







Annex

Call for applications for admission to PhD programmes 40th cycle Academic year 2024/2025

Article 1

(Available positions)

The Scuola Universitaria Superiore IUSS, hereinafter referred to as the "School", hereby announces 40 positions for admission to the 40th cycle of PhD programmes.

This announcement specifies the number of positions available under the competition for each Ph.D Programme:

Programme	Coordinator	n. of positions
DEPARTMENT OF HUMANITIES AND LIFE SCIENCES		
PhD in COGNITIVE BRAIN SCIENCES	Prof. Eleonora Catricalà	6
In Agreement with Università degli Studi di Pavia.		
PhD in BIOMOLECULAR SCIENCES AND BIOTECHNOLOGY	Prof. Federico Forneris	7
In Agreement with Università degli Studi di Pavia.		
In collaboration with Philochem A.G.		
PhD in THE HUMAN MIND AND ITS EXPLANATIONS: LANGUAGE, BRAIN AND REASONING	Prof. Andrea Sereni	9
In Agreement with Università degli studi di Milano e Scuola Normale Superiore		
PhD in THEORETICAL AND EXPERIMENTAL LINGUISTICS	Prof. Valentina Bambini	6
DEPARTMENT OF SCIENCES, TECHNOLOGY AND SOCIETY		
PhD in EARTHQUAKE ENGINEERING	Prof. Ricardo Monteiro	
In Agreement with Università degli Studi di Pavia		8
In collaboration with Eucentre Foundation		









PhD in THE HADRON ACADEMY: RISK AND COMPLEXITY IN HIGH TECH MEDICAL INNOVATION	Prof. Annalisa Bonfiglio	6
In collaboration with CNAO Foundation		

The relevant admission procedures shall be formally closed after the ministerial validation has been obtained

If additional funding becomes available before the start of the Programmes, the number of positions may be increased.

The School also reserves the right to assign to eligible candidates on the merit ranking any further scholarships that may be awarded by the Ministry at the end of the procedure for the reallocation of resources made available pursuant to art. 11 of Ministerial Decree 629/2024 and art. 8 of Ministerial Decree 630/2024

Article2

(Requirements for taking part in the competition)

Candidates with the academic qualifications set forth below may take part in the selection process, without citizenship restrictions:

- Master degree
- Similar academic qualification obtained abroad recognized as comparable by the Admission Committee to the Italian qualification in terms of duration and content and deemed eligible for the purposes of taking part in the competition.

Individuals who have not obtained their qualification by the announcement deadline but who will obtain it by 31 October 2024 may also take part in the selection process.

Candidates holding a qualification obtained in Italy

All candidates holding an academic qualification obtained at an Italian University, whether they are EU or Non-EU Countries citizens, are required to self-certify their qualification and are eligible for the selection process subject to verification of the self-certified declarations.

Candidates holding a qualification obtained abroad (EU and NON-EU Countries)

All candidates holding a qualification obtained abroad (NON-EU Countries) are required to submit a legalized copy of their original degree certificate along with a translation unless written in English/French/Spanish. Admission to the Programme for candidates holding a foreign qualification obtained in a NON-EU Country is in any case conditional on verification of the qualification held, which is carried out on the basis of the "Dichiarazione di valore in loco" ["Declaration of local value"] issued by the Italian diplomatic mission competent in that territory.









Candidates holding an academic degree awarded abroad in the EU Countries are required to submit the *Diploma Supplement*.

Article 3

(Application to take part in the competition)

The application to take part in the competition, one for each PhD programme in which candidates wish to take part, should be submitted starting from **31 May 2024, 13:00 CET** by electronic means only, using the online procedure which can be found in the dedicated section of the School website at the link https://iusspavia.esse3.cineca.it by the date specified in the individual PhD programme information sheets annexed to this announcement and integral part of it.

Candidates are required to declare the following in the application, on their responsibility:

- a) surname, name, place and date of birth, nationality;
- b) that they hold the academic qualification set forth in article 2 above, specifying the degree programme, its duration and the University or Institution of Higher Education where it was obtained;
- c) the mark received in the Master degree examination, specifying the maximum possible mark and the date on which the said mark was obtained;
- d) the date on which they expect to obtain the qualification, for those not already holding it;
- e) the chosen curriculum, where the Programme envisages more than one;
- f) the domicile or contact details for receiving competition-related communications and the undertaking to inform of any further changes of address;
- g) email address, mandatory for competition-related correspondence.

The following may use the self-certification process:

- Italian and EU citizens;
- Non-EU Countries citizens who are legal residents in Italy, only as regards personal qualities and facts which can be certified or attested by Italian public bodies.

People with disabilities can, during the application process, apply for the aids they may require throughout the competition in relation to their disability, as well as for any extra time needed.

A valid identity document along with the documentation certifying the possession of the academic qualification referred to in article 2 above should be attached to the application procedure, on pain of exclusion.

The School may perform checks on the truthfulness of the declarations and documents submitted, at any time during the procedure, including after the start of the Programmes, and may request that the original documents be produced. In the event of false declarations, the School may order the exclusion of candidates from the selection procedure or from the Programme at any time, by the substantiated decision of the Rector, without prejudice to the criminal liability deriving from the same.









Article 4

(Selection Board and test examinations)

The Examining Boards for admission to the Ph.D. Programmes are appointed by decree of the Rector and their composition is available for consultation on the School website.

The candidate selection and assessment methods and criteria for drawing up the ranking lists are specified in the information sheets annexed hereto. Selection procedures will be communicated to the interested candidates with due notice.

Article 5

(Admission to the Ph.D. Programme and entrance of students)

Successful candidates are admitted to the Ph.D. Programme according to the merit ranking list and subject to availability of the positions.

The general merit ranking lists, approved by decree of the Rector, are published on the School website. Publication constitutes an official communication.

In case of equal ranking in the assessment phase, preference will be given to the younger candidate.

The School reserves the right to assign any positions which become available as a result of candidates renouncing or dropping out, to suitable candidates on the ranking list, until PhD courses start.

The start date of the Ph.D. Programmes is 1 October 2024.

NON-EU students should apply for a specific study visa to enter Italy using the online procedure through <u>Universitaly portal</u>. Students are required to apply for a residence permit for study purposes within eight (8) days of arriving in Italy.

