MSCA HOSTING OFFERS 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Environmental Sciences and Geology (ENV)

Landslide risk reduction

Supervisor: Nicola Casagli

E-Mail

Website

The research group led by Prof. Nicola Casagli at the University of Florence is a world-class team of 60 researchers, supervised by 12 professors, specialising in engineering geology, slope instability, landslides, disaster risk reduction, remote sensing for geohazards, and cultural heritage protection. Recognised as a World Center of Excellence for landslide risk reduction, the group follows open, transparent, and merit-based recruitment and career progression. It is linked with the UNESCO Chair on Prevention and Sustainable Management of Geo-hydrological Hazards and an Academic Center for Civil Protection. Officially recognised as a competence centre by the Italian Civil Protection, the group collaborates internationally within the International Consortium on Landslides, the International Consortium for Geodisaster Reduction, the Global Alliance of Disaster Research Institutes, and the UNESCO Chair network.

Application documents: CV, motivation letter. Certifications, letters of endorsement or other documents may also be submitted.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Environmental Sciences and Geology (ENV)

Understanding extensional tectonics and volcanism

Supervisor: Derek Boswell Keir

E-mail

Website

Research group primarily uses remote sensing, modelling, seismology, geology, and geochemistry to understand extensional tectonics and volcanism.

Application documents: CV and motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Life Sciences (LIF)

Theoretical and statistical physics of living systems: from the physics of intra and inter-cellular signaling to the physics of proofreading and error correction.

Supervisor: Francesco Piazza

E-mail

Website

The group of complex systems at the department of physics of UNIFI and at the neighboring CNR Institute for Complex Systems (ISC) is a vibrant group of PIs, postodcs and graduate students whio are active at the interface between physics and a number of disciplines, such as biology, economics, social and data sciences.

See:

https://www.fisico.org/

https://www.fis-astro-lm.unifi.it/index.html?newlang=eng

Application documents: CV, short research proposal, motivation letter, academic transcripts

Application deadline: May 31st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Chemistry (CHE), Life Sciences (LIF) and Physics (PHY)

Theoretical and computational physics of living systems: from the physics of intra- and inter-cellular signaling to the physics of signaling, proofreading, error correction and origins of life.

Supervisor: Francesco Piazza

E-mail

Website

The group of complex systems at the department of physics of UNIFI and at the neighboring CNR Institute for Complex Systems (ISC) is a vibrant group of PIs, postodcs and graduate students whio are active at the interface between physics and a number of disciplines, such as biology, economics, social and data sciences.

See:

https://www.fisico.org/

https://www.fis-astro-lm.unifi.it/index.html?newlang=eng

Application documents: CV, short research proposal, motivation letter, academic transcripts

Application deadline: June 15th 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Life Sciences (LIF)

Exploring the Transcriptomic Landscape of Pain in Mouse and Human Models

Supervisor: Francesco De Logu

E-mail

Website

Our research group specializes in understanding pain mechanisms, focusing on pain behavior and the development of advanced animal pain models, including cancer-related pain models. We employ cutting-edge techniques to investigate receptor functionality and ion channel activity, utilizing imaging technologies to explore these pathways in detail. With extensive expertise in molecular biology, our team excels in viral vector development, particularly in the production of adeno-associated viral vectors (AAV) and lentiviruses, enabling precise gene delivery for functional studies. We also have proficiency in long-read sequencing technologies, allowing for comprehensive analysis of whole genome DNA and mRNA. Our bioinformatic capabilities support the interpretation of complex datasets, offering deep insights into genetic variations and transcriptional profiles related to pain and therapeutic targets. This multidisciplinary approach positions us at the forefront of pain research, contributing to the development of novel pain management strategies.

Application documents: CV, motivation letter, certifications

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Life Sciences (LIF) and Physics (PHY)

Uncovering force propagation and regulation in living systems

Supervisor: Marco Capitanio

E-mail

Website

The Molecular and Cellular Mechanobiology research group investigates the mechanisms underlying mechanical regulation of biological systems. Cellular and molecular forces have emerged to play a fundamental role in a wide array of biological processes. We investigate the chemo-mechanical properties of molecular motors and transcription factors and, more in general, biomolecular interactions. We study the molecular mechanisms of mechano-transduction, i.e. the conversion of mechanical signals into changes in gene expression and cell fate. We use laser light to manipulate single biological molecules or cells. High-speed optical tweezers allow us to measure the mechanical properties of single motor proteins, investigate target search of transcription factors on DNA as well as load-dependence of the interaction between mechano-transductor proteins and the actin cytoskeleton. Light is also used to image and track motor proteins and measure intracellular forces through molecular force sensors

Application documents: CV and motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Chemistry (CHE), Environmental Sciences and Geology (ENV) and Life Sciences (LIF)

Photosynthetic microbes-based Biotechnology

Supervisor: Alessandra Adessi

E-mail

Website

The Microbial Biotechnology Laboratory at DAGRI- University of Florence is dedicated to the study and application of phototrophic microbial systems for biotechnological innovations. Our research focuses on microbial bioprocesses for sustainable industrial and agri-food applications.

We are currently engaged in several national and EU-funded projects, working on the development of bio-based production platforms and novel bioremediation strategies. We also carry out basic studies on microbial interactions and metabolic networks. Our multidisciplinary team collaborates with leading academic institutions both at national and international level.

Research Areas:

-Engineering microbial cell factories for bio-based chemicals and bioenergy

-Biodegradation and valorization of industrial waste through microbial processes

-Metagenomics and microbiome analysis for industrial and environmental biotechnological applications

Our lab offers access to state-of-the-art facilities, including advanced photobioreactor systems, high-throughput phenomics technologies. We primarily rely on an experimental approach, supported by computational analysis. The reseach lab is currently composed of 3 Post docs, 3 PhD students, and Masters and Bechelor students. We foster a collaborative and dynamic research environment, providing excellent training opportunities for early-career researchers.

Application documents: Motivation Letter, CV and publications list.

Application deadline: June 10th 2025

EUniWell Thematic Arena: Health and Well-Being, Environmental Change and Well-Being

Euraxess Research Area: Environmental Sciences and Geology (ENV) and Life Sciences (LIF)

Studying social insect behaviour from a cognitive ecology perspective

Supervisor: David Baracchi

E-mail

Website

Studying social insect behaviour from a cognitive ecology perspective. Together with my research team, we focus on investigating the neuroethological mechanisms and behavioural principles of small-brained insects, primarily bees and wasps. We aim to understand how these insects effectively adapt to their environment and make strategic decisions to ensure their survival. Our research also investigates the effects of biotic and abiotic stressors on the well-being and cognition of managed and wild pollinators. We are interested in understanding how factors such as pesticide exposure, pollutants and disease affect the health and cognitive abilities of these important insects.

Keywords: Insect pollinators; paper wasps, honeybees, bumblebees, cognitive abilities; learning and memory; higher cognition; stressors; chemical communication; neuroethology; biogenic amines; HPLC-MS; GC-MS.

https://davidbaracchi.wixsite.com/beelab

Application documents: CV and Motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Wind energy and smart energy systems based on renewables, green hydrogen, and batteries

Supervisor: Alessandro Bianchini

E-mail

Website

The research group I am leading is made of around 12 people, working into different areas related to wind energy, smart energy systems based on renewables, green hydrogen, and batteries. In particular, in wind energy our activities span in a wide range of disciplines, from aero-(hydro)-servo-elastic simulations of wind turbines (both bottom fixed and floating), to high-fidelity CFD simulations, control, up to system-level analyses for wind farm design and siting. In the field of renewable, we work on algorithms and control logics for the optimal sizing/control of smart energy systems comprising renewables and storage devices. We are expert of machine-learning techniques. In the field of hydrogen, we have a test rig for alkaline electrolyzers, and we model them with engineering method and multi-physics CFD.

Application documents: CV, motivation letter, certification of proficient english (min C1), resumee of specific research activities carried out in the field of the proposal.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Culture, Multilingualism and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC) and Economic Sciencies (ECO)

Economic and business international history

Supervisor: Valerio Cerretano

E-mail

Website

Economic and business international history. I have some expertise in the area of international cartels and industrial history. But I have made incursions into the history of central banks and central banking, as well as the armament business in a historical perspective. At present I am about to begin a major work on the 1930s global economic depression. I would be happy to supervise in any area pertaining a) the making of central banks; b) the making of the international patent system; c) the depression of the 1930s.

Application documents: CV and motivation letter plus one letter of recommendation

Application deadline: July 1st 2025

EUniWell Thematic Arena: Social Equality and Well-Being, Environmental Change and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC) and Economic Sciencies (ECO)

Entrepreneurial finance, sustainability, and financial innovation

Supervisor: Nicola Del Sarto

E-mail

Website

The Research Group investigates how new ventures, SMEs, and mission-driven enterprises access and manage financial resources in evolving market and institutional environments. Our research lies at the intersection of entrepreneurial finance, sustainability, and financial innovation, with a focus on understanding how different forms of capital—venture capital, crowdfunding, banking, and fintech—support firm growth, innovation, and impact.

We combine empirical rigor with policy relevance, using mixed methods including econometric modeling, configurational approaches (fsQCA), and qualitative case studies. The group is particularly interested in:

Financing dynamics of sustainability-oriented ventures (SOVs)

The role of intermediaries such as accelerators and digital innovation hubs

Investor characteristics and their impact on firm outcomes

ESG integration in financial decision-making

The emergence of alternative finance ecosystems

The group actively collaborates with national and international academic institutions, policy bodies, and innovation stakeholders. Our goal is to contribute to both scholarly debate and practical solutions for inclusive, sustainable, and innovation-driven growth.

Application documents: CV, motivation letter, research interests.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Life Sciences (LIF)

The hosting group offers a unique opportunity to delve into the metabolic and functional aspects of neuroendocrine microenvironment

Supervisor: Elena Rapizzi

E-mail

Website

The research group is multidisciplinary, made up of me, two endocrinology researchers, a PhD student and two research fellows. The goal of my research is to better understand the molecular mechanisms underlying tumorigenesis, progression and aggressiveness of cancer, in order to identify an effective pharmacological treatment for these tumours.

Application documents: CV with list of publications, motivation letter.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Social Equality and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC)

Lean and Industry 5.0

Supervisor: Romeo Bandinelli

E-mail

Website

Fashion for Future is an applied research laboratory at the University of Florence dedicated to advancing innovation and sustainability within the fashion industry. Under the scientific direction of Associate Professor Romeo Bandinelli, the lab focuses on integrating digital technologies and sustainable practices into fashion supply chains and production systems. By collaborating with industry partners, Fashion for Future aims to bridge the gap between academic research and practical applications, fostering the development of environmentally responsible and technologically advanced solutions in fashion. Agricola is a joint laboratory at the University of Florence dedicated to enhancing the efficiency of the food production value chain. As Scientific Director, Associate Professor Romeo Bandinelli leads the lab's efforts in integrating digital technologies and promoting circular economy principles within agri-food systems. By collaborating with industry partners and academic researchers, Agricola aims to develop innovative solutions that improve sustainability and productivity in agriculture.

Application documents: CV, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Mobility and transport, energy, environmental, Smart City, HPC, industry 4.0, NLP for justice, computer vision, ethics AI and data

Supervisor: Paolo Nesi

E-mail

Website

DISIT Lab of UNIFI is the most active Big Data / AI lab of the University of Florence, metropolitan Florence area, and it is an official Regional Lab in Tuscany, Certified Experts of FIWARE, member of GAIA-X, EDIH Tuscany X.0, UNINFO ISO, CBD-AI of Tuscany Region, national CINI, national CNIT, national PhD on AI, involved into IFAB, etc., and in several international boards and Advisory Boards, such as those of BBC for blockchain, and the European Mobility Data Space.

DISIT successfully developed a relevant number of International and National research, development and innovation projects and direct contract with industries and public administrations.

DISIT Lab is strongly active on artificial intelligence (ML, generative AI, deep learning, Bert, continuous learning, etc.), Explainable AI, neuro-symbolic AI, big data, knowledge engineering, security and privacy, GDPR, Digital Twins, What-if analysis, decision support, expert systems, digital twins, NLP, LLM, big data architectures, etc. https://www.snap4city.org/944

Domains of: mobility and transport, energy, environmental, Smart City, HPC, industry 4.0, NLP for justice, computer vision, ethics AI and data, etc.

Application documents: CV, motivation letter, certifications, etc.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Economic Sciencies (ECO), Environmental Sciences and Geology (ENV)

Economics of Natural Disasters + Energy and Environmental policy evaluation

Supervisor: Stefano Clò

E-mail

Website

Stefano Clò is an Associate Professor of the Departiment of Economics at the University of Florence. Currently, he is teaching Environmental Economics and Policy evaluation, where econometric technique and rbust methodologies are implemented to analysis environmental and energy policies.

Currently, he is working in the fields of: 1) Renewble policies evaluation; 2) Economics of natural disasters; 3) determinants of the firm performance analysis, 4) evolution of state-owned enterprises; 5) reforms of the electricity market; 6) evaluation of environmental and energy policies.

The hosting offers the possibility to work with his research group on one of the above mentioned issues.

Application documents: Some of the following documents: CV, motivation letter, statistical softwares, list of publications, project description

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Life Sciences (LIF)

Exploring the Cytoarchitecture of Focal Cortical Dysplasia Using Tissue Clearing and 3D Fluorescence Microscopy

Supervisor: Irene Costantini

E-mail

Website

The research group, headed by Prof. Costantini, is located within the Scientific and Technological Campus of UNIFI, both at the Department of Biology and at the European Laboratory of Non-Linear Spectroscopy (LENS), an infrastructure of excellence, unique in Italy, which provides state-of-the-art infrastructure (e.g two-photon fluorescence microscopy, spinning disk fluorescence microscopy, light sheet fluorescence microscopy) and fosters multidisciplinary collaborations.

The research focuses on developing and applying novel technologies to understand large-scale complex biological systems. We're optimizing different methods, for tissue preparation, imaging, and automatic data analysis, that enable the identification and interrogation of multiscale systems with micrometer resolution. We're applying these technologies to study the function and dysfunction of various organs in animal models and human clinical samples.

Application documents: CV and a motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Life Sciences (LIF)

Innovation in agriculture and climate change

Supervisor: Camilla Dibari

E-mail

Website

The research group comprises two full professors, senior and junior scientists, postdoctoral researchers, and technicians (a total of 15 people) collaborating on the following topics: precision agriculture, innovation in agriculture, agro-silvo-pastoral systems, climate change (impacts, adaptation, mitigation), remote sensing, geographical information systems, agro-ecosystem monitoring, and participatory approaches in rural areas. Representatives of the group are members of the INSURLAB Research Unit, the URSTAI Research Unit (Territorial Development and Inner Areas), the AGRICOLA Joint Laboratory, and the COPERNICUS Research Unit. We have access to several products (Copernicus, PlanetScope) and tools (Grasshopper, GrassMaster, GreenSeeker, 3D image phenotyping platforms, ceptometers, UAVs, multispectral and hyperspectral cameras (for UAV and proximal sensing), and thermal cameras). They have founded the AgriZapp innovative start-up, recognised as a spin-off of the University of Florence.

Application documents: CV, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Social Equality and Well-Being,

Euraxess Research Area: Environmental Change and Well-Being

Analysing the most challenging areas in the insurance market

Supervisor: Sara Landini

E-mail

Website

The InsurLab Research Unit is part of the Department of legal science of the University of Florence.

The Research Unit will take into account several of the most challenging areas for the insurance market:

Insurtech: understood as the use of new technologies in production, distribution, governance, regulation and supervision.

Responsible Insurer: understood as market action also according to the logic of public/private partnership to impact on livability and urban quality, the protection of the historical-cultural, agro-environmental and landscape heritage, environmental and energy problems, resilience to climate change and social: issues that call for new local balances between settlement and territory capable of promoting the transition towards more sustainable organizational models and lifestyles.

People: centrality of the person and their protection needs in a logic of life extension and economic sustainability of aging through the insurance management of longevity risk.

Globalisation: geopolitical situation and management of related risks, new challenges for the market regarding the application of legislation on anti-financial crimes and anti-money laundering, war and terrorism risk, globalization of markets

Application documents: CV and motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Intelligence at the edge solutions for Integrated Terrestrial-Non Terrestrial Networks

Supervisor: Daniele Tarchi

E-mail

Website

The DaCoNetS research group at the University of Florence, led by Professor Fantacci, focuses on cutting-edge advancements in wireless communications and network optimization. The group comprises 10 members, including full professors, associate professors, assistant professors, and collaborators. Their expertise spans terrestrial and satellite wireless networks, 5G/B5G/6G systems, intelligent transportation systems, cooperative communication, edge computing, and green communication.

Their research areas include machine learning techniques for 6G networks, intelligence at the edge, smart city scenarios, integrated terrestrial and non-terrestrial networks, and intelligent transportation systems. The group is dedicated to enhancing computational efficiency and resource management in distributed networks through edge and fog computing systems. They also explore artificial intelligence and machine learning to improve the performance and scalability of distributed computing systems.

DaCoNetS investigates various optimization methods to enhance computational processes in heterogeneous networks and studies the integration of different network types to improve connectivity and performance. Their work in smart city solutions aims to enhance urban living, while their research in intelligent transportation systems focuses on improving traffic management and safety. Additionally, they explore the delivery and optimization of multimedia services over various network infrastructures to enhance user experience.

Application documents: Curriculum Vitae (CV): A detailed CV highlighting their academic background, research experience, publications, and any relevant professional activities. Cover Letter: A cover letter explaining their motivation for applying, their research interests, and how their expertise aligns with the proposed project on Intelligence at the Edge solutions for Integrated Terrestrial-Non Terrestrial Networks. Research Proposal: A concise research proposal outlining their planned research activities, objectives, methodologies, and expected outcomes. PhD Certificate: Proof of their PhD degree, as required by the MSCA PF eligibility criteria. Recommendation Letters: Letters of recommendation from previous supervisors or collaborators, attesting to their research capabilities and suitability for the fellowship. Proof of Compliance with Mobility Rule: Documentation demonstrating compliance with the MSCA PF Mobility Rule, as specified in the MSCA Work Programme 2023-2025.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Environmental Sciences and Geology (ENV) and Life Sciences (LIF)

Bioclimatic architecture and innovative technologies for the built environment

Supervisor: Paola Gallo

E-mail

Website

ABITA is a consortium of eight leading Italian Universities an Interuniversity Research Centre in the field of environmental technologies, and is leader in Italy on innovation technologies studies for built environmentat both regional, national and european level.

ABITA`s main objetives and activities are to promote, organise and develop research on built systems and architectural technologies fileds as for the built & natural environmental transformations.

ABITA lately promotes collaboration with Municipalities and Public Administrations both in the European Union and foreign transitional & growing economies, in order to: Improve urban environmental policies re qualification aiming to introduce new environmental parameters on building standards & urban developments.

Application documents: CV, motivation letter, research proposal ideas

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Environmental Change and Well-Being

Euraxess Research Area: Life Sciences (LIF)

Studying the microbiome-immunity axis in human health

Supervisor: Amedeo Amedei

E-mail

Website

MIA-LAB is dedicated to studying the microbiome-immunity axis in human health, focusing on its role in the development of inflammation-related conditions such as cancer, autoimmune diseases, infections, and neurodegenerative disorders. In alignment with the concept of ``Circular Health,`` MIA-LAB emphasizes a holistic approach that recognizes humans as ``holobionts``—complex systems interconnected with their environment

(https://mia-lab.it/)

Application documents: CV, motivation letter, certifications

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Environmental Sciences and Geology (ENV) and Life Sciences (LIF)

Investigating plant responses to abiotic stress

Supervisor: Nadia Bazihizina

E-mail

Website

The plant physiology research group investigates plant responses to abiotic stress, exploring a diverse range of environmental challenges, including microplastics, heavy metals, and salinity. Our lab is equipped with state-of-the-art facilities for ionomics, gas exchange measurements, and a suite of advanced eco-physiological instruments. Additionally, we have access to cutting-edge microscopy facilities, enabling in-depth cellular and structural analyses. Through interdisciplinary approaches, we aim to deepen our understanding of plant stress physiology and contribute to sustainable solutions for agriculture and environmental conservation.

Application documents: Motivation letter, CV and potential research topics

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC), Environmental Sciences and Geology (ENV), Life Sciences (LIF) and Physics (PHY)

MSCA Global/European Hosting Offer in Postgrowth Urbanism: a dialogue between social and biophysical sciences

Supervisor: Silvio Cristiano

E-mail

Website

The Regional Design Lab is a reference point for national and international scientific research, bringing together spatial design and planning, also resorting to systems thinking, transdisciplinary approaches, and interdisciplinary collaborations, and offering consultancy and professional services to local administrations, on top of scientific dialogue and advancements.

Application documents: CV (including list of publications) + motivation letter (including a research proposal)

Application deadline: July 1st 2025

EUniWell Thematic Arena: Social Equality and Well-Being

Euraxess Research Area: Mathematics (MAT)

Functional, geometric, and spectral inequalities

Supervisor: Giorgio Saracco

E-mail

Website

The Calculus of Variations typically deals with minimization problems for functionals defined on classes of functions. Some relevant related topics are geometric measure theory, partial differential equations, geometric inequalities, local and nonlocal operators. In particular we study applications to interfaces and microstructures, shape optimization, evolutions of defects in materials, density functional theory.

Existence and regularity of solutions to variational problems

Optimal transport problems

Free discontinuity and free boundary problems

Variational solutions to evolutionary problems

Optimization problems

Application documents: Motivation letter, CV, short research plan

Application deadline: July 1st 2025

EUniWell Thematic Arena: Social Equality and Well-Being

Euraxess Research Area: Economic Sciencies (ECO)

The Role of Investor Sentiment in Financial Markets

Supervisor: Leonardo Bargigli

E-mail

Website

The research unit NETBHEE LAB aims to serve as a meeting point, both nationally and internationally, for researchers exploring the heterogeneity of economic agents, their behaviors, and their interactions within network structures, as well as the evolutionary dynamics of the economic system. NETBHEE LAB promotes analyses and research that use these methodological elements, which, thanks to the intensive use of calculators and the availability of data, enable a complexity approach to economics, enhancing both theoretical and empirical analysis.

Application documents: CV, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG), Life Sciences (LIF) and Mathematics (MAT)

Discrete Tomography, Graph Thoery, Neuroscience.

Supervisor: Andrea Frosini

E-mail

Website

The research group is composed by Matematicians, Computer Scientists and Psychologists to cover all the required competencies described in the research areas. Publications and specific research themes can be found on-line.

Application documents: CV and motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Life Sciences (LIF)

Cardiac Surgery Clinical and Research Activities

Supervisor: Massimo Bonacchi

E-mail

Website

Prof. Massimo Bonacchi's Cardiac Surgery Innovation Group at the University of Florence pioneers translational research in advanced cardiac therapies. The team integrates surgical expertise in complex procedures (transplants, minimally invasive CABG, aortic reconstruction) with biomedical innovation, focusing on heart failure solutions (bioengineered grafts, VADs/ECMO), AI-driven surgical planning, and regenerative approaches (stem cell/biomaterial hybrids). Fellows engage in cutting-edge projects spanning clinical activities, experimental activities and predictive outcome modeling. The group fosters multidisciplinary collaboration with bioengineers, data scientists, and ethicists, offering access to state-of-the-art experimental labs, advanced imaging, and global clinical networks. Emphasizing patient-centered innovation, fellows bridge preclinical discovery with clinical validation, contributing to trials on arterial conduit durability, neuroprotection strategies, and AI-enhanced recovery protocols. The dynamic environment prioritizes leadership development, grant acquisition, and ethical evaluation of emerging technologies, aligning with MSCA's mission to drive surgical excellence through interdisciplinary research.

Application documents: Application Process:

Submit the following to Prof. Bonacchi (massimo.bonacchi@unifi.it) by 30 June 2025:

CV (including publications, research experience).

1-page research proposal summary aligned with the group's focus areas.

Eligibility self-assessment confirming compliance with MSCA criteria.

Application deadline: June 30th 2025

EUniWell Thematic Arena: Culture, Multilingualism and Well-Being

Euraxess Research Area: Social Sciences and Humanities(SOC)

Archaeological excavations of Minoan Crete

Supervisor: Maria Emanuela Alberti

E-mail

Website

The AegeanLab counts some Ph.D students and some MA students, beside myself.

We work in Crete (Malia, Sklavokambos and Pacheiammos) in collaboration projects with material studies (especially cooking and storing wares and loom-weights) and excavations. We started a collaboration in Sardinia (Nuraghe Arrubiu) and some material studies in Cyprus (mainly Aegean pottery, balance weights and metal objects). The past and current Ph.D. project deal with the reconstruction of the sea-routes in the Eastern Mediterranean (A. Querci); the use of balance weights and related finds in Bronze Age Cyprus (E. De Benedictis); the production of perfumes in Bronze Age Aegean (I. Valinoti); and the critical re-examination of the so-called “Minoan villas” (C. Caleo). MA thesis are all concerning the identification of production and other economic activities in various excavations of Minoan Crete.

We also deal with experimental archaeology and dissemination to the wider public. Our series “Periploi” for the Firenze University Press, gathers studies of various topics related to the Aegean and Cypriot Bronze Age.

https://books.fupress.com/scientific-board/Periploi%20%E2%80%93%20Studi%20Egei%20e%20Ciprioti/33

Application documents: CV, motivation letter, a first draft of the project

Application deadline: May 30th 2025

EUniWell Thematic Arena: Culture, Multilingualism and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC)

Hosting and Mentoring Offer (History of Emotions; Early Modern Global History; Intelelctual History)

Supervisor: Giovanni Tarantino

E-mail

Website

The research group aims to foster activities, partnerships and publications exploring the history of emotions in the early modern period, with scholars and institutions based on both shores of the Mediterranean as its main stakeholders. The group works in close synergy with GLOBHIS: the Network of Global History, the editorial board of the journal Cromohs, and the Society for the History of Emotions.

Application documents: CV, motivation letter, sample publication, contact details of 2 referees

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Research on reverberation chamber theory and measurements

Supervisor:

E-mail

Website

The staff of the EMC Laboratory consists in the scientific responsible, a technical assistant, and a postdoc engineer.

Applicants will be involved in research on reverberation chamber theory and measurements, specifically aimed at improving test methods, both emission and immunity, and evaluation of measurement uncertainty.

Application documents: CV, motivation letter, certifications, etc.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Life Sciences (LIF)

Developing and validating innovative outcome measures and rehabilitation interventions, including rehabilitation technologies for persons with disability

Supervisor: Francesca Cecchi

E-mail

Website

PROMISE@LAB is an interdisciplinary research group that gathers the complementary research and clinical expertise of:

-medical specialists (physiatrists, neurologists, geriatricians)

-physiotherapists

-psychologists

-occupational therapists

-speech therapists

Our mission is to develop and validate innovative outcome measures and rehabilitation interventions, including rehabilitation technologies, for persons with disability, with focus on:

-Neurological conditions (stroke, severe Acquired Brain Injuries (sABI) and Parkinson's disease)

-Musculoskeletal conditions

AND to co-create and validate innovative interventions to promote healthy/active aging.

We have experience in conducting: multicentric observational studies; clinical measures validation; robot- and sensor-derived measures validation; cross cultural adaptation; case series; usability and feasibility; single subject design; RCTs; medical device testing.

Our research is mainly aimed at: understanding how an exposure affects patients' outcome; generating outcome prediction models; Innovating and improving rehabilitation assessment and treatment protocols; comparing treatments' effectiveness; supporting technological development through patients and experts' opinion; testing medical devices.

https://www.unifi.it/sites/default/files/2025-03/promiselab_0.pdf

Application documents: CV, motivation letter. Certifications, letters of endorsement or other documents may also be submitted

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Coupling Geothermal Energy with High-Performance Thermal Storage

Supervisor: Lorenzo Talluri

E-mail

Website

Thermo Group (formerly known as Gruppo di Fisica Tecnica) is the research group of the Department of Industrial Engineering dedicated to thermodynamics and heat transfer in their broadest applications. Founded in the late 1990s by Professor Giuseppe Grazzini, the group initially focused on optimizing refrigeration systems, studying ejection cycles, multiphase fluid dynamics, natural refrigerants, second-law analysis of energy systems, HVAC, and building energy performance.

In recent years, research has expanded to energy storage technologies and high-temperature heat pumps, alongside simulations of HDH desalination and environmental impact assessments of energy systems. The group is actively involved in national and international projects such as THUNDER (Horizon Europe), GEOSYN (Horizon Europe), ATENA (Fondazione Cassa di Risparmio), and CO_2 Mix (PRIN). It collaborates with companies through scientific and commercial agreements and operates a well-equipped laboratory for experimental research and CFD simulations.

The team includes two associate professors, one researcher, one technologist, three postdoctoral researchers, and five PhD students.

Application documents: CV, motivation letter, certifications

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Life Sciences (LIF)

PSYCHIATRY AND MENTAL HEALTH

Supervisor: Giovanni Castellini

E-mail

Website

The Psychiatry Research Unit at the Department of Health Sciences, University of Florence, is a dynamic and interdisciplinary research group dedicated to advancing knowledge in psychiatric disorders through cutting-edge clinical and experimental research. Our mission is to bridge the gap between basic science and clinical applications by developing innovative diagnostic, therapeutic, and preventive strategies for mental health conditions.

Our team comprises scientists and researchers with clinical (psychiatrists, psychologists, and dieticians), preclinical and translational backgrounds, working together to explore biological, psychological, and social determinants of mental disorders. We leverage advanced neuroimaging, genetic, and computational modeling techniques, integrating artificial intelligence and machine learning to improve diagnostic accuracy, identify biomarkers, and develop personalized treatment approaches.

We conduct translational research across multiple domains, including eating disorders (Anorexia Nervosa, Bulimia Nervosa, Binge Eating Disorder), schizophrenia, and psychotic disorders. We actively participate in national and international research collaborations, contributing to major consortia such as ENIGMA Eating Disorders, and the Psychiatric Genomics Consortium – Eating Disorders Working Group.

The Psychiatry Research Unit is committed to translating scientific discoveries into real-world clinical applications, fostering the development of evidence-based interventions (both by psychotherapy or pharmacological intervention) to enhance mental health outcomes, possibly adopting specific protocols for specific subgroups and clinical populations. By collaborating with the main public stakeholders, levering epidemiological data, we aim to improve patient care, inform public health policies, and advance psychiatric training for students and professionals at the University of Florence.

Application documents: CV, motivation letter. Certifications, letters of endorsement or other documents may also be submitted.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Culture, Multilingualism and Well-Being, Teacher Education and Well-Being

Euraxess Research Area: Physics (PHY)

Superconduducting Quantum Technologies

Supervisor: Luca Chirolli

E-mail

Website

The research leader Luca Chirolli as just settled at the Department of Physics and Astronomy and counts on an active grant to study Quartet Superconductivity in hybrid superconducting systems. The Department of Physics and Astronomy, the LENS, and the CNR Institutes in Florence provide a rich local Quantum Ecosystem, with strong experimental and theoretical groups, and fruitful collaborations are highly promoted and encouraged. The research group of Luca Chirolli provides an ideal environment, promoting excellence and creativity with a strongly international attitude.

Scopus https://www.scopus.com/authid/detail.uri?authorId=15065048900

arXiv https://arxiv.org/search/?query=chirolli&searchtype=all&source=header

UniFi Web https://cercachi.unifi.it/p-doc2-0-0-A-3f2c3829382828.html

LinkedIn https://www.linkedin.com/in/lucachirolli/

Personal https://lucachirolli.wordpress.com

Application documents: CV, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Training and Research for a safer active and light mobility

Supervisor: Giovanni Savino

E-mail

Website

ight and active mobility, including bicycles, has been an important means of transport in urban and peri-urban settings in Europe. Currently, with the need to transition to more sustainable solutions, and the need to promote an active and healthier population, muscular and electric-assisted two-wheelers represent an important resource. But a clear concern associated with relevant shifts in transport means is road users' safety. This is especially true considering a transition towards vehicles that are indeed smaller and lighter, but also rather complex to stabilise and control, more exposed in the traffic due to speed differentials, and unprotected in case of a crash with larger vehicles. A research line in the safety of light and active mobility users is a timely commitment for early career scientists.

The MOVING is an excellent setting for scientific and personal development in the field of light mobility. Current projects include the Next Generation EU funded MOST, a large National collaboration which in the Spoke 5 Light Vehicles and Active Mobility offers a strong opportunity for research synergies. The Municipality of Florence is active in European research collaborations and committed to sustainable mobility. Applicants are welcome to contact the scientific supervisor via email to discuss the project proposal details in this research line.

Application documents: CV, motivation letter, brief project proposal (not exceeding 600 words)

Application deadline: June 30th 2025

EUniWell Thematic Arena: Culture, Multilingualism and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Watermarking, cryptography, signal processing in the encrypted domain, and multimedia forensics

Supervisor: Alessandro Piva

E-mail

Website

The hosting offers the possibility to work with his research group belonging to the Signal Processing and Communications Laboratory (LESC). The group has a long experience in the study, design and application of multimedia processing and protection tools, namely watermarking, cryptography, signal processing in the encrypted domain, and multimedia forensics. In the multimedia forensics field the staff developed several image and video forgery localization tools, mainly based on the analysis of acquisition, editing and coding traces. The diffusion of a new wave of synthetic media, widely known as deepfakes generated using sophisticated AI techniques, has raised the importance of these techniques for the identification of these kind of content. On these topics, the research was carried out in the framework of several funded project, the most recent ones are UNCHAINED (2020-2024), and FENCE (2016–2020), funded by DARPA. Currently, we are starting the activities of a new EU-funded Project, called DETECTOR.

Application documents: CV and motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being, Culture, Multilingualism and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC)

Archaeometry and Geoarchaeology

Supervisor: Elisabetta Gliozzo

E-mail

Website

The research group can supervise projects dealing with two complementary fields: archaeometry and geoarchaeology, focusing on the scientific analysis of materials and contexts from archaeological and historical sites across all chronological periods.

The archaeometry line is dedicated to the compositional and technological characterization of ceramics, glass, mortars, plasters, pigments and geo-resources. Using a wide range of analytical techniques, we investigate production technologies, provenance and material transformation processes, with the aim of supporting archaeological and historical interpretation.

The geoarchaeology line explores the interaction between human activity and the physical environment. It combines field-based investigations with laboratory approaches to study stratigraphy, site formation processes, landscape evolution and raw material exploitation. Our work integrates sediment analysis and GIS tools to reconstruct past human-environment dynamics.

We welcome candidates with backgrounds in archaeological science, geology, materials science or cultural heritage, with a strong interest in interdisciplinary research.

Application documents: CV, PhD certificate a motivation letter including a description of the candidate's main skills and expertise

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Chemistry (CHE) and Life Sciences (LIF)

ANTIBODY-MEDIATED NEUROLOGICAL CONDITIONS: PATHOPHYSIOLOGY AND IMMUNOLOGICAL MARKERS OF DISEASE

Supervisor: Valentina Damato

E-mail

Website

FAN group research program aims to improve our understanding of underlying disease pathogenesis with a focus towards 'precision medicine' in neuroimmunology – both with diagnosis and therapeutics in antibody-mediated neurological conditions, with a focus on myasthenia gravis, MOGAD, NMOSD, autoimmune encephalitis and paraneoplastic syndromes. The research focuses on defining the clinical, radiological, and immunophenotypic profiles of specific pathogenic autoantibodies; understanding what triggers autoimmunity and disruption of immune tolerance; and the cellular and humoural mechanisms of action of autoantibodies and how this might be translated into refining novel therapeutic approaches. The work of the research group thus far has resulted in the enhanced recognition of novel treatable neurological conditions, important biological insights into the pathophysiology of these disorders, and the development of diagnostic criteria and therapeutic approaches to improve outcomes in vulnerable patients who otherwise risk chronic disability, resulting in more than 50 publications on relevant journals and several contributions to international conferences. The lab group employs cutting-edge techniques in the field of cell biology, microscopy, flow cytometry and in vitro models and has national and international collaborations with prestigious institutions, including several ongoing collaborative funded projects. It includes 3 postdoctoral fellows, a research assistant, 2 neuroscience PhD candidates and 5 clinical research fellows.

