DECLARATION OF <u>PRIORITY INTEREST</u> TO COMPETE FOR SCHOLARSHIPS LINKED TO A SPECIFIC RESEARCH TOPIC

I, _____ (*full name)*,

born in _____ (*place*) on _____ (*date)*

wish to express my interest in applying primarily for the following scholarships linked to a specific research topic (please tick the appropriate box and rank the research topics by order of priority).

PhD Programme in **"Agri-Food Science, Technology and Biotechnology"**			
Specific research topic	**Interest in applying for the scholarship linked to the specific research topic YES/NO**		**<u>If you are interested in more than one specific research topic,</u> please enlist the topics in order of priority:**
UMCC culture collection as a reservoir of microbial resources for sustainable bioprocesses	☐ YES	☐ NO	**1** _____
Combined Non-GMO Strategies to Enhance the Aromatic Potential of Lager Yeasts and Improve Beer Quality (LAGERBOOST)	☐ YES	☐ NO	**2** _____
The role of gut microbial metabolites of dietary phenolic compounds in human health	☐ YES	☐ NO	**3** _____

PhD Programme in **"Computer, Language and Data Science for Social Innovation"**			
Specific research topic	**Interest in applying for the scholarship linked to the specific research topic YES/NO**		**If you are interested in more than one specific research topic, please enlist the topics in order of priority:**
Cooperative and non-cooperative motion planning and control for edge-case autonomous driving	☐ YES	☐ NO	**1** _____
Motion planning and control at and beyond the defined Operative Design Domain (ODD) in extreme autonomous driving	☐ YES	☐ NO	**2** _____
Co-Scheduling of CPU, Memory, and Hardware Accelerators for Deterministic Real-Time Guarantees in Modern Computing Systems	☐ YES	☐ NO	**3** _____
Low-Latency Integration of Intra-Vehicle and V2X Communication Protocols for Cooperative and Autonomous Driving	☐ YES	☐ NO	**4** _____
Latency-Aware Orchestration of Multimodal Applications in Intelligent Living Labs for Smart Mobility	☐ YES	☐ NO	**5** _____
Syntax out of Africa: Deep History through Human Grammars (DHisGram)	☐ YES	☐ NO	
Multimodal Generative Digital Twins for Personalized Education: Heterogeneous Encoders and Adaptive Content Creation	☐ YES	☐ NO	
Machine-learning-based object detection, tracking, and motion forecasting for extreme autonomous driving	☐ YES	☐ NO	

PhD Programme in **"Health innovative products and technologies (HIP-TECH)"**			
Specific research topic	**Interest in applying for the scholarship linked to the specific research topic YES/NO**		**If you are interested in more than one specific research topic, please enlist the topics in order of priority:**
In silico design and optimization of dual KRas-G12C/ADAM17 inhibitors for the treatment of resistant Non-Small Cell Lung Cancer.	☐ YES	☐ NO	**1** _____
Synthesis and optimization of dual KRas-G12C/ADAM17 inhibitors for the treatment of resistant Non-Small Cell Lung Cancer.	☐ YES	☐ NO	**2** _____
Biological evaluation and optimization of dual KRas-G12C/ADAM17 inhibitors for the treatment of resistant Non-Small Cell Lung Cancer.	☐ YES	☐ NO	**3** _____
Preclinical development and characterization of drug delivery platforms using a technology-driven and industrial readiness approach	☐ YES	☐ NO	

PhD Programme in **"Information and communication technologies (ICT)"**			
Specific research topic	**Interest in applying for the scholarship linked to the specific research topic YES/NO**		**If you are interested in more than one specific research topic, please enlist the topics in order of priority:**
Human-Inspired Memory Mechanisms for World Models	☐ YES	☐ NO	**1** _____
Large-Scale and Trustworthy Multimodal Foundation Models	☐ YES	☐ NO	_____
AI modularity for foundational models	☐ YES	☐ NO	**2** _____
Multimodal Reasoning and Understanding for Technical Diagrams and Complex Documents	☐ YES	☐ NO	_____
Modularity and task arithmetic in Multimodal vision AI systems	☐ YES	☐ NO	**3** _____
Analysis of multidimensional and heterogeneous data, integrated with local language models for advanced operational support systems in industrial contexts	☐ YES	☐ NO	_____
Modular AI and world models for simulation and control	☐ YES	☐ NO	**4** _____
Modular and Adaptive Multimodal Foundation Models	☐ YES	☐ NO	_____
Federated Learning in the Pervasive Computing Continuum	☐ YES	☐ NO	**5** _____
Advanced Multi-Interface 5G Standalone Networks for V2X Communications and Experimental Vehicular Applications	☐ YES	☐ NO	_____
Experimental Characterization of Advanced Soft and Hard Magnetic Materials for Traction Electrical Machines	☐ YES	☐ NO	
Modular and task arithmetic for foundation models on multi sensory and multi source data	☐ YES	☐ NO	
Design and control of high-performance electric machines for cryogenic applications	☐ YES	☐ NO	
Multimodal World Models for Embodied AI	☐ YES	☐ NO	