For further information, please go to: https://www.iusspavia.it-/en/outreach/internationalization/incoming-mobility/international-students

Admitted candidates must enroll within the deadline set down in the letter of admission.

Candidates who do not complete their enrollment by the deadline and according to the procedure indicated, will be considered withdrawn.

In order to enroll, admitted candidates shall submit through the dedicated online procedure the needed documents, including:

- a) Electonic payment of Tassa regionale diritto allo Studio;
- b) Candidates who awarded their second level Degree abroad: Declaration of Local Value (*Dichiarazione di valore*) or proof of request issue to competent authorities or Diploma Supplement;
- c) Only for candidates having been awarded the second level Degree after the deadline of the competition and by 31/10/2024: Certificate or self-declaration of second level Degree, with grade, date and place of obtainment.

The effectiveness of the selection is subject to confirmation by the competent Ministry of Education, University and Research (MUR) of the validation for Academic Year 2024/2025 as provided for by art. 5 of Ministerial Decree 226/2021.









In special, justified cases, entrance of students in Italy may generally be postponed, to no more than 30 days after the official Programme start date.

Article 6

(Scholarship and other grants)

The scholarships have the duration of the PhD Course of interest and are awarded for the 1st Year and confirmed on a yearly basis for admission to the subsequent year subject to the decision by the Teaching Board of the individual programmes.

The annual amount of the scholarship is € 16.243,00, including National Social Security Contributions (INPS). This amount is exempt from the IRPEF tax and it is subject to the payment of National Social Security contribution (INPS "gestione separata"), of which two thirds are paid by the administration and one third by the PhD student.

The scholarships may not be cumulated with other scholarships granted for any reason, with the exception of those granted by national or foreign institutions to enhance the student's research activity with periods of stay abroad.

Those who have taken advantage, even partly, of a PhD scholarship in the past, may not benefit from the scholarship.

The scholarship may be increased by 50% for an average period of 6 months stay abroad and, in any case, until a maximum period of 12 months.

The School will also make an annual budget, amounting to not less than 10% of the scholarship, available to all PhD students pursuant to article 9 of Italian Ministerial Decree 226/2021 to cover research activity-related expenses in Italy and abroad, as provided for by internal rules.

The School shall insure the students against accidents and civil liability for the entire duration of the Programme.

Article 7

(PNRR Scholarships)

Implementing the National Recovery and Resilience Plan (PNRR), as part of Mission 4 Components 1 and 2, the Ministry of University and Research (MUR) - through Ministerial Decrees no. 629 and n. 630 of 24 April 2024- has assigned to universities new funds for Ph.D. scholarships XL cycle, for courses dedicated to:

- digital and environmental transitions;
- PNRR research topics;
- public administration;
- cutting-edge paths for innovative needs of companies.

The School has selected the research projects to be activated as part of the Ph.D. courses XL cycle, respecting the eligibility criteria defined by the above-mentioned Decrees and reported in this call with the lettering PNRR.

At the end of the procedures, successful applicants who have been awarded the grants referred to Ministerial Decrees no.629 and n. 630, will have to enroll, according to the art. 5.

In order to officially conclude the scholarships assignment, the MUR has to verify the projects' eligibility to the PNRR and the ANVUR has to verify their consistency with the requirements









defined in the above-mentioned Decrees. Therefore, the admission to the Ph.D. course for students awarded the grants referred to Ministerial Decrees no. 629 and n. 630, is to be considered under condition of the positive verification of eligibility, consistency and the assignment of ministerial funding.

Decrees no. 629 and n. 630, is to be considered under condition of the positive verification of eligibility, consistency and the assignment of ministerial funding.

The acceptance of PNRR scholarships implies additional duties compared to those required and detailed in the Ph.D. Courses Regulation of the School:

- write a report every six months indicating the time commitment and a summary of the main activities carried out;
- for PNRR 629 Research scholarships: spend a period of study and research abroad from a minimum of 6 to a maximum of 12 months;
- for the PNRR 629 Public Administration scholarships: spend a period of study and research abroad from a minimum of 6 to a maximum of 12 months and periods of study and research in Public Administrations, research centers or companies from a minimum of 6 to a maximum of 12 months;
- for PNRR 629 Digital and Environmental Transitions scholarships: spend a period of study and research abroad from a minimum of 6 to a maximum of 12 months and a period of study and research in a company or a research center for a minimum of 6 to a maximum of 12 months;
- for PNRR 630 cutting-edge paths for innovative needs of companies scholarships: spend a period of study and research abroad from a minimum of 6 to a maximum of 12 months and a period of study and research in a company for a minimum of 6 to a maximum of 12 months;

Failure to respect the minimum period in the company and abroad and in case of non-compliance with reporting obligations, the IUSS School reserves the right to revoke the scholarship.

Ph.D. programs funded according to the Ministerial Decree 629/24 and 630/24 must be started by 13th December 2024.

Article 8

(Obligations of the Ph.D. student)

Students undertake to comply with the rules in the Statute, in the Regulations and in Code of Ethics and Conduct of the School.

Disclaimer:

The official and legally binding announcement is the Italian one. The present document cannot be used for legal purposes and is only meant to provide information in English on the call for applications.









Procedure Supervisor:

Mrs. Giovanna Spinelli, Head of Education, Quality and Students Support Services Unit – Palazzo del Broletto, Piazza della Vittoria n. 15 – 27100 Pavia – tel. +39 0382375811, fax +39 0382375899, e-mail: info@iusspavia.it.

Data handling:

Personal data provided by candidates shall mainly be handled automatically by the School and in compliance with article 11 of Italian Legislative Decree no. 196/2003 and Regulation (EU) 2016/679 for management of the competition procedures. The data, which is made anonymous, may also be used for statistical purposes. Data must be provided in order to take part in the Competition. The interested parties have the right to ask the data controller to access personal data and to correct or cancel it or limit the processing that concerns it or to oppose the processing (articles 15 and following of EU Regulation 679 / 2016). The appropriate application should be submitted in writing to the University School for Advanced Studies IUSS Pavia, Head of Personal Data Protection RPD - Piazza della Vittoria No. 15, email: dpo@iusspavia.it The interested parties, having recourse to the conditions, also have the right to lodge a complaint with the Guarantor in accordance with the procedures laid down in Regulation (EU) 2016/679. Further information on the handling of personal data of the University School for Advanced Studies IUSS Pavia can be found at the link: https://www.iusspavia.it/en/privacy

Transparent administration:

The Scuola Universitaria Superiore IUSS Pavia operates in compliance with the legislation on the prevention of corruption (Italian Law 190/2012), by applying the measures identified in the "Piano Integrato" in the "Trasparenza" section (in Italian) of the School web site at: http://www.iusspavia.it.









PhD in COGNITIVE BRAIN SCIENCES

2 11 1	
Coordinator	Prof. Eleonora Catricalà,
	e-mail: eleonora.catricala@iusspavia.it
Scientific fields	M-PSI/02; M-PSI/01; M-PSI/04; M-PSI/03; MED-26; L-LIN/01
Brief description	The PhD Program in Cognitive Brain Sciences is a fulltime 3-year joint program with the University of Pavia. The PhD Program is aimed at providing an advanced training in neuroscientific research, focusing on the understanding of the neural processes underlying cognitive functions and behaviour during the lifespan, both in normal conditions and in neurological and psychiatric diseases, and it is strongly oriented towards an interdisciplinary approach. The aim is to train a new generation of cognitive neuroscientists capable of synthesising concepts and methods from different disciplines in an integrated approach to the study of the mind/brain relationship that not only increases competitiveness within traditional disciplinary departments, but also promotes the progress in advanced and new research, and the transfer of knowledge to Health and Education fields.
Language	English
Duration	3 years
Number of	6 positions, of which:
positions available	 n. 2 positions with scholarship funded by IUSS on the following topic: "Cognitive, clinical and experimental neuroscience". Projects focus on understanding the nature, organisation and neural processes underlying different aspects of cognitive functioning through behavioural, neurophysiological, neurostimulation and/or neuroimaging studies in healthy, neurodegenerative or psychiatric populations. Characteristic topics include memory, language, executive functions, decision-making, social cognition and nutritional neuroscience. n. 1 position with scholarship co-funded by National Recovery and Resilience Plan (PNRR) - DM 630/2024 – Investment 3.3. Innovative Doctorates, on the following topic: "Application of high-definition direct current transcranial stimulation (HD-tDCS) to neurorehabilitation". This research project aims at the development, and validation in neuro-psychiatric disorders, of innovative neuromodulation rehabilitation treatments aimed at increasing the intensity/focus of the effect of direct current electrical stimulation (tDCS) using customized high-definition protocols (HD-tDCS). Company involved: ICS Maugeri; n. 1 position with scholarship co-funded by National Recovery and Resilience Plan (PNRR) - DM 630/2024 – Investment 3.3. Innovative Doctorates, on the following topic: "Cognitive profile and body representation in eating and feeding disorders". This research project aims to investigate the characteristics of cognitive profiles and alterations in body representation in patients diagnosed with eating and feeding disorders, and in populations at risk of development these disorders. Company involved: IPSI - Istituto Psicologico Italiano; n. 1 position covered by University of Pavia with scholarship co-funded under









	3.3. Innovative Doctorates, on the following topic: "Behavioural, anatomical and functional study of cognitive and emotional processes in patients with drugresistant epilepsy". This research project aims to develop innovative protocols for the behavioural, anatomical and functional study of cognitive and emotional processes in patients with drug-resistant epilepsy using advanced technologies. Company involved: Ospedale Niguarda
	 n. 1 position covered by University of Pavia with scholarship co-funded under National Recovery and Resilience Plan (PNRR) - DM 630/2024 – Investment 3.3. Innovative Doctorates, on the following topic: "Application of new technologies in neurorehabilitation of patients with cognitive impairment: an integrated neurobiological approach". This project aims to investigate how new technologies (digital devices, telerehabilitation, virtual reality, artificial intelligence) can be integrated into the rehabilitation of cognitive difficulties resulting from diseases that directly or indirectly affect the central nervous system. Company involved: IRCCS Ospedale San Camillo
Submission	01/07/2024, 13:00 (CEST)
deadline for the	
online application	
Mandatory	a) a PDF copy of a valid identity document;
documentation*	b) self-certification of the Master Degree Certificate (Italian or UE educational
to be attached to	qualification), or Copy of the MSc Degree Certificate (NON-EU educational
the online	qualification);
application	c) self-certification of the Bachelor Degree Certificate (Italian or UE educational qualification), or Copy of the Bachelor Degree Certificate (NON-EU educational
	qualification);
*failure to upload the	d) diploma Supplement/Transcript/or similar document of Master Degree
documentation	Certificate;
referred to in (a) and (b) will result in	e) diploma Supplement/transcript/or similar document of Bachelor Degree
exclusion from the	Certificate;
competition procedure	f) Self-certification of the grades of the Bachelor's Degree and of the Master's
	Degree (through the application procedure). For students holding a degree obtained
	abroad, the minimum grade for sufficiency and the maximum grade of the home
	University are also required
	g) research project (see guidelines on the IUSS website). The candidate who intends
	to compete for more than one scholarship is required to submit a project for each of
	the scholarship he/she is applying for. Up to a maximum of three preferences may
	be expressed (NB: the topic of the scholarship must be included in the header of the project).
Qualification	a) diploma Supplement/Transcript/or similar document of Master Degree Certificate;
assessment	b) Self-certification of the arithmetic mean (if any), calculated by the candidate, of
	the grades obtained in the exams taken during the Bachelor's Degree and the
	Master's Degree (through the application procedure). For students holding a degree
	obtained abroad, the minimum grade for sufficiency and the maximum grade of the
	home University are also required.
	c)research project (see guidelines on the IUSS website);
	of escarcii project (see gardenies on the roso website)
	d) academic and professional CV;









