



40th CYCLE PhD CALL FOR APPLICATION

DESCRIPTION of PhD PROGRAM

in Music, Performance, and Technological Innovation

Description and Objective of the PhD in Music, Performance, and Technological Innovation

The PhD in *Music*, *Performance*, *and Technological Innovation* addresses strategic issues related to the concept of musical performance and creation through inter- and multidisciplinary research and training, combining the specificity of the Venetian heritage, the collaboration with cultural and non-cultural enterprises, and the dissemination of activities in the territory (with particular attention to people with disabilities) and translating them into innovative artistic production.

The PhD candidates selected through an international call for application will receive excellent training that combines artistic practice and artistic research with new technologies and academic programs, benefiting from the comparison with rapidly expanding scientific fields such as performance studies and neuroscience applied to music, in a prolific dialogue between art, science, new technologies, and business that can enhance the uniqueness of Venice, which is a polyphony of voices, cultures, languages, sounds, and ideas.

Training Project

Thanks to the collaboration with Ca' Foscari and IUAV Universities of Venice, SISSA International School of Advanced Studies of Trieste, University of Verona, State University of Milan, University of Milan-Bicocca, University of Rome Tor Vergata, University of Genoa, University of Strasbourg, New York University, and prestigious European Music Universities, the wide range of training programs will include individual and collective lessons, masterclasses, workshops, laboratories, seminars, and conferences, through which they intend to:

- 1. Hone the *performance and creative skills* of PhD students with the aim of preparing internationally renowned artists and researchers capable of *developing a general vision* of the problems related to *artistic action* and *renewing the concepts of performance and artistic production*. This would see the reinvention of the role of the *performer* and *composer* as cultural operators able to conduct their experimentation with originality, while also combining it with research and interaction with other disciplinary sectors, recognizing a synergy between art, science, and new technologies in connection with an anthropological, social, and environmental perspective.
- 2. Develop the concept of *musical performance*, introducing theories developed by performance studies which are useful to research: the connection between music performance, performing arts, and other types of performance; the relationship between notation, sound, and performative action; the importance of listening, improvisation, and evaluation within the performance; the interaction with the body and gestures, also in relation to new technologies; the connection between performance and science; the social and educational role played by performances; and the production of new types of performance, emphasizing archival research, new editions, and world premieres.
- 3. Explore the relationship between *music* and *neuroscience*. A general introduction to neuroscience





and neuroaesthetics will be necessary to acquiring the fundamentals of *music neuroscience*, which is useful to research: the development of associative functions and the synergistic action between different areas of the cerebral cortex during performances; the implementation of cognitive plasticity triggered by music; the enhancement of interdisciplinary and interactive skills generated by performances; the influence of practical skills on the development of brain activity; the relationship between music and emotions; the impact of new technologies on our aesthetic perception; and the importance of music as a support for disabilities.

- 4. Help PhD students develop a philosophy of **innovation** in its multiple declinations, capable of translating inventions into practices with an anthropological, social, technological, economic, and environmental impact. The application of these themes to *musical performance* will offer food for thought to develop an innovative profile of the **performer** and original contributions to the conception of **performance** in contemporary society. Drawing on the *bibliographic heritage* offered by the Library of the "Benedetto Marcello" Music Conservatory of Venice Library and the archives and museums of musical instruments involved, PhD students will research the relationships between writing, performance practice, and reception in the historical and contemporary repertoire (*Venetian*, in particular). PhD students will also be encouraged to create original works and sound installations that combine different artistic languages with music, improvisational practice, and scientific innovation, emphasizing: new technologies through the design of electroacoustic and computer music performances; software/hardware geared towards sound and musical arts; new soundscapes, research on sensory expansion and immersive sound; performance practices for mixed ensembles of laptops and acoustic musical instruments; online performance practices; and composition aids and algorithmic composition. Thanks to cooperation with cultural enterprises and local businesses, the synergy between art and science will contribute to enhancing the creative process, favoring the development of a versatile profile in the PhD student, open to experimentation and research and participating in the increase of production, research, and cultural heritage conservation activities.
- 5. Acquire specific strategies for the transversality of the learning process and *Special Education for Inclusion* leading to the creation of *materials related to music theory disciplines* (paper, digital, audio-video, apps, event with AI) aimed at students with special educational needs (BES), an initiative that places the Conservatory at the *forefront in the creation of musical publications for Inclusion*.

Research and Production Support Structures

1. PhD students can take advantage of **study periods abroad** and benefit from a stimulating **research and technological environment** supported by the International **Research Center MPI** (**Music, Performance, and Innovation**), which will involve artists, national and international scholars, Art Management experts, experts in Key Enabling Technologies, representatives of research institutions, cultural operators, representatives of the business world, and public and private entities engaged in research and development activities, all involved in a multi and interdisciplinary dialogue looking at the relationships between music, performance, neuroscience, science, technology, training, business, and society.

The Center's activities will include conferences, seminars, workshops, and the foundation of **open-source** journals and publications (paper and digital, audio and video), which is in line with an idea of





Open-Science. The technology transfer and adequate circulation of the achieved results will be guaranteed by a digital archive of musical productions, ancient and modern musical scores, and the activity of the research center and training program in order to make the cooperation and dissemination of knowledge prolific and widespread while also promoting the valorization of the results in the context of the activities of the co-financing companies.

- 2. The performance experimentation can benefit from a **Music Performance and Innovