It will be considered also the	The proposer participates in working groups and collaboration networks both nationally (INdAM/GNCS, UMI/MSE, MUR-PRIN) and internationally (IFAC), which focus on research topics with applications in population dynamics and epidemiology. The methodologies under investigation will lead to the development of software.

8. POSITIONS and EXAMS– PhD Programme MATHEMATICAL AND PHYSICAL SCIENCES

		extension of evolutionary therapy for plant diseases.	

9. POSITIONS – PhD Programme in CLINICAL AND TRANSLATIONAL MEDICAL SCIENCES

GENERAL COMPETITION

Date for the publication of admitted applicants to the oral examination	Within July 11, 2025
Date for the publication of the final ranking list	Within July 31, 2025

Examination schedule		
Oral examination	**Date**	**July 22, 2025**
	Time	**10:00 AM (Italian time)**
	Place	**Department of Medicine (DMED), Room B – Piazzale Kolbe 4, 33100 Udine ITALY**
	Based on the number of applicants, the oral examination may take place in more than one day. To attend the examination tests, the candidates must exhibit a valid identity document or other personal identification document (possibly the same document attached to the application), under penalty of exclusion from the selection procedure. Citizens of non-EU states must mandatorily exhibit their passport.	

Available positions: 8

Detailed description	*N.*	*Type*	*Funding*	*Annual gross amount*	*Period abroad*	*Research program*
Positions WITH SCHOLARSHIP: 8	**3**	D.R. 299/2025 art. 11 p. 2 lett. b)	University of Udine	€ 17,805.00	max 6 months optional	Area A
	2	D.R. 299/2025 art. 11 p. 2 lett. a)	External funding: "Azienda sanitaria universitaria Friuli Centrale" (ASU FC) *	€ 17,805.00	max 6 months optional	Area B
	3	D.R. 299/2025 art. 11 p. 2 lett. a)	External funding: Regional Programme (PR) ESF+ 2021/2027 of the Autonomous Region Friuli Venezia Giulia (Decreto n. 9526/GRFVG of 28 February 2025 and subsequently amended and supplemented) – CUP G23C25000620008*	€ 17,805.00	max 6 months optional	Area C
Positions WITHOUT SCHOLARSHIP: 0	-	-	-	-	-	-

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RESEARCH PROGRAMMES

Area A – Funder: University of Udine
In line with PhD research topics (University Chancellor's Decree n. 299/2025 - Table 9)

Area B – Funder: ASUF FC
Heart failure and pulmonary hypertension
Heart and inflammation

Area C – Funder: Regional Programme 20/24 ESF+ 2021/2027			
Research Topic	**Specialization Area S4 and Trajectory/ies reference**	**Organisation, methods, results and innovativeness of the project**	**Integration with networks and partnerships, spin-offs and contribution to strategic supply chains and the development of the regional production system**
Multi-omics approach to identify fingerprint of acute injury in the developing lungs Prof. Paola Cogo	**Specialization Area S4**: 4.Health, Quality of Life, Agrifood and Bioeconomy. **Trajectory/ies of reference**: 4.Solutions and systems for innovative therapies: integrated development of drugs and biopharmaceuticals (biotech) for personalised and sustainable medicine.	Bronchopulmonary dysplasia (BPD) is a chronic lung condition that primarily affects premature infants which leads to persistent airway and pulmonary vascular disease that can have lifelong consequences. Postnatal steroid are administered to preterm infants to blunt the lung inflammation. The project aims to analyze in a rabbit model and in preterm infants the metabolic signature of developing BPD and how the steroids affect the	The identification of the metabolic and transcriptional networks might lead to the discovery of relevant biomarkers useful for identify preterm infants for targeted early interventions, aiming to minimize lung injury and promote repair. The study is based on the collaboration with the Chiesi Foundation ONLUS and with the Department of Mathematical Scienses, University of Udine.

9. POSITIONS – PhD Programme in CLINICAL AND TRANSLATIONAL MEDICAL SCIENCES

		lung inflammation process by high sensitivity mass spectrometry analysis. Data will be analyzed by unsupervised machine learning for networking.	The PhD will be actively involved in the data processing and machine learning analysis, to identify relevant fingerprint related to the developing BPD and to the effect of the steroid treatment
Physical exercise with spinal neuromodulation and neuromuscular function in the elderly population Prof. Stefano Lazzer, Dr. Enrico Rejc	**Specialization Area S4:** 4.Health, Quality of Life, Agrifood and Bioeconomy. **Trajectory of reference**: 3.Active and assisted living solutions and systems to support frailty.	The goal of this project is to develop and implement a novel ergogenic approach based on non-invasive, low-intensity spinal cord stimulation to augment the effects of physical exercise in frail, elderly individuals. This approach has the potential to improve functional independence in this population, and is based on solid pilot data obtained from young, physically active individuals. This project includes sophisticated methodologies of electrical stimulation, data collection and analysis of neurophysiology and biomechanic data.	This project is inherently prone to develop networks with tech-industry entities because, to date, neurostimulators specifically designed for non-invasive spinal cord stimulation are not available for sale. Importantly, the core technology of some of the neurostimulators currently available is sufficient for the proposed application, and limited and feasible changes are needed to develop a dedicated technology. We are already in contact with industry partners (e.g., *I-tech medical division*) who showed interest in this project.
Integration of AI and Technologies into Nursing Practice and Value-Added Activities Prof. Alvisa Palese	**Specialization Area S4:** 4.Health, Quality of Life, Agrifood and Bioeconomy. **Trajectory of reference:** 5.Development of an integrated bi-economic approach to increase the value of territorial resources by favouring the safety and security of production and the resilience of the regional entrepreneurial system's value chains, through the integration of innovation interventions on sustainable and circular supply chains capable of bringing value to the consumer	The phenomenon of the progressive decrease in the number of nurses, both nationally and internationally, represents an increasing challenge for healthcare systems around the world. The low attractiveness of the profession, due to factors such as high workload, working conditions, and low pay compared to other healthcare professions, further exacerbates the situation. The study aims to identify the valuable activities that must necessarily be carried out by nurses and those that could be transferred to technology. The multi-method study with both qualitative and quantitative data collection in hospital settings will help identify a predictive model of the time that can be recovered through the implementation of technologies; guide nursing staff needs, and optimize resources.	The quality of care is threatened by the decrease in the number of nurses. Projections indicate a dramatic reduction in the coming years. Understanding which nursing activities could benefit from a gradual and controlled shift toward artificial intelligence systems and technologies (such as time spent on medication delivery, monitoring vital signs) has an immediate impact on the regional system and guides decision-making. This project will be integrated with the healthcare organizations in the region, which will be involved, with national and international AI and technology research labs, and will include strong practical integration with the Regional Health Service (SSR) toThe quality of care is threatened by the decrease in the number of nurses. Projections indicate a dramatic reduction in the coming years. Understanding which nursing activities could benefit from a gradual and controlled shift toward artificial intelligence systems and technologies (such as time spent on medication delivery, monitoring vital signs) has an immediate impact on the regional system and guides decision-making. This project will be integrated with the healthcare organizations in the region, which will be involved, with national and international AI and technology research labs, and will include strong practical integration with the Regional Health Service (SSR) to ensure the immediate transfer of results into practice and ensuring sustainability and resilience of the health system.
"NEUROBIOME": stroke, gut and nutrition Prof. Mariarosaria Valente	**Specialization Area S4**: 4.Health, Quality of Life, Agrifood and Bioeconomy. **Trajectories of reference**: 1.Systems and solutions for health maintenance and care support: nutraceuticals, dietary	The project is divided in two phases: the first one is observational. Its aim is to investigate gut microbiota in a cohort od stroke patients and analyze effect on outcomes (mRS at three and six months). The secondo phase is interventional. Its	The project enables collaborations with research centers, companies and institutions in the region. Practical contributions include the development of personalized probiotic, improvement of clinical protocols, and promotion of awareness campaigns for