PhD Programme in **"Industrial Innovation Engineering"**

Specific research topic	**Interest in applying for the scholarship linked to the specific research topic YES/NO**		**If you are interested in more than one specific research topic, please enlist the topics in order of priority:**
Modeling and control of multi-robot systems	☐ YES	☐ NO	**1** _____
Mitigation of carbon dioxide emissions through capture at bioenergy plants and its application in hard-to-decarbonize industrial sectors	☐ YES	☐ NO	**2** _____
Modeling and simulation of innovative materials and next-generation semiconductor devices, and the study of their reliability	☐ YES	☐ NO	**3** _____
Technologies to Define a Pathway to a Carbon-Neutral Ceramic Industry	☐ YES	☐ NO	
Design and Integration of Acoustic and Optical Metamaterials in Ceramic Tiles Using Advanced 3D Printing Technologies	☐ YES	☐ NO	
Digital Twins and Simulation-Driven Artificial Intelligence for Industrial and Cyber-Physical Systems	☐ YES	☐ NO	
Laser-Driven Fabrication of Graphene–Metal Composites for Electrochemical Devices	☐ YES	☐ NO	

PhD Programme in **"Mechanical and Vehicle Engineering"**

Specific research topic	**Interest in applying for the scholarship linked to the specific research topic YES/NO**		**If you are interested in more than one specific research topic, please enlist the topics in order of priority:**
Thermo-fluid dynamic modelling of innovative solutions for sustainable mobility	☐ YES	☐ NO	**1** _____
Thermo-fluid dynamic analysis of high-performance engines and their components	☐ YES	☐ NO	**2** _____
Vibro-acoustic analysis of high-performance vehicles and their components	☐ YES	☐ NO	**3** _____
Improved turbulence closures for high-fidelity coarse-grained CFD simulations	☐ YES	☐ NO	

PhD Programme in **"Models and Methods for Material and Environmental Sciences"**

Specific research topic	**Interest in applying for the scholarship linked to the specific research topic YES/NO**		**If you are interested in more than one specific research topic, please enlist the topics in order of priority:**
Optimization of electrolytes for lithium metal–based solid-state batteries	☐ YES	☐ NO	**1** _____
New current collectors for lithium metal–based solid-state batteries	☐ YES	☐ NO	**2** _____
In operando analysis of electrolyte degradation in lithium metal batteries	☐ YES	☐ NO	
Advanced Characterization of Li and Na-ion based battery materials using Electron Microscopy	☐ YES	☐ NO	**3** _____
Rational Design of Macrocyclic and Acyclic Chelators for Scandium-44 and Titanium-45 toward Radiopharmaceutical Applications	☐ YES	☐ NO	_____

PhD Programme in **"Molecular and Regenerative Medicine"**

Specific research topic		**Interest in applying for the scholarship linked to the specific research topic YES/NO**	
Selection 2	Characterization of the transcription factors driving anti-tumor immunity (Topic 1)	☐ YES	☐ NO
	Study of the biological determinants in B-cell lymphomas (Topic 2)	☐ YES	☐ NO
Selection 3	Engineering the interaction between hematopoietic stem cells and their niche for ex vivo gene therapy approaches (Topic 1)	☐ YES	☐ NO
	In vivo gene therapy approaches for multisystemic diseases (Topic 2)	☐ YES	☐ NO

PhD Programme in **"Neurosciences"**

Specific research topic	**Interest in applying for the scholarship linked to the specific research topic YES/NO**		**If you are interested in more than one specific research topic, please enlist the topics in order of priority:**
Early recognition of psychological distress and biopsychosocial complexity in the clinical oncology setting	☐ YES	☐ NO	**1** _____
Neuropsychological and Behavioral Phenotyping in Alzheimer's Disease and Cerebral Amyloid Angiopathy: integrating clinical neuroscience, imaging, and point-of-care biomarker innovation	☐ YES	☐ NO	**2** _____
Development of CBT interventions for patients with Central Nervous System hypersomnia	☐ YES	☐ NO	**3** _____
Clinical, kinematic, neurophysiological, and advanced neuroimaging study of paroxysmal eyelid movements in a large cohort of patients with genetic generalized epilepsy	☐ YES	☐ NO	

PhD Programme in **"Physics and Nano Sciences"**

Specific research topic	**Interest in applying for the scholarship linked to the specific research topic YES/NO**		**If you are interested in more than one specific research topic, please list the topics in order of priority:**
Electrolyte-gated organic transistors as sensors of biomarkers of Alzheimer's disease	☐ YES	☐ NO	**1** _____
Controlling nucleation and growth of beta-amyloid isoforms on electrode surfaces of electrolyte-gated organic transistors	☐ YES	☐ NO	**2** _____
BlackHoleWeather: Multiscale Black-Hole Astrophysics and Galaxy Evolution	☐ YES	☐ NO	**3** _____
Computational Design and Characterization of Silver-Based Contact Materials for Switching Arc Applications	☐ YES	☐ NO	

PhD Programme in **“Reggio Childhood Studies”**		
Specific research topic	**Interest in applying for the scholarship linked to the specific research topic YES/NO**	
INSPIRE PROJECT: AI in educational processes	☐ YES	☐ NO
Visual literacy	☐ YES	☐ NO

The option hereby chosen has priority over regular places, with or without scholarship.

Date and place, _____

Signature

_____