Application documents: CV and motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Social Equality and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC)

The relationship between religion and society in the contemporary era

Supervisor: Maria Antonia Paiano

E-mail

Website

I am available to supervise a historical-critical research project focusing on the relationship between religion and society in the contemporary era. In particular, I am interested in overseeing research that aims to provide historical depth to some of the most significant issues of the present day, in which religion appears to play an important role: from nationalism to populism, the debate on the 'just war,' and the relationship with religion in certain factions of the current far-right political movements. I am pursuing these research lines in various ways, both independently and within research groups in Italy and Europe.

Application documents: CV, motivation letter

Application deadline: June 1st 2025

EUniWell Thematic Arena: Social Equality and Well-Being, Culture, Multilingualism and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC)

Sociology and migration processes

Supervisor: Elisabetta Zontini

E-mail

Website

I am happy to host candidates who work in areas aligned to my research:

migrant and transnational families; gender and the life course; the sociology of emotions; intra-European mobilities; citizenship; identities; racialisation and othering processes; intersectionality; new approaches in qualitative methods.

I also welcome work on the politicization of families and the backlash against families diversity; on social movements connected to gender and/or migration; and on 'second generation' migrants.

Application documents: Motivation letter, CV and brief research proposal

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Environmental Sciences and Geology (ENV), Life Sciences (LIF)

MOLLUSCS AND CLIMATE CHANGE

Supervisor: Silvia Danise

E-mail

Website

Currently my research group includes a posto-doc researcher working on the response of Mediterranean Sea marine invertebrates on the Last Interglacial warming interval (125.000 years ago, Pleistocene). This is the most recent interval of time in which the Earth was warmer than today, and it is considered an analogue for future warming. I also have undergraduate students doing their thesis on past marine biodiversity of the Mediterranean Ses (e.g., changes in body size due to cimate change). My research group also includes a PhD student working on the valorization of paleontological heritage.

Application documents: CV, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Mathematics (MAT)

Applications of mathematics to environmental problems

Supervisor: Maria Elvira Mancino

E-mail

Website

The research group includes assistant professors and postdoc students, with a variety of interest in quantitative and computational finance, risk assessment, insurance. Florence Lab for quantitative Assessment of Integrated Risks

https://www.disei.unifi.it/vp-645-florence-lab-for-quantitative-assessment-of-integrated-risks-flair.html

Application documents: CV, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Environmental Change and Well-Being

Euraxess Research Area: Life Sciences (LIF)

Bacterial Genome Evolution

Supervisor: Elena Perrin

E-mail

Website

Our research group use a system biology approach to study the evolution of bacterial genomes, with a particular focus on multipartite genomes. In particular, we are interested in the role of bacterial genome organization and structure on different aspect of bacterial life, like the evolution of antibiotic resistance or the interaction with a host. We use a combination of classical genetic manipulation techniques and -omics analysis.

Application documents: CV with list of publications, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Life Sciences (LIF)

Preclinical pharmacology of autism spectrum disorder

Supervisor: Alessio Masi

E-mail

Website

The group is composed by one postdoc, two PhD students, three grad students.

Application documents: CV

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG), Life Sciences (LIF)

ICT for health, molecular communications, body area networks, visible light communications, smart vehicles communications, smart energy communities.

Supervisor: Lorenzo Mucchi

E-mail

Website

1 associate professor, 3 post-doc, and 1 phd student.

Application documents: CV, motivation letter and draft activities plan.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Chemistry (CHE) and Life Sciences (LIF)

Study of molecular aspects in neurodegeneration

Supervisor: Fabrizio Chiti

E-mail

Website

Our research uses a multi angle approach to investigate the mechanisms by which proteins assemble into ordered aggregates and the resulting aggregates cause cell dysfunction. Examples of projects:

• How, at a molecular level, native proteins convert into misfolded states that initiate aggregation

• How, in molecular depth, fully or misfolded states of proteins convert into amyloid fibrils and precursor oligomers

• Relationship between structure and cellular toxicity of protein oligomers

• Algorithms able to predict fundamental aspects of protein aggregation

• Protein folding, misfolding, aggregation and cell toxicity in Alzheimer, Parkinson, ALS, ATTR, CMT diseases

• Purification of full-length and domains of TDP-43 and its liquid-liquid phase separation and aggregation

• Biophysics and proteotoxicity of cerebrospinal fluid samples from Alzheimer patients

• Action of aminosterols and protoberberine derivatives against neurodegeneration

• Proteostasis against protein misfolding/aggregation

Application documents: CV, MSc degree certificate, PhD degree certificate, first-author papers if they are submitted for publications, but not yet published

Application deadline: July 1st 2025

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EUniWell Thematic Arena: Social Equality and Well-Being, Environmental Change and Well-Being

Euraxess Research Area: Economic Sciencies (ECO) and Environmental Sciences and Geology (ENV)

Developing Integrated Assesment Models by incorporating ecological and socioeconomic dynamics

Supervisor: Tiziano Distefano

E-mail

Website

The group works in the area of Ecological Macroeconomics.

Our primary objective is to develop Integrated Assesment Models - such as EUROGREEN - by incorporating ecological and socioeconomic dynamics. By combining advanced modeling techniques with empirical data, our research provides scientifically robust insights for policymakers, guiding sustainable development strategies at local, national, and international levels.

We foster a collaborative and supportive environment, encouraging innovative research and providing ample opportunities for professional development. Currently, the team is involved in different national and international projects.

Ideal candidates are highly motivated young scientists with a strong background in Ecological Economics, Data analysis, Programming and Sustainability Sciences. Applicants could benefit from a wide network of collaborations, including MIT and Virginia Tech (USA), UNAL (Colombia), PUCP (Peru), USS (Chile) and UFRJ (Brazil).

Website: https://sites.google.com/view/tdistefano/home

Application documents: CV, list of publications and motivation Letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Chemistry (CHE)

Smart Polymers

Supervisor: Daniele Martella

E-mail

Website

The group main focus is the synthesis and application of photoresponsive polymers as actuating systems (artificial muscles, micrometric robots, tunable photonic devices). Other materials of interest include hydrogels as pollutant adsorbents or cell scaffolds

Application documents: CV, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Chemistry (CHE) and Physics (PHY)

Molecular and Hybrid 1D and 2D Magnetic Systems for Spintronics and Quantum Computing by ab initio methods

Supervisor: Federico Totti

E-mail

Website

Prof. Totti's team at the Laboratory of Molecular Magnetism (LaMM) includes colleagues such as Dr. Matteo Briganti. Over the years, several PhD students and post-docs have been part of the group. Prof. Totti has extensive experience managing advanced High-Performance Computing (HPC) infrastructures. He and his collaborators have exclusive access to LaMM's HPC resources, consisting of three Linux Clusters: 1) 548 AMD Opteron 6234 cores on 24 nodes with QDR Infiniband (2012, updated in 2014); 2) 650 AMD EPYC 9534 cores on 5 nodes with HDR Infiniband (2024); 3) more than 3500 cores and 1 GPU node with two H200 with HDR Infiniband (2025). He personally manages the hardware and software configuration and maintenance of these systems. The team also leverages resources like CINECA, Italy's largest supercomputing center, and Brazil's high-performance computing centers. These facilities play a crucial role in supporting the team's complex computational projects.

Application documents: CV with list of publications and with candidate's contribution, motivation letter, and two reference letters.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Chemistry (CHE)

Developing Au(I)-catalyzed cascade processes to complex organic compounds

Supervisor: Ernesto Giovanni Occhiato

E-mail

Website

The group is currently composed by two permanent researchers (Prof. Ernesto G. Occhiato and Dr. Dina Scarpi) and one contract researcher. The group has hosted and hosts motivated undergraduate, graduate, and PhD students who wish to become skilled synthetic organic chemists for both industrial (especially pharmaceutical) and academic research. The research group is active especially in devising cascade processes for the stereocontrolled synthesis of densely functionalized polycyclic compounds by gold(I)-catalysis and in the stereoselective synthesis of unnatural amino acids for bioactive compounds.

Application documents: CV, motivation letter, PhD certification, letters of recommendation

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Chemistry (CHE) and Life Sciences (LIF)

Intrinsically disordered proteins (IDPs) by NMR spectroscopy (NMR of IDPs)

Supervisor: Isabella C. Felli

E-mail

Website

The research on Intrinsically Disordered Proteins (IDPs) by Nuclear Magnetic Resonance (NMR) Spectroscopy is shared with my colleague Roberta Pierattelli, with Dr. Marco Schiavina, Dr. Lorenzo Bracaglia and with several PhD students. CERM provides a very stimulating research environment thanks to the long-standing expertise in NMR methods development and to the excellent instrumentation available (NMR instruments ranging from 400 MHz to 1200 MHZ equipped with different probes and accessories to perform a wide array of NMR experiments).