	f) referees (maximum n. 3), if any, of whom the candidate has to indicate the
	institutional e-mail address (through the application procedure);
	g) motivational letter, if any.
Interview and	The selection will be performed through the assessment of the qualifications listed in
evaluation	the section "Qualification assessment", points from a) to f) included, with a
	maximum of 50 out of points and through an interview, with a maximum of 50 out
	of points.
	The Selection Board will therefore award a final score from 1 to 100.
	1. The Selection Board will assess the submitted scientific qualifications awarding a
	score up to 50 points. The candidates obtaining a score of at least 36/50 in the
	assessment phase, will be accepted to the interview.
	2. The interview may also be carried out online, as long as the candidate can be
	identified. The interview will entail a discussion about the scientific background and
	skills of the candidate as well as technical/scientific questions, with the aim of
	ascertaining the candidate's background, vocation and aptitude for research.
	Candidates obtaining a score below 36/50 in the interview will not eligible to the
	ranking list.
	During the interview, the selection board will verify that the candidate has the
	necessary fundamental knowledge and skills to for attending the doctoral course
	and evaluate the eligibility for the research topics of the scholarships selected, also
	based on the research project/s submitted.
	At this stage, subject to the candidate's authorization, the Selection Board will assess
	eligibility for scholarships other than their preferred choice(s). If the assessment is
	positive, eligibility for the alternative scholarship will be taken into consideration
	only in case of unassigned scholarships after the final ranking.
	3. IUSS Pavia will notify the scholarship holders of their admission to the programme
	using the e-mail address provided in the application.
Test schedule	The results about the evaluation process will be published on the IUSS website
	http://www.iusspavia.it
	The interviews will be carried out at the IUSS Marelli building or online, via Zoom.
	The date is 22/07/2024 at 09:00 CEST .
Information	U.O. PhD Courses: e-mail: postlaurea@iusspavia.it









PhD in BIOMOLECULAR SCIENCES AND BIOTECHNOLOGIES

Caardinatar	Duef Federice Fernania
Coordinator	Prof. Federico Forneris
Colombific Field	e-mail: federico.forneris@unipv.it
Scientific Field	Biology
Research topics	BIO/11 CHIM/03 BIO/04 CHIM/08 MED/04 BIO/14 BIO/19 BIO/10
Brief description	The PhD in Biomolecular Sciences and Biotechnologies is a full-time 3-year joint
	program with Università degli Studi di Pavia.
	The PhD is configured with a decidedly interdisciplinary approach guaranteed by the
	established interaction between the proponents of the course, the possibility of
	access to scientific instruments present in the laboratories, and the wealth of
	experience of the individual group coordinators.
Language	English
Duration	3 years
Number of	n. 7 positions, of which:
positions available	
	- n. 2 positions with scholarship funded by IUSS
	- n. 1 position with scholarship co-funded by National Recovery and Resilience Plan
	(PNRR) - DM 630/2024 - Investment 3.3. Innovative Doctorates, on the following
	topic: Application of Biotechnologies to Drug Discovery
	Company involved: Philogen SpA
	- n. 1 position covered by University of Pavia with scholarship co-funded under
	National Recovery and Resilience Plan (PNRR) - DM 630/2024 - Investment 3.3.
	Innovative Doctorates, on the following topic: Investigating innate immunity against
	gene therapy vectors in the central nervous system
	Company involved: Ospedale San Raffaele Srl
	- n. 1 position covered by University of Pavia with scholarship co-funded under
	National Recovery and Resilience Plan (PNRR) - DM 630/2024 - Investment 3.3.
	Innovative Doctorates, on the following topic: Production and characterization of
	recombinant proteins to understand mechanisms associated to spreading of vector-
	borne pathogens
	Company involved: INF-ACT Foundation
	- n. 1 position with scholarship funded by National Recovery and Resilience Plan
	(PNRR) - DM 629/2024 – Investment 3.4 Digital and environmental transitions, on
	the following topic: <i>Enzymes for green and red biotechnologies</i>
	Institution involved: Dipartimento Medicina di Precisione, Università degli studi della
	Campania "L. Vanvitelli"
	- n. 1 position reserved for Philochem A.G. company employees
Submission	15/07/2024 at 13:00 (CEST)
deadline for the	
online application	
Mandatory	
Documentation*	a) A PDF copy of a valid identity document;
	1 4/11. 5. copy of a valid identity document,









to be attached to	b) Self-certification of the Master Degree Certificate (Italian or UE educational
the on line	qualification) Or Copy of the MSc Degree Certificate (NON-EU educational
application	qualification);
	c) Academic and professional CV
*failure to upload the	d) Diploma Supplement or transcript Bachelor degree
documentation referred to in (a) and (b) will result	e) Diploma Supplement or transcript Master Degree
in exclusion from the	f) Publications
competition procedure	a) A density and market signal CV
Qualification	a) Academic and professional CV
assessment	b) Diploma Supplement or transcript Bachelor degree
	c) Diploma Supplement or transcript Master Degree;
	d) Publications
	e) Up to two reference letters provided through the online application.
Interview and	Selection will be performed through an assessment of the qualifications listed in the
evaluation	section "Qualification assessment", from points a) to e) inclusive, with the awarding
	of 50 points out of 100, and through an interview awarding a maximum of 50
	points.
	The Selection Board will therefore award a final score from 1 to 100.
	The Selection Board will assess the scientific qualifications submitted awarding a
	score out of fifty. Candidates obtaining a score of at least 36/50 in the overall
	assessment phase will then be accepted for interview.
	The interview may also be carried out using electronic communications instruments
	which allow the candidate to be identified. The interview will entail a discussion
	about the research plan carried out and about the research that the candidate
	would like to conduct with the aim of ascertaining the candidate's vocation for
	research. Candidates obtaining a score of below 36/50 will be excluded from the
	merit ranking list.
	During the interview, the selection board will verify that the candidate has the
	necessary fundamental knowledge and skills for attending the doctoral course and
	evaluate the eligibility for the research topics of the scholarships announced.
	The School will notify scholarship holders of their admission to the School using the
	e-mail address given in the application.
Test schedule	The results about the evaluation process will be published on the IUSS' website
	03/09/2024.
	The interviews will be carried out on 09/09/2024 from 09:30 CEST at IUSS, Palazzo
	del Broletto, Piazza della Vittoria 15 or remotely (via Zoom)
Information	e-mail: federico.forneris@unipv.it; postlaurea@iusspavia.it









PhD in The Human Mind and its Explanations: Language, Brain and Reasoning (HuME)

Coordinator	Prof. Andrea Sereni
Coordinator	e-mail: andrea.sereni@iusspavia.it
Scientific fields	M-FIL/01, M-FIL/02, M-FIL/03, M-FIL/05, M-PSI/01, M-PSI/05, MED/27, MED/34;
Selentine neids	BIO/09, L-LIN/01, SECS-P/01
Brief description	Over the past decade, the University of Milan, Scuola Normale Superiore in Pisa and
brief description	Scuola Universitaria Superiore IUSS Pavia have promoted top-notch international
	research in areas shared by three institutions, ranging from the philosophy of mind
	and cognitive sciences to the philosophy of logic, epistemology and theories or
	reasoning.
	Today more than ever, cutting-edge research requires taking these kinds of
	competences even further. For this reason, the HuME PhD Program requires
	candidates to develop a strong analytical and epistemological background, also
	promoting the harmonization between theoretical reflection and experimental
	practice. The goal is to attract young researchers wishing to dive deeper into the
	many facets of human cognition through a multi-disciplinary approach to their
	studies. This makes the HuME PhD program one-of-a-kind in Italy, and promises to
	make it a flagship program in Europe.
	Training for PhD students develops along two lines: fine-tuning the skills they
	acquired during their undegraduate and graduate studies, whilst providing them the
	theoretical and practical tools they need to explore philosophy, pure and
	experimental sciences, cognitive neuroscience, and linguistics. The program offers a
	multi-disciplinary approach that will allow students to devise original and innovative
	paths within their specialized area of research.
	Thanks to the network of partner Institutions, PhD candidates will have access to a
	wide range of theoretical and methodological courses, to experimental activities, and
	more generally to a variety of expertise among the members of teaching board as
	they investigate the central issues of their research.
	The program aims at broadening the academic profile of students at an international
	level. Study periods abroad and exchange programs, participation in international
	conferences, and international networks of scientific partnerships (including
	collaborations with international research centres) are all offered either directly
	within the program, or through the Faculty's independent research activities.
Language	Coherently with this approach, teaching is entirely offered in English. English
Duration	3 years
Number of	n. 9 positions, of which:
positions available	The positions, or willow
poortions aranasis	- n. 2 positions funded by Scuola Universitaria Superiore IUSS Pavia
	- n. 3 positions funded by Università degli studi di Milano
	- n. 1 position funded by Scuola Normale Superiore di Pisa
	- 11. 1 position runded by Schola Normale Superiore di Pisa
	- n. 1 position with scholarship funded by National Recovery and Resilience Plan
	(PNRR) - DM 629/2024 – Investment 4.1. Research PNRR, on the following topic:
	Mind, self and mathematics









	 n. 1 position with scholarship funded by National Recovery and Resilience Plan (PNRR) - DM 629/2024 – Investment 4.1. Public Administration, on the following topic: "Disagreement, pluralism and trust: human decisions and technologyin public policies" Institution involved: Scuola Nazionale dell'Amministrazione n. 1 position covered by Università degli studi di Milano with scholarship cofunded under the National Recovery and Resilience Plan (PNRR) - DM 630/2024 – Investment 3.3. Innovative Doctorates, on the following topic: Mitigating Bias and opacity Risks in generative AI Company involved: Alkemy
Submission	1/07/2024 at 13:00 (CEST)
deadline for the	
online application	
Mandatory	a) a PDF copy of a valid identity document;
documentation*	b) self-certification of the Master Degree Certificate (Italian or UE educational
to be attached to	qualification), or Copy of the MSc Degree Certificate (NON-EU educational
the online	qualification);
application	c) self-certification of the Bachelor Degree Certificate (Italian or UE educational
	qualification), or Copy of the Bachelor Degree Certificate (NON-EU educational
	qualification);
*failure to upload the	d) diploma Supplement/Transcript/or similar document of Master Degree Certificate; e) diploma Supplement/transcript/or similar document of Bachelor Degree
documentation	Certificate;
referred to in (a) and	f) research project (see guidelines on the IUSS website);
(b) will result in	g) self-certification of arithmetic mean of the grades for the exams taken in the
exclusion from the competition procedure	bachelor's and master's degrees, with possible grade ranges (through the application
	procedure);
	h) self-certification of graduation grade with range of possible grades (through the
	application procedure);
Qualification	a) diploma Supplement/Transcript/or similar document of Master Degree Certificate;
assessment	b) diploma Supplement/transcript/or similar document of Bachelor Degree
	Certificate;
	c) research project (see guidelines on the IUSS website);
	d) academic and professional CV;
	e) publications;
	f) recommendation letters (maximum n. 2), sent by the referees through the online
	system, within the deadline of the call.
Interview and	The selection will be performed through the assessment of the qualifications listed in
evaluation	the section "Qualification assessment" (maximum 50 points) and through an
	interview (maximum 50 points). The Selection Board will therefore award a final
	score from 1 to 100.
	The Selection Board will assess the submitted scientific qualifications awarding a
	score up to 50 points. The candidates obtaining a score of at least 36/50 in the assessment phase, will be accepted to the interview. Candidates are not required to
	be present during the assessment of qualifications.
	The interview may also be carried out online, as long as the candidate can be
	identified. The interview will entail a discussion about the scientific background and









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	skills of the candidate and about the research that the candidate would like conduct,
	as well as technical/scientific questions, with the aim of ascertaining the candidate's
	background, vocation and aptitude for research. Candidates obtaining a score below
	36/50 in the interview will not eligible to be admitted to the programme hence not
	part of the ranking list.
	During the interview, the selection board will verify that the candidate has the
	necessary fundamental knowledge and skills for attending the doctoral course and
	assess the eligibility for those scholarships which may be based on specific research
	themes.
	IUSS Pavia will notify the scholarship holders of their admission to the programme
	using the e-mail address provided in the application.
Test schedule	The results about the evaluation process will be published on the IUSS website
	http://www.iusspavia.it
	The interviews will be held starting 16/07/2024 at 14:00 CEST in presence at IUSS
	School, or remotely via Zoom.
Information	e-mail: postlaurea@iusspavia.it









PhD in THEORETICAL AND EXPERIMENTAL LINGUISTICS

Coordinator	Drof Valentina Dambini
Coordinator	Prof. Valentina Bambini
Scientific fields	e-mail: valentina.bambini@iusspavia.it
	L-LIN/01; M-PSI/01; M-PSI/02; MED/25; MED/27
Brief description	The PhD program in Theoretical and Experimental Linguistics is a full-time 3-year program offered by IUSS. The doctoral program aims at training scholars in the field of linguistics, considering both theoretical and experimental approaches. In particular, the program focuses on studies in the areas of theoretical syntax, experimental pragmatics, and computational linguistics, taking into account both formal descriptions and psycho/neurolinguistic investigations. Research activities are based also on national and international collaborations promoted by IUSS, very often within interdisciplinary contexts encompassing in particular the fields of psychology and medicine. The PhD program will especially promote research projects in the following domains, also combined: Theoretical syntax Neurosyntax History of the linguistic thought Computational linguistics Corpora and language modelling Processing and complexity Language disorders Language acquisition Experimental pragmatics Neuropragmatics
	- Clinical pragmatics
	- Developmental pragmatics
	For further information, see the <u>IUSS website</u> .
Language	English
Duration	3 years
Number of	n. 6 positions, of which:
positions available	
	- n. 3 positions funded by IUSS The project will deal with one or more of the PhD topics, with special reference to theoretical syntax (e.g., configurational correlates of the subject-predicate link; copular sentences, role of symmetry and symmetry-breaking phenomena), experimental syntax and neurosyntax (e.g., grammaticality judgments, reaction times, eye-tracking, neurophysiology or invasive techniques), exerimental pragmatics and neuropragmatics (metaphor and non-literal language, also at the interface with computational modelling of behavioral and brain data), clinical and developmental pragmatics, language disorders (e.g., in psychosis and with NLP approaches). - n. 1 position with scholarship funded by National Recovery and Resilience Plan (PNRR) - DM 629/2024 – Investment 4.1 Public Administration, on the following topic: Linguistic and communicative skills in children and adolescents in social









The project will deal with the study of linguistic and communicative skills in children and adolescents belonging to deprived contexts and other underserved populations, including the identification of the aspects of major difficulty and possible intervention strategies, considering also the impact of communicative interaction with carers and surveillance personnel.

Institution involved: Tribunale per i Minorenni di Milano

- n. 1 position with scholarship funded by National Recovery and Resilience Plan (PNRR) - DM 629/2024 – Investment 4.1 Public Administration, on the following topic: Language and its impact in communicating science and medicine

The project will deal with linguistic phenomena and structures (e.g., metaphors, backgrounding and foregrounding constructions, etc.) in the perspective of communicating science and medicine, including their impact on society and individuals, with specific reference to domains that include, among others, communication in the fields of oncology, mental health, aging and dementia, doctorpatient interaction, and citizen science.

Institution involved: Center for Ethics in Science and Journalism (CESJ)

- n. 1 position with scholarship co-funded by National Recovery and Resilience Plan (PNRR) - DM 630/2024 – Investment 3.3. Innovative Doctorates, on the following topic: Atypical language development: neurophysiological correlates and implications for intervention

The research aims to phenotype expressive and receptive language skills in subjects of developmental age attending the Department of Paediatric Neurosciences at the IRCCS Foundation "Carlo Besta" Neurological Institute in Milan. Individuals with neurodevelopmental disorders associated with atypical language development, impacting communicative and social abilities (e.g., primary and secondary language disorders, verbal dyspraxia, cerebral palsy, epileptic encephalopathies such as Landau-Kleffner Syndrome, sensorineural hearing loss), will be recruited. The project includes the improvement/validation of assessment tools, the study of neurophysiological correlates, and the search for rehabilitative strategies both inperson and "smart" rehabilitation (e.g., language games, crosswords).

Company involved: IRCSS Besta

Submission deadline for the online application

1/07/2024 at 13:00 (CEST)

Mandatory documentation* to be attached to the online application

- a) a PDF copy of a valid identity document;
- b) self-certification of the Master Degree Certificate (Italian or UE educational qualification), or Copy of the MSc Degree Certificate (NON-EU educational qualification);
- c) self-certification of the Bachelor Degree Certificate (Italian or UE educational qualification), or Copy of the Bachelor Degree Certificate (NON-EU educational qualification);
- d) diploma Supplement/Transcript/or similar document of Master Degree Certificate;

e) diploma Supplement/transcript/or similar document of Bachelor Degree

documentation
referred to in (a) and
(b) will result in
exclusion from the

competition procedure

*failure to upload the

- Certificate;
- f) research project (see guidelines on the IUSS website).
- g) self-certification of arithmetic mean of the grades for the exams taken in the









	bachelor's and master's degrees, with possible grade ranges (through the application
	procedure);
	h) self-certification of graduation grade with range of possible grades (through the
	application procedure);
Qualification	a) diploma Supplement/Transcript/or similar document of Master Degree Certificate;
assessment	b) diploma Supplement/Transcript/or similar document of Bachelor Degree
	Certificate;
	c) academic and professional CV;
	d) research project;
	e) publications;
	f) recommendation letters (maximum n. 2), sent by the referees through the online
	system, within the deadline of the call.
	The candidate who intend to compete for more than one scholarship may indicate
	up to 3 preferences on the proposed themes of research, indicating the order of
	preference.
Interview and	The selection will be performed through the assessment of the qualifications listed in
evaluation	the section "Qualification assessment" (maximum 50 points) and through an
	interview (maximum 50 points). The Selection Board will therefore award a final
	score from 1 to 100.
	1. The Selection Board will assess the submitted scientific qualifications awarding a
	score up to 50 points. The candidates obtaining a score of at least 36/50 in the
	assessment phase, will be accepted to the interview. Candidates are not required to
	be present during the assessment of qualifications.
	2. The interview may also be carried out online, as long as the candidate can be
	identified. The interview will entail a discussion about the scientific background and
	skills of the candidate and about the research that the candidate would like conduct,
	as well as technical/scientific questions, with the aim of ascertaining the candidate's
	background, vocation and aptitude for research. Candidates obtaining a score below
	36/50 in the interview will not be eligible to be admitted to the programme hence
	not part of the ranking list.
	During the interview, the selection board will verify that the candidate has the
	necessary fundamental knowledge and skills to for attending the doctoral course
	and evaluate the eligibility for the research topics of the scholarships selected, also
	based on the research project/s submitted.
	At this stage, subject to the candidate's authorization, the Selection Board will asses
	eligibility for scholarships other than their preferred choice(s). If the assessment is
	positive, eligibility for the alternative scholarship will be taken into consideration
	only in case of unassigned scholarships after the final ranking.
	3.IUSS Pavia will notify the scholarship holders of their admission to the programme
	using the e-mail address provided in the application.
Test schedule	The results about the evaluation process will be published on the IUSS website
	http://www.iusspavia.it
	The interviews will be carried out on 23/07/2024 at 10:30am (CEST), at the IUSS
	building or online, via Zoom.
Information	e-mail: postlaurea@iusspavia.it









PhD in EARTHQUAKE ENGINEERING (ROSE)

Coordinator	Prof. Ricardo Monteiro,
Coordinator	e-mail: ricardo.monteiro@iusspavia.it
Scientific fields	
Scientific fields Brief description	ICAR/09, ICAR/07, GEO/10 The PhD in Earthquake Engineering (ROSE) is a three-year full-time joint programme with the University of Pavia. The ROSE PhD aims to train graduates and professionals with strong scientific and professional capabilities, aware of the cultural, technical and management contents related to earthquake engineering and seismic risk, including topics related to seismology, geophysics, geology, geotechnics, behaviour of materials and structures, structural analysis, design of new structures and assessment of existing structures, with particular attention to the study of data acquisition methods, methods of investigation of materials, technologies and structures, the development of interpretative frameworks for assessment of hazard, vulnerability, exposure and, consequently, seismic risk, and techniques for safeguarding elements and structures, i.e. essential project components for risk reduction. The programme is characterised by interdisciplinary character, international experience, constant reference to the most advanced and applied
	research.
Language	English
Duration	3 years
Number of positions available	8 positions, of which: - n. 2 positions funded by IUSS
	 n. 1 position with scholarship funded by National Recovery and Resilience Plan (PNRR) - DM 629/2024 – Investment 3.4 "Digital and environmental transitions", on the following topic: Integrated seismic risk assessment of structures considering environmental impact The research under this grant will focus on methodologies for risk assessment of existing structures, with possible large-scale analysis considerations. The research will also concern the study of holistic strategies for the evaluation of any necessary seismic retrofitting options, considering various decision-making variables, such as, for example, structural safety, installation and maintenance costs, duration of the works, seismic risk and environmental impact. Institution involved: Eucentre Foundation
	 n. 1 position with scholarship co-funded by National Recovery and Resilience Plan (PNRR) - DM 630/2024 – Investment 3.3. Innovative Doctorates, on the following topic: Development of innovative methods for probabilistic seismic hazard analysis The grant will focus on the development of innovative methods for the probabilistic calculation of seismic hazard, such as vector calculus and new methods for the propagation of epistemic uncertainty. These methods will allow to obtain estimates of seismic damage to structures, thus contributing to the design of interventions for higher sustainability. Other topics that could be developed concern new approaches for building seismic occurrence models. Company involved: GEM Foundation









	 n. 2 positions covered by University of Pavia with scholarship co-funded under National Recovery and Resilience Plan (PNRR) - DM 630/2024 – Investment 3.3. Innovative Doctorates, on the following topic: Risk assessment and damage scenarios of structures and infrastructure The research will concern for example, but not exclusively, the evaluation of performance and safety of existing buildings and infrastructure assets, using risk variables, as well as other probabilistic parameters, for greater sustainability with respect to natural hazards and climate change. Company involved: GEM Foundation n. 2 positions with scholarship funded by the Eucentre Foundation, on a topic to be agreed upon with the Eucentre Foundation, at the beginning of the programme.
Submission	04/07/2024 -+ 12:00 (CECT)
deadline for the	01/07/2024 at 13:00 (CEST)
online application	
Mandatory	
documentation*	a) A PDF copy of a valid identity document;
to be attached to	b) Self-certification of the MSc Degree Certificate (in case of Italian or UE
the online	educational qualification) OR copy of the MSc Degree Certificate (NON-EU
application	educational qualification);
	c) Academic and professional CV;
*failure to upload the documentation referred to in (a) and (b) will result in exclusion from the competition procedure	d) Diploma Supplements (or similar documents) of "Diploma di Laurea Triennale"/BSc Degree and "Diploma di Laurea Magistrale"/MSc Degree.
Qualification	a) Academic and professional CV;
assessment	b) Diploma Supplements (or similar documents) of "Diploma di Laurea
	Triennale"/BSc Degree and "Diploma di Laurea Magistrale"/MSc Degree;
	c) Scientific publications (and list of relevant publications);
	d) Up to three reference letters (to be sent by the referees following the online
	application procedure);
	e) Any other academic or professional qualifications that the candidate deems relevant to the programme.
Interview and	The selection will be performed through the assessment of the qualifications listed in
evaluation	the section "Qualification assessment" (maximum 50 points) and through an
	interview (maximum 50 points). The Selection Board will therefore award a final
	score from 1 to 100.
	The Selection Board will assess the submitted scientific qualifications awarding a
	score up to 50 points. The candidates obtaining a score of at least 36/50 in the
	assessment phase, will be accepted to the interview. Candidates are not required to
	be present during the assessment of qualifications. The interview may also be carried out online, if the candidate can be identified. The
	interview will entail a discussion about the scientific background and skills of the
	candidate and about the research that the candidate would like conduct, as well as
	technical/scientific questions, with the aim of ascertaining the candidate's
	background, vocation and aptitude for research. Candidates obtaining a score below
	36/50 in the interview will not be eligible to be admitted to the programme hence









	not part of the ranking list.
	During the interview, the selection board will verify that the candidate has the
	necessary fundamental knowledge and skills to for attending the doctoral course
	and evaluate the eligibility for the research topics of the scholarships announced.
	IUSS Pavia will notify the scholarship holders of their admission to the programme
	using the e-mail address provided in the application.
Test schedule	The results about the evaluation process will be published on the IUSS website
	http://www.iusspavia.it.
	The interviews will be carried out from 22/07/2024 at 09:30 CEST onwards, at the
	"EUCENTRE Foundation", Via Ferrata n. 1, 27100, Pavia or online.
Information	e-mail: postlaurea@iusspavia.it