9. POSITIONS – PhD Programme in CLINICAL AND TRANSLATIONAL MEDICAL SCIENCES

	supplements, functional foods, medical nutrition and functional cosmetics; 4.Solutions and systems for innovative therapies: integrated development of drugs and biopharmaceuticals (biotech) for personalised and sustainable medicine.	aim is to evaluate the impact of nutritional intervention and probiotics on microbiota modulation and post-stroke recovery in a consecutive patient cohort. The objective of the project is to clarify gut-brain connections and personalize the therapeutic approach.	prevention. Moreover, results and applicable technologies can be transferred across the regional network to support health education programs, enhance prevention strategies, and improve pts' quality of life.
Nutrition and Neuropsychology: An integrated Approach in Progressive MS Prof. Mariarosaria Valente	**Specialization Area S4**: 4.Health, Quality of Life, Agrifood and Bioeconomy. **Trajectory of reference**: 1.Systems and solutions for health maintenance and care support: nutraceuticals, dietary supplements, functional foods, medical nutrition and functional cosmetics	The aim is to examine the effects of an integrated intervention with an anti-inflammatory diet and supplements designed to rebalance the gut microbiota. The benefits on cognitive functions and the progression of MS in its progressive phase will be investigated. Patients will be monitored for three years with serial clinical, neuropsychological and neuroimaging assessments.	The estimated prevalence of MS in Friuli Venezia Giulia in 2024 is 2750 people, a growing figure that has led to an increase in per capita healthcare costs, medication consumption, and the average daily cost of therapy. In response to this, a proper diet combined with nutraceuticals could prove effective in improving the quality of life and maintaining the psycho-cognitive well-being of MS patients, thereby reducing the socio-health impact of the disease in Friuli Venezia Giulia.

10. POSITIONS and EXAMS – PhD Programme in ART HISTORY, FILM STUDIES, MEDIA STUDIES AND MUSIC

GENERAL COMPETITION

Date for the publication of admitted applicants to the oral examination	Within July 7, 2025
Date for the publication of the final ranking list	Within July 31, 2025

Competition procedure and test schedule		
Calendar of the oral examintion	**Date**	**July 16, 2025**
	Time	**09:00 AM (Italian time)**
	Location	**Department of Humanities and Cultural Heritage (DIUM) - Sala del lampadario, Palazzo Caiselli, vicolo Florio 2, 33100 Udine**
	Based on the number of applicants, the oral examination may take place in more than one day. To attend the examination tests, the candidates must exhibit a valid identity document or other personal identification document (possibly the same document attached to the application), under penalty of exclusion from the selection procedure. Citizens of non-EU states must mandatorily exhibit their passport.	

Available positions: 7

Detailed description	*N.*	*Type*	*Funding*	*Annual gross amount*	*Period abroad*	*Research program*
Positions WITH SCHOLARSHIP: 7	**4**	DR 299/2025 art. 11 P. 2 lett. b)	University of Udine	€ 16,243.00	max 6 months optional	Area A
	3	DR 299/2025 art. 11 P. 2 lett. a)	External funding: Regional Programme (PR) ESF+ 2021/2027 of the Autonomous Region Friuli Venezia Giulia (Decreto n. 9526/GRFVG of 28 February 2025 and subsequently amended and supplemented) - CUP G23C25000620008*	€ 16,243.00	max 6 months optional	Area B
Positions WITHOUT SCHOLARSHIP:	**0**	-	-	-	-	

*Scholarships funded by "External Institutions" and associated locations can be assigned subject to the successful completion of the agreement that governs their funding or the decree's issuance granting funding or approving the operation (Rector's Decree n. 299/2025 art.14 p.7).

RESEARCH PROGRAMMES

Area A – Funder: University of Udine
In line with PhD research topics (Rector's Decree n. 299/2025 - Table 10).

Area B – Funder: Specific Programme 20/24 ESF+ 2021/2027 Region FVG			
Research Topic	**Specialization Area S4 and Trajectory/ies of reference**	**Organisation, methods, results and innovativeness of the project**	**Integration with networks and partnerships, spin-offs and contribution to strategic supply chains and the development of the regional production system**
Cinema and vocational training. Networks, data and technologies for local heritage Prof. Simone Dotto	**Specialization Area S4:** 5. Cultural heritage, design, creativity industry, tourism. **Trajectory of reference:** Research Development Technological Innovation for Cultural and Creative Enterprises (CCI).	The project aims to reconstruct the production and circulation of vocational training films in the 1950-75 period, focusing on case of FVG region. The main objectives are: 1) locating film materials in private collections and public institutions (year I) 2) extracting data from printed historical sources (year II) 3) increasing access through the implementation of an IA-based Bot available for online consultation (year III).	The project is in line with the international research networks (Media&Extraction) and Italian heritage circuits (Archivio Cinema Industriale e della Comunicazione). It innovates existing research by introducing new source materials and establishing Digital Humanities methods. With respect to the S4 strategy, it provides museums, archives and private companies with a technologically updated 'good practice' to enhance a traditionally neglected heritage scattered among different institutions.
From art printing to graphic design in Friuli-Venezia Giulia. Enhancing the CCI heritage for cultural tourism Prof. Luca Pietro Nicoletti	**Specialization Area S4:** Cultural heritage, design, creativity industry, tourism. **Trajectory of reference:** System development for competitiveness through national and international levers and	There is a regional excellence in the field of art printing and graphic design, in private and public spheres, recognised at national level as a specific segment of Made in Italy. This project aims at defining a knowledge and valorisation tool by means of the reconnaissance, census and scientific	The project is integrated in the operational research network that includes national partners (Erpac FVG; CSAC Parma, CASVA Milan; Calcografia nazionale Roma; GAM Turin, Apice Milan). The adoption of descriptive standards and the related census of production

10. POSITIONS and EXAMS – PhD Programme in ART HISTORY, FILM STUDIES, MEDIA STUDIES AND MUSIC

	frameworks for Cultural and Creative Industries (CCI) and Tourism.	study of the heritages and places of production of art printing and graphic design (active or historical) pertaining to the CCI in function of a broader promotion, also from a tourist point of view.	centers, protagonists and works envisages as a further research output a proposal for musealisation as a documentation center destined to become a hub for the knowledge/dissemination of this heritage. The envisaged enhancement of these cultural realities makes it possible to develop and strengthen integration with the regional tourist-productive system and with research bodies (universities, museums, banking foundations, cultural associations) in the area.
Reframing FVG Media Heritage Prof. Simone Venturini	**Specialization Area S4:** Cultural heritage, design, creativity industry, tourism. **Trajectory of reference:** Research Development Technological Innovation for Cultural and Creative Enterprises (CCI).	Research and experimentation on the digitization and valorization practices of historical media objects preserved in museums, media libraries and archives. Year I: mapping digitization and enhancement practices; historiographic, media archaeological, museological study of the corpus; Year II: applied research on specific FVG collections. Reference projects: PRIN 2022 MOV.I.E, CROSSINNO, 'La storica impresa'.	(Inter)national networks: Museo 'Leonardo da Vinci' Milan, MIT Media Lab Boston, Deutsches Filmmuseum - Frankfurt, Archivio Storico Luce – Cinecittà, Rome. FVG: Cineteca del Friuli, Ikon, Mediateche FVG, Media Lab UniUd Impact on CCIs FVG - establishing good practices and solutions for the digitisation, exhibition and dissemination of the archival heritage of museums, festivals and media libraries; - revisiting cultural and tourist practices and promoting new skills for the CCIs human resources.

11. POSITIONS – PhD Programme in LINGUISTICS AND LITERATURE

GENERAL COMPETITION

Date for the publication of admitted applicants to the oral examination	Within June 27, 2025
Date for the publication of the final ranking list	Within July 31, 2025

Examination schedule		
Oral examination	**Date**	**July 8, 2025**
	Time	**8:30 AM**
	Location	The oral examination will be held in person. **Università degli Studi di Udine, room 6, Palazzo Antonini - Via Petracco 8, Udine.**
	Based on the number of applicants, the oral examination may take place in more than one day. To attend the examination tests, the candidates must exhibit a valid identity document or other personal identification document (possibly the same document attached to the application), under penalty of exclusion from the selection procedure. Citizens of non-EU states must mandatorily exhibit their passport.	

Available positions: 9

Detailed description	*N.*	*Type*	*Funding*	*Annual gross amount*	*Period abroad*	*Research program*
Positions WITH SCHOLARSHIP: 9	**3**	DR 299/2025 art. 11 p. 2 lett. b)	University of Udine	€ 16,243.00	max 6 months optional	Area A
	3	DR 299/2025 art. 11 p. 2 lett. b)	Associated Institution: University of Trieste*	€ 16,243.00	max 6 months optional	Area B
	3	DR 299/2025 art. 11 p.2 lett.a)	External funding: Regional Programme (PR) ESF+ 2021/2027 of the Autonomous Region Friuli Venezia Giulia (Decreto n. 9526/GRFVG of 28 February 2025 and subsequently amended and supplemented) - CUP G23C25000620008*	€ 16,243.00	max 6 months optional	Area C
Positions WITHOUT SCHOLARSHIP: 0	**0**	-	-	-	-	-

*Scholarships funded by "External Institutions" and associated locations can be assigned subject to the successful completion of the agreement that governs their funding or the decree's issuance granting funding or approving the operation (Rector's Decree n. 299/2025 art.14 p.7).

RESEARCH PROGRAMMES

Area A – Funder: University of Udine
In line with PhD research topics (Rector's Decree n. 299/2025 - Table 11).

Area B – Funder: University of Trieste
In line with PhD research topics (Rector's Decree n. 299/2025 - Table 11).

Section C – Funder: Specific Programme 20/24 ESF+ 2021/2027 Region FVG			
Research Topic	**Specialization Area S4 and Trajectory/ies of reference**	**Organisation, methods, results and innovativeness of the project**	**Integration with networks and partnerships, spin-offs and contribution to strategic supply chains and the development of the regional production system**
Ecological awareness through picturebooks in English as lingua franca Prof. Maria Bortoluzzi	**Specialization Area S4:** 5. Cultural heritage, design, crative industry, tourism. **Trajectory/ies of reference:** 1. System planning for cultural and creative industries (ICC); 5. Development of competitive systems through national and international leverages and environments for cultural and creative industries and tourism.	The project aims at investigating professional training to promote responsible citizenship as environmental action and development of ecological identities in children and adolescents through ecological language and multimodal awareness. English is the lingua franca of the project for the intercultural and ecoliteracy dialogue instantiated by means of picturebook mediation for children and adolescents. Cultural institutions of	The project will • improve young people's professional competence as educators; • enhance ecological language awareness and ecological literacy through picturebook mediation; • investigate innovative ways to involve young people, adolescents and children in ecological communication and action through the use of picturebook mediation in interdisciplinary events in libraries, museums and institutions of the region;