Application documents: CV

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Social Equality and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC) and Life Sciences (LIF)

The Lasting Effects of Prenatal Alcohol Exposure on Adolescent Brain

Supervisor: Elisabetta Gerace

E-mail

Website

The research group is composed of postdoctoral researchers, PhD candidates, and undergraduate/master's students working on their thesis projects. Our work focuses on neuropharmacology, developmental neurotoxicity, and synaptic physiology, with an emphasis on translational approaches. We are also actively involved in multiple research collaborations, which contribute to a vibrant interdisciplinary environment and provide access to a broad range of expertise and advanced methodologies across complementary fields.

Application documents: CV, motivation letter, brief research proposal (1 page), and reference contact(s)

Application deadline: June 15th 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Chemistry (CHE) and Life Sciences (LIF)

Advanced formulation

Supervisor: Francesca Maestrelli

E-mail

Website

The research group is composed of Francesca Maestrelli, Marzia Cirri e Natascia Mennini

Marzia Cirri: Development and characterization of innovative formulations aimed at improving drug bioavailability, through drug complexation with cyclodextrins, solid dispersions and mechanically activated systems with polymeric carriers and/or with cyclodextrins;Drug vectorization in different types of colloidal carriers (solid lipid nanoparticles (SLN), nanostructured lipid carriers (NLC), micelles, liposomes, niosomes, polymeric nanoparticles, etc.) also exploiting combined strategies with the use of cyclodextrins (mixed systems "drug-in-cyclodextrin-in-lipid nanocarriers") for oral and topical use; development of bioadhesive and/or thermosensitive buccal, nasal or vaginal delivery systems for local or systemic action; development and characterization of innovative pediatric formulations.

Natascia Mennini: Since 2015, she has started an innovative research line aimed at the development and characterization of advanced dressings, collaborating with leading companies in the field. Through this activity, she has had the opportunity to work with multidisciplinary teams, participate as a speaker at national and international conferences, receive awards and funding, thus consolidating her expertise in the sector. Recently, she became a member of the European Committee for Standardization, joining the international working group focused on developing standardized tests to assess the performance of advanced wound dressings.

Application documents: CV and motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Chemistry (CHE) and Life Sciences (LIF)

Responsive soft materials

Supervisor: Jacopo Vialetto

E-mail

Website

Main research directions include: i) colloidal and polymer synthesis, ii) characterization of structural and dynamic properties of colloidal systems at the single-particle level, in dense suspensions, or when the particles are confined at fluid interfaces. Iii) the relationship between microscopic structure and rheology of dense suspensions and gels iv) living active matter, investigation of bacterial motility in complex environments. Main techniques: SAXS-SANS (exploiting copolymerization with deuterated monomers), DLS-SLS, confocal microscopy and particle tracking, rheology, AFM. The group works in close contact with theoretical groups, comparing experimental findings with monomer-resolved simulations (Dr. Emanuela Zaccarelli), and collaborates with industry (bioMérieux Spa) on the development of synthetic colloidal systems that mimic properties of cellular systems.

Application documents: CV and motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Environmental Change and Well-Being

Euraxess Research Area: Chemistry (CHE), Life Sciences (LIF), Mathematics (MAT) and Physics (PHY)

Different research topics

Supervisor: Enrico Ravera

E-mail

Website

Currently my group comprises of 3 postdoctoral fellows and three undergraduate students. Overall, I have supervised 7 postdoctoral fellows, three graduate students, and 12 undergraduate internships in Chemistry, Pharmacy, Biology and Applied Mathematics. Most of the alumni of my group went on for academic research (one holds an Assistant Professor position at UniBO).

I regularly collaborate with colleagues in the Department of Chemistry, Biology, Mathematics, and Psychology. I have several active international collaborations, and I actively contribute to the activities of Instruct-ERIC.

In my group we are exploring several research topics. These include, but are not limited to

1) Theoretical and Experimental developments in the field of NMR of paramagnetic molecules (experimental optimization and electronic structure calculations through ab-initio software)

2) Determination of the reaction mechanisms for the formation of inorganic oxides and salts through biomolecular catalysts - e.g. biosilica formation

3) NMR-based reaction monitoring. To accompany these applications we develop advanced numerical methods for NMR data analysis, integrative structural biology methods (combination of X-ray, Cryo-EM, and NMR data through MM and QM methods, mathematical modelling of conformational ensembles), and we also study effective communication strategies in collaboration with Psychologists.

Any researcher interested in these broadly-defined topics are welcome to contact the scientific supervisor for refining the scope of the potential application.

Application documents: CV

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Environmental Sciences and Geology (ENV) and Physics (PHY)

"Earth system dynamics"

Supervisor: Giovanni Forzieri

E-mail

Website

Our group has multidisciplinary interests in climate sciences from a technical perspective, with a wide network of international collaborations. Main temathic areas include:

Climate risk assessment

Climate-related tipping points

Climate-driven disturbances in forest ecosystems

Process-based modelling of land surface dynamics

Remote sensing of Earth system

Machine learning for climate sciences

Application documents: CV

Application deadline: July 1st 2025

EUniWell Thematic Arena: Culture, Multilingualism and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC)

Developing new interpretative frameworks for re-examining women's experience in music across the centuries

Supervisor: Antonella D'Ovidio

E-mail

Website

Thanks to the contribution of scholars active on the international stage, the research unit "Women in music" aims to develop new interpretative frameworks for re-examining women's experience in music across the centuries, from a differentiated yet coherent perspective.

The research will be primarily based on an extensive survey and interpretation of archival, literary, musical, and iconographic sources. These will serve to shed light on the social and economic mechanisms, cultural models, spaces of intermediation (both physical and symbolic), and networks of relationships (personal, patronage-based, professional, and political), as well as on the production and musical practices that, in various ways and depending on context, significantly contributed to the emergence of women on the Italian musical scene between the 17th and 19th centuries.

Application documents: CV

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Power Converters for Environmental Change

Supervisor: Rosa Anna Mastromauro

E-mail

Website

The electrical engineering team includes professors, PhD students and researchers working on different areas: electrotechnics, power circuits, power converters, electrical machines and drives, power quality analysis.

Application documents: CV, motivation letter, certifications

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Chemistry (CHE)

Smart polymers for biomedical application

Supervisor: Camilla Parmeggiani

E-mail

Website

The research group, headed by Prof. Parmeggiani, includes the Assistant Prof. Daniele Martella, 4 Post-Doc and 3 Phd Students. Laboratories, located both at the Department of Chemistry, at the Department of Physics and Astronomy of the UNIFI campus in Sesto Fiorentino, are equipped with modern instruments for material synthesis, characterization and structuration (UV/VIS and IR spectrometer, SEM, DSC, POM, LED lamps etc.). Furthermore, she is associated to LENS (European Laboratory of Non-Linear Spectroscopy), an infrastructure of excellence, unique in Italy, which is located on the same campus, having free access to all its facilities. Prof. Parmeggiani research group has broad experience in functional organic materials, such as stimuli-responsive systems and their application, and take advantage of several international collaborations; for instance, Prof. D. J. Broer and A. P. H. J. Schenning (Eindhoven University of Technology), or Prof. L. Oriol (Universidad de Zaragoza). She is a renowned expert in the field of smart materials, conducting cutting edge research in monomer synthesis, LCN based inks development, and LCN 3D printing at different length scale and by different techniques. Prof. Parmeggiani has a good record of training successful scientists in academia (e.g., Dr. Daniele Martella, Tenure track position at UniFi) and industry (e.g., Dr. Bruno Grandinetti in Novac srl, Dr. Flavia Lupi in PQE).

Application documents: CV and motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Life Sciences (LIF)

Statistical Methods for Public Health and Clinical Research

Supervisor: Ersilia Lucenteforte

E-mail

Website

The research group applies biostatistics and epidemiological methods to public health and clinical research. Main areas include pharmacoepidemiology, comparative effectiveness research, and real-world data analysis. The group collaborates with national and international institutions, including Cochrane and VAC4EU. Activities involve systematic reviews, meta-analyses, and the development of innovative approaches for analyzing large health databases. The team works closely with clinicians, regulatory bodies, and academic partners, promoting a multidisciplinary and collaborative environment focused on evidence-based decision-making.

Application documents: Interested applicants should submit a detailed CV and a motivation letter outlining their research interests and how they align with the hosting group's expertise.

Application deadline: June 15th 2025

EUniWell Thematic Arena: Health and Well-Being, Teacher Education and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

The hosting offers the possibility to work with his research group in the design of high-gain antennas, reflectarrays, and transmitarrays for 5G/ 6G and satellite applications with particular attention to the use of metasurfaces and innovative materials.