PhD in THE HADRON ACADEMY Risk and Complexity in High Tech Medical Innovation

Coordinator	Prof.ssa Annalisa Bonfiglio
	e-mail: annalisa.bonfiglio@iusspavia.it
Scientific fields	ICAR/09; ICAR/03; IUS/02; FIS/07; ING-INF/06; FIS/01; MED/36; FIS/02; MED/06; BIO/13
Brief description	The extraordinary increase of technologies available in the biomedical field induces as a consequence the need of controlling the adequacy of medical procedures and their prescription, the preparation of medical staff for the informed use of technologies and the management of risks associated to their use with patients. The increasing complexity of this topic requires the harmonization of different competences in order to optimize all phases of the therapeutic route of the patient. In addition, the technological development in medicine is a complex procedure also under the legal and ethical point of view, aspects essential for allowing innovation reaching the patient. In this scenario, the PhD program in Risk and Complexity in High Tech Medical Innovation aims at the education of medical doctors, medical physicists, biologists, engineers, physicists with a program whose goal is building a common language and integrating different skills and competences. The agreement between the Scuola Universitaria Superiore IUSS (IUSS), the University of Cagliari and Fondazione CNAO (CNAO) ensures the right synergy of scientific, methodological, technological, legal/ethical competences needed for considering the mentioned topics in the specific scientific/technological area of Hadrotherapy. The PhD course, characterized by a high degree of interdisciplinarity, proposes every year to the candidates, research topics and activities characterized by interdisciplinarity and complexity that can be dealt with by motivated students coming from different disciplines, i.e. biomedical disciplines (medical doctors, radiotherapists, biologists, biotechnologists), technological disciplines (physicists, philosophers). The research activities will be accompanied by a curriculum including both common and specialistic courses. Common courses will deal with general topics related to hadrotherapy (the main focus of the PhD) and to risks associated to the technological innovation in the biomedical field, including those related to legal and et
Language	English
Duration	3 years
Number of positions available	6 positions, of which:
	 n. 1 position co-funded by Piano Nazionale di Ripresa e Resilienza (PNRR) DM 630/2024, on the following topic: RADOTHERAPY: from radiobiology to patient care, through the integration of different disciplines. Main topics: Exploring therapeutic approaches with different particles, guided by the biological characteristics of tumors in radioresistant forms. Treatment program guided by radiobiology, designed by medical physics, and implemented by heavy particle accelerators. New methods for characterizing mixed fields and activation, and development









	of innovative instrumentation for radioprotection. • Development of a detector for simultaneous treatment and range verification with a dual ion beam. Company involved: CNAO.
	- n. 1 position funded by CNAO on the topic: BORON NEUTRON CAPTURE THERAPY (BNCT): the multidisciplinarity of care. When radiobiology, pharmacology, physics, and engineering contribute to the improvement of medical treatments. Main topics:
	Implementation of clinical workflow for BNCT (Radiotherapy, Medical physics, Bioengineering). Along matheds for aboratorising region fields and activation and development.
	 New methods for characterizing mixed fields and activation, and development of innovative instrumentation for radioprotection. Study of radiation fields generated by BNCT and their detection during commissioning and clinical activity.
	- n. 2 positions funded by CNAO on the following topic: <i>Particle Accelerators:</i> advanced technologies and radioprotection.
	- n. 2 positions funded by IUSS on one of the following topics relevant to the doctoral course subjects:
	 Machine-learning classification models applied to biomedical imaging and data. Health risk and benefit assessment in the context of radio- and hadron therapy Advanced wearable systems for patient monitoring during hadrotherapy Advanced sensor systems for the characterization of cell cultures in the context of hadrotherapy Philosophical and ethical implications of medical advanced technologies
Submission deadline for the	01/07/2024 at 13:00 CEST
online application	
Mandatory	a) a PDF copy of a valid identity document;
documentation*	b) self-certification of the Master Degree Certificate (Italian or UE educational
to be attached to	qualification), or Copy of the MSc Degree Certificate (NON-EU educational
the online	qualification);
application *failure to upload the	c) self-certification of the Bachelor Degree Certificate (Italian or UE educational
documentation referred	qualification), or Copy of the Bachelor Degree Certificate (NON-EU educational qualification);
to in (a) and (b) will result in exclusion from the	d) diploma Supplement/Transcript/or similar document of Master Degree
competition procedure	Certificate;
	e) diploma Supplement/transcript/or similar document of Bachelor Degree
	Certificate;
	f) a proposal of research project (see guidelines on the IUSS website) related to one
Qualification	or more of above mentioned topics;
Qualification assessment	a) diploma Supplement/Transcript/or similar document of Master Degree Certificate; b) diploma Supplement/transcript/or similar document of Bachelor Degree
assessificit	Certificate;
	c) research project (see guidelines on the IUSS website).
	of research project (see gardenies on the 1035 Website).









	d) academic and professional CV;
	e) publications;
	f) recommendation letters (up to 3), sent by the referees through the online system,
	within the deadline of the call.
	The candidate may indicate up to 3 preferences on the proposed themes of
	research, indicating the order of preference.
Interview and	The selection will be performed through the assessment of the qualifications listed in
evaluation	the section "Qualification assessment" (maximum 50 points) and through an
	interview (maximum 50 points). The Selection Board will therefore award a final
	score from 1 to 100.
	1.The Selection Board will assess the submitted scientific qualifications awarding a
	score up to 50 points. The candidates obtaining a score of at least 36/50 in the
	assessment phase, will be accepted to the interview. Candidates are not required to
	be present during the assessment of qualifications.
	2.The interview may also be carried out online, as long as the candidate can be
	identified. The interview will entail a discussion about the scientific background and
	skills of the candidate and about the research that the candidate would like to
	conduct, as well as technical/scientific questions, with the aim of ascertaining the
	candidate's background, vocation and aptitude for research. Candidates obtaining a
	score below 36/50 in the interview will not be eligible to be admitted to the
	programme hence not part of the ranking list.
	During the interview, the selection board will verify that the candidate has the
	necessary fundamental knowledge and skills to for attending the doctoral course
	and evaluate the eligibility for the research topics of the scholarships selected, also
	based on the research project/s submitted.
	At this stage, subject to the candidate's authorization, the Selection Board will assess
	eligibility for scholarships other than their preferred choice(s). If the assessment is
	positive, eligibility for the alternative scholarship will be taken into consideration
	only in case of unassigned scholarships after the final ranking.
	3. IUSS Pavia will notify the scholarship holders of their admission to the programme
	using the e-mail address provided in the application.
Test schedule	The results about the evaluation process will be published on the IUSS website
	http://www.iusspavia.it
	The interviews will be carried out on 18/07/2024 at 10.00 CEST, at the IUSS building
	or online, via Zoom.
Information	e-mail: postlaurea@iusspavia.it