11. POSITIONS – PhD Programme in LINGUISTICS AND LITERATURE

		Friuli Venezia Giulia, such as libraries and museums, will be involved in transnational collaborations.	• enhance international relations of local institutions through networks such as the Erasmus + KA220 HEI - ICETEMP project (network of 7 European universities, including Udine).
Digital edition and commentary of Il Conte Pecorajo by Ippolito Nievo Prof. Silvia Contarini	**Specialization Area S4:** 5. Cultural heritage, design, creativity industry, tourism. **Trajectory of reference:** 5. System development for competitiveness through national and international leverages and frameworks for cultural and creative enterprises (CCEs) for Tourism.	The project aims to provide a digital commentary on the historical novel Il Conte Pecorajo by Ippolito Nievo, in the 1857 edition edited by S. Casini in 2010. The focus will be on the narrative strategies related to the representation of the natural and social reality of Friuli. The annotated edition will be freely accessible on the DIUM digital platform.	The project is linked to the PRIN 2017 project Nievo and the literary Culture of Risorgimento coordinated at national level by Silvia Contarini, and to the international research group on Nievo active at DIUM. It will result in: 1. A digital commentary in open access on the DIUM platform 2. A series of initiatives aimed at enhancing the Friulian landscapes and the historical realities of upper Friuli described in the novel, with the aim of renewing the experience of literary parks.
Literature of roots: on the tracks of immigration to Canada. Enhancing places of memory for sustainable cultural tourism in FVG Prof.ssa Alessandra Ferraro	**Specialization Area S4:** Cultural heritage, design, creativity industry, tourism. **Trajectories of reference:** Trajectory 3 and 5: Tourism 4.0 new business model; System development for competitiveness through national and international levers and frameworks for Creative Industries and Tourism.	In the context of the important migratory movement from the Region to Canada, there are many Friulian and Veneto-Julian writers who have established themselves in the North American country, evoking their origins. The project aims to repertory their writings in Italian, Friulian, French and English, with particular attention to the spatial dimension and the representation of places of memory.	In synergy with already existing realities, the aim is to create several itineraries in the villages of origin that will enrich the regional cultural-tourist offer in the sphere of root tourism (https://www.esteri.it/it/servizi-consolari-e visto/italiani-all-estero/turismo-delle-radici/). The work envisages the recognition, census, filing and setting up of an information portal with georeferencing and interactive map.
Trieste in Translation. Portraits of the city in fiction and non-fiction works in English Prof. Katia Peruzzo	**Specialization Area S4:** Cultural heritage, design, creativity industry, tourism. **Trajectories of reference:** Trajectory 1. System Building for Cultural and Creative Enterprises (CCI); Trajectory 2. Research Development Technological Innovation for Cultural and Creative Enterprises (CCI).	The project focuses on the representation of the city of Trieste and its surrounding territory in English-language literature and non-fiction, including both translated works (primarily from Italian and Slovene) and texts originally written in English. The project will be carried out in three phases, in close collaboration with the LETS Museum – Literature Trieste: 1. a survey of the relevant works; 2. the creation and analysis of a searchable database; 3. the development of museum materials and digital resources for both the general public and scholars.	The University of Trieste has a long-standing collaboration with the Municipality of Trieste and its network of museums. The project's outputs aim to offer a multifaceted perspective on the representation of the city. The proposed materials and digital pathways will provide new insights and unexplored connections. The project will contribute to the development of cultural-literary, educational, and scientific tourism. It will establish thematic routes focused on key elements of the city's literary and cultural history, following models to be replicated at regional level.
Native Wisdom and Tradition: the poetic and symbolic heritage of 'ancient' and minority cultures as a source of cultural innovation for the future Prof. Antonella Riem	**Specialization Area S4:** Cultural heritage, design, creative industries, tourism. **Trajectories of reference:** Trajectory 4: Sustainable innovations to build greener destinations; Trajectory 5: System development for competitiveness through national and international levers and areas for Cultural and Creative Industries (CCI) and Tourism.	Set within an innovative post- and decolonial methodological framework, combined with the Partnership cultural paradigm, the project explores the poetic, symbolic, and mythological systems of Indigenous cultures, emphasizing their vitality and relevance in today's globalized world. Through the analysis of their representations in English-language literatures, the project seeks to redefine relationships between individuals, otherness, and Nature, promoting a vision rooted in participation, care, and peace among peoples.	The project offers an innovative approach to enhancing: • the cultural roots of Indigenous traditions; • new paradigms for the development of the anthropological and cultural heritage of Friuli-Venezia Giulia, strengthening international cultural relations for tourism. It applies: • ESG models to local specificities, respecting minority identities while fostering environmental awareness and market innovation. It connects: • networks such as the PSG, the MaPS Master's program, and the ALL Alumni Association with major CCI at the regional, national, and international levels. CCI links: https://partnershipstudiesgroup.uniud.it/ https://all.uniud.it/ https://dofconsulting.it/ https://www.dmav.it/ https://www.isabellapers.com/ https://www.tizianapers.com/ https://timeforafrica.it/

11. POSITIONS – PhD Programme in LINGUISTICS AND LITERATURE

			https://rezija.com/it/gruppo-folkloristico-val-resia/chi-siamo/ https://gala.network/