Supervisor: Angelo Freni

E-mail

Website

The Radar and Millimeter Wave research group of the University of Florence has extensive experience:

- In the development of numerical formulations dedicated to the electromagnetic solution of specific scattering and antenna problems;

- Design of high gain antennas, radial line slot arrays, reflectarrays, and metasurface antennas for far-field and near-field applications;

- Design of antenna for automotive applications with special emphasis on metalized plastic antennas for automotive radar applications in the 77GHz and 140GHz bands;

- Design of radar systems for automotive and meteorological applications;

- Design of high-power microwave ablation systems for the treatment of tumors in lung, liver, and kidney.

Application documents: CV, motivation letter, research proposal ideas

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG) and Mathematics (MAT)

TOPOLOGY DESIGN AND TESTING OF META-MATERIALS FOR MASONRY STRUCTURE

Supervisor: Michele Betti

E-mail

Website

The hosting offers the possibility to work in his research group focused in numerical modelling and ideal candidates are highly motivated young scientists with a strong background in Materials Science, Theory of Elasticity with programming skills. Specific research activities may involve experimental activities.

Application documents: 4 August 2025

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Supervision in Computational Mechanics

Supervisor: Enzo Marino

E-mail

Website

I can offer supervision in Computational Mechanics, with a focus on new discretization techniques, such as Isogeometric Analysis, for complex structural problems, e.g., geometrically exact beams and shells for innovative applications like Shape Memory and programmable systems. Possibility to combine computational research activities with experimental ones in the framework of 4D Printing.

Application documents: CV, motivation letter, reference contacts, reference letters (not mandatory but desirable).

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Chemistry (CHE) and Life Sciences (LIF)

Synthetic chemistry, medicinal chemistry research and development, clinical research

Supervisor: Fabrizio Carta

E-mail

Website

NEUROFARBA Department accounts for a merger of highly skilled sub-sections specifically dedicated to highly advanced scientific sectors, including synthetic chemistry, medicinal chemistry research and development (located into an interdisciplinary research campus) and clinical research. Competences and facilities for drug design, chemical synthesis, enzymology, molecular biology and analysis of new compounds (NMR, FTIR, UV-VIS, MS, elemental analysis, etc), including X-ray crystallography of proteins in complex with their ligands. Spectrophotometric/fluorimetric measurements, etc. The team has extensive experience in molecular techniques including cloning, protein expression and purification, enzyme-kinetics and inhibition assay, X-ray crystallography of enzyme-inhibitor/activator adducts.

The research group accounts for young scientists which carry out experimental science in the field of mecicinal chemistry with particular attention to new advancements in chemistry and related disciplines.

Application documents: CV, motivation letter, track records

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Modeling and testing of active materials responsive to environmental stimuli

Supervisor: Roberto Brighenti

E-mail

Website

Prof. Brighenti's research group focuses on the mechanics and physics of advanced active materials. The research interest in the development and modeling of new smart materials has emerged in recent years due to their potentialities in a diversity of fields, such as autonomous responsive systems, functional materials, soft robotics, bio-mechanical applications, wearable devices, etc. Our research topics involve advanced polymers such as gels, liquid crystal elastomers, dielectric elastomers, piezoelectric polymers, polymers responsive to chemical/physical/mechanical stimuli, etc. The formulation of physically-based approaches, their computational implementation and testing are our research common thread. We seek highly motivated researchers with a strong background in mechanics, physics, and computational mechanics, or related fields. A research background in mechanics of materials (experimental, numerical as well as theoretical), is strongly recommended. Join our team and contribute to cutting-edge research aimed at proposing multi-physics modeling and testing of new advanced materials for unprecedented applications.

Application documents: CV, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Decomposition algorithms to health care service delivery

Supervisor: Paola Cappanera

E-mail

Website

The Global Optimization Lab (GOL) carries out research, teaching, and technology transfer in Operations Research and Optimization with focus on:

Optimization theory and algorithms (continuous, combinatorial, local, global)

Operations Research and Analytics

Machine Learning and Data Science

Applications: Logistics, Healthcare, Production Transportation

Industry 4.0

Application documents: CV, reference letters, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Social Equality and Well-Being, Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Continual Learning for Green and Privacy Preserving Artificial Intelligence

Supervisor: Andrew David Bagdanov

E-mail

Website

Our research unit comprises several faculty members, postdocs, and PhD students focusing on a wide range of Deep Learning problems and applications. Key fundamental problems we address include parameter-efficient adaptation of large vision-language models, plasticity loss in deep continual reinforcement learning, federated learning and model merging, offline reinforcement learning, and Green AI. Our group regularly publishes multiple papers each year at leading international conferences in computer vision and machine learning, such as ICLR, CVPR, ICCV, ECCV, and NeurIPS. Application areas cover a broad spectrum of contemporary applications of computer vision and deep learning. We maintain strong, ongoing collaborations with industry partners and international research institutions, and are a partner in the Modena ELLIS Unit.

For more information see: https://www.micc.unifi.it/

Application documents: CV, motivation letter.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Environmental Sciences and Geology (ENV)

Near surface applied geophysics and the 17 SDG (Sustainable Development Goals)

Supervisor: Veronica Pazzi

E-mail

Website

The Applied Geophysics research group of the Earth Sciences Department of the University of Florence mainly focuses on the near surface applied geophysics. The main research topics include the application of non-invasive surface geophysical techniques (mainly electrical resistivity tomographies, induced polarization, GPR, and seismic noise) to study, characterize, and monitor instability phenomena (landslides and sinkholes) both at local and regional scale, as well as other environmental and engineering geology problems. Part of the research is also focused on agro-geophysics, on the application of geophysical techniques to archaeology and cultural heritage, to the characterization and quantification of site effects induced by earthquakes, to the development of expeditious methods for the characterization of the seismic vulnerability of buildings and cultural sites of interest, and to the improvement of perception and awareness of geological hazards and resilience.

Application documents: CV with list of publications, motivation letter, certifications if any, research proposal idea

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Life Sciences (LIF)

Development and characterization of innovative drug delivery systems

Supervisor: Marzia Cirri

E-mail

Website

The research group (3 Associate Professors and 4 PhD students) works in the Pharmaceutical Technology field, focusing on drug optimization in pharmaceutical formulations, aimed to improve its therapeutic efficacy, stability, and safety, as well as on the development and characterization of innovative controlled or targeted drug delivery systems.

Research lines include: drug vectorization in different types of colloidal carriers such as solid lipid nanoparticles (SLN), nanostructured lipid carriers (NLC), micelles, liposomes, niosomes, polymeric nanoparticles, etc. also exploiting combined strategies with the use of cyclodextrins (mixed systems "drug-in-cyclodextrin-in-lipid nanocarriers"), mechanically activated systems with polymeric carriers and/or cyclodextrins, for oral and topical use; another interest of the research group is the development and characterization of bioadhesive and/or thermosensitive buccal, nasal or vaginal delivery systems for local or systemic action. One of my main areas of research is also focused on the development and characterization of safe and effective pharmaceutical formulations specifically designed for pediatric use. Laboratories are equipped with instruments as Texture analyzer, DSC, DLS, UV spectrometer, HPLC, Franz cells, USP Apparatus I, II and IV, and other official instruments for tablets characterization.

Application documents: CV and motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG), Life Sciences (LIF)

Innovative technologies for ultrasound biomedical imaging

Supervisor: Alessandro Ramalli

E-mail

Website

The Microelectronics System Design Laboratory (MSDLab) at the University of Florence develops custom electronics systems using advanced programmable devices. Their research primarily focuses on novel ultrasound technology for biomedical imaging with a multidisciplinary and experimental approach. MSDLab is renowned for original processing methods, novel Doppler techniques, and their fully programmable ultrasound open platforms (ULA-OP), which are tailored for research purposes. They collaborate with esteemed research institutions and academic labs worldwide.

MSDLab welcome highly motivated researchers to join a friendly and open environment. The group hosts undergraduate, graduate, and PhD students, as well as postdocs and visiting researchers, eager to learn, practice, and develop new ultrasound technologies.

Application documents: CV with list of publications and motivation letter.

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Education and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Generative Methods for 3D Human Face and Body

Supervisor: Stefano Berretti

E-mail

Website

Stefano Berretti leads a research group at the Media Integration and Communication Center (MICC) https://www.micc.unifi.it/ of the University of Florence, where he is an Associate Professor. The main focus of the group's research activities is on the development of Artificial Intelligence and Computer Vision-based solutions for geometric data, i.e., point clouds, meshes, graphs, for a broad range of applications. These include, for example, the analysis, segmentation and classification of 3D models based on their shape and surface relief characteristics, generative AI methods for expressive 3D face and 3D talking heads, text-based generation of 3D human behavior, 3D neural transfer. The research has also been focused on the analysis of 3D faces for 2D-3D reconstruction, fitting and registration using 3D Morphable Models, action units and expression recognition from static and dynamic 3D.

Application documents: CV with list of publications, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC), Life Sciences (LIF)

Statistical modeling of complex phenomena

Supervisor: Marco Doretti

E-mail

Website

Research in Methodological Statistics, with a preeminent focus on general statistical modeling theory, causal inference and latent variable models for cross-sectional and longitudinal data.

My research interests concern Methodological Statistics and involve statistical modeling of complex phenomena in a broad sense, from both a methodological and an applied perspective. In particular, my latest work has been focussing on causal mediation analysis as well as on innovative methodological tools for the statistical evaluation of public institutions' and service providers' performance, but also on latent variable models for cross-sectional and longitudinal data.

Application documents: CV, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Social Equality and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC), Mathematics (MAT)

Advancing Latent Variable Modeling and Complex Data Analysis

Supervisor: Maria Francesca Marino

E-mail

Website

The hosting provides an opportunity to collaborate with her research group, which is dedicated to developing innovative statistical methodologies and models aimed at addressing real-world challenges in areas such as social science, medicine, and network analysis.

Application documents: Motivation letter, CV

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Mathematics (MAT)

Variational analysis of problems arising in Materials Science

Supervisor: Giuliano Lazzaroni

E-mail

Website

The postdoctoral fellow will work with Giuliano Lazzaroni as part of the group of Mathematical Analysis. See more details at https://www.dimai.unifi.it/vp-251-analisi-matematica.html

This project deals with theoretical analysis of problems arising in Materials Science: the derivation of reduced energies for thin structures, the rigorous justification of the appearance of singularities and/or pattern formation within fundamental interaction models, the precise formulation of evolutionary models through different loading regimes. This project focuses on the variational analysis of significant models in fracture mechanics and dynamics, elasto-plasticity, dislocations, crystal growth, continuum mechanics and thermodynamics, and electromagnetism. The mathematics needed to tackle these problems combines methods and tools from Calculus of Variations, Geometric Measure Theory and PDEs, and may in some cases also require contributions from Geometry or Probability. Indeed, energy concentration, relaxation and homogenization phenomena can be efficiently described using the language of Gamma-convergence, which is also instrumental for the derivation of limit theories for materials or the optimal control of multiagent systems. The study of discrete-to-continuum limits may additionally profit from methods for kinetic partial/stochastic differential equations, discrete differential geometry and nonlinear analysis. The analysis of evolutionary models will build upon, and extend the range of application of, a well-developed variational machinery including viscous regularizations, implicit schemes based on time-incremental minimization, and gradient flows.

Application documents: CV including a list of publications, motivation letter, two recommendation letters

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

SAFE LEARNING FOR DISTRIBUTED ESTIMATION AND DECISION MAKING IN AUTONOMOUS SYSTEMS

Supervisor: Giorgio Battistelli

E-mail

Website

The DINFO SYSCON group comprises internationally renowned researchers with expertise in sensor networks, distributed estimation and information fusion, learning and adaptive systems, as well as data-driven methods in systems & control, among other related topics. In the most recent research quality assessment carried out by the Italian agency for the evaluation of universities and research institutes (ANVUR), the DINFO SYSCON group has ranked first among all the Italian universities in systems & control. The group has ongoing collaborations with several prestigious universities (including Groningen University, Eindhoven University of Technology, Royal Melbourne Institute of Technology, University of Liverpool, University of Electronic Science Technology of China) providing ample opportunities for networking and dissemination, as well as crossfertilization and potential research collaborations.

Application documents: CV, motivation letter, certifications if any

Application deadline: July 1st 2025

EUniWell Thematic Arena: Culture, Multilingualism and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Computer Vision and Multimedia at the Media Integration and Communication Center

Supervisor: Marco Bertini

E-mail

Website

MICC is a research and transfer center where innovative solutions for the application of multimedia and information technologies are studied, including computer vision, 3D acquisition and modeling, automatic recognition techniques, solutions for natural human-machine interaction, multimedia installations.

Application documents: CV

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Social Equality and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC), Mathematics (MAT)

Statistical Foundations of Fairness and Explainability in Data Science

Supervisor: Anna Gottard

E-mail

Website

The hosting offers an opportunity to collaborate with her research group and the other members of the Florence Center for Data Science, focused on advancing statistical methodologies and models, particularly in areas like machine learning, graphical models, fairness, and interpretability, to tackle complex real-world challenges in data science.

Application documents: CV, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Social Equality and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG), Environmental Sciences and Geology (ENV), Life Sciences (LIF)

Co-creation of water harvesting solutions

Supervisor: Elena Bresci

E-mail

Website

The Water Harvesting Lab, WHLab, (https://www.dagri.unifi.it/vp-261-wh-lab.html), of the University of Florence, led by Elena Bresci has been established in 2017 and it is active in inter-disciplinary research on Water Harvesting ("the process of concentrating precipitation through runoff and storing it for beneficial use" (Oweis, 2006), in particular in arid and semi-arid areas and fragile regions. The WHLab is born to develop research in the field of Water Harvesting implementation and rainwater management through GIS applications and agro-hydrological modeling, aiming at the sustainable management of the water under extreme conditions (flood and drought) for guaranteeing water availability for agricultural and domestic use. WHLab mission is the co-identification and co-development of solutions with the involvement of the local stakeholders. WHLab is active in numerous projects funded by national and international agencies.

Application documents: CV, motivation letter

Application deadline: July 1st 2025

EUniWell Thematic Arena: Teacher Education and Well-Being

Euraxess Research Area: Physics (PHY)

Quantum Simulation and Computing with two-electron ultracold atoms

Supervisor: Leonardo Fallani

E-mail

Website

We have three laboratories focusing on different approaches for quantum simulation and computing:

1) In the Yb lab (https://quantumgases.lens.unifi.it/exp/yb), we trap ultracold Fermi gases in optical lattices to realize quantum simulators of multicomponent Hubbard models and of the Hall effect, with synthetic dimensions and high-resolution optical control.

2) The Sr Tweezer lab (https://quantumgases.lens.unifi.it/exp/sr-rydberg) explores spin models with long-range interactions and multi-partite entanglement in the first Italian programmable array of Rydberg Strontium atoms in optical tweezers.

3) Quantum computation will be explored in the Yb Tweezer lab (https://quantumgases.lens.unifi.it/exp/yb-tweezer), leveraging programmable optical tweezers for operating arbitrary gate sequences and Rydberg interactions for fast gate switching.

The PI is assisted by four senior researchers in leading the experimental teams: Dr. Jacopo Catani, Dr. Vladislav Gavryusev, Dr. Luca Tanzi and Dr. Jacopo Parravicini.

Application documents: CV with list of publications, motivation letter, research proposal ideas (if already formulated)

Application deadline: July 1st 2025

EUniWell Thematic Arena: Environmental Change and Well-Being

Euraxess Research Area: Information Science and Engineering (ENG)

Exploring complex phenoma caused by digitalization in cyber-physical systems

Supervisor: Giacomo Innocenti

E-mail

Website

The group of Control Systems and Nonlinear Dynamics at the SysCon Lab of the University of Florence counts on four stable members and on a varying number of PhD students and post-doctoral fellows. The group is focused on topics related to control theory, but it is specialized in the study of complex phenomena in multi-stable nonlinear dynamical systems. In particular, the suppression or the usage of behaviors such as self-excitability, self-induced oscillations, vibrations, and chaos are keynote research themes of the group. The research is mainly directed towards theoretical results, but the group has a long experience made of practical applications developed as part of funded projects. In the last decade the group has broadened its multidisciplinary skills to include optimization techniques and machine learning.

Application documents: CV, motivation letter, PhD certificate

Application deadline: July 1st 2025

EUniWell Thematic Arena: Health and Well-Being, Social Equality and Well-Being, Environmental Change and Well-Being, Culture, Multilingualism and Well-Being, Teacher Education and Well-Being

Euraxess Research Area: Social Sciences and Humanities (SOC)

Amily and Successions Law, Contract Law, Biolaw, Third Sector Law, also in a transnational dimension

Supervisor: Marco Rizzuti

E-mail

Website

The Department of Legal Sciences was established in 2013 after the merging of several smaller departments covering the different legal fields. The Department represents therefore the continuation of the rich tradition of legal studies that blossomed in Florence since the 19th century, and included the work of several among the major legal scholars of contemporary Italy, who contributed as well to the building of the country's institutions, like e.g. Federico Cammeo, Giorgio La Pira, Enrico Finzi, Piero Calamandrei, Giuseppe Maranini, Paolo Barile, Giovanni Miele, Enzo Capaccioli, Mauro Cappelletti, Alberto Predieri, Andrea Orsi Battaglini, Antonio Cassese. These scholars, who taught in both the School of Law and that of Political Sciences, established as well several independent teaching and research centers that reached an undisputed prestige, like the Seminar for Parliamentary Studies, the Interfaculty Department of Public law, and the Center for the Study of Modern Legal Thinking. The Department aims at providing, in an increasingly interconnected world, a reference for cutting edge study and research in the legal field, with a particular attention to the historical and theoretical dimensions, to comparison, and to developments occurring in case law and at policy level.

My main research interests deal with: Family and Successions Law, Contract Law, Biolaw, Third Sector Law, also in a transnational dimension. I am available to host MSCA Postdoctoral Fellowships.

Application documents: CV and motivation letter

Application deadline: July 1st 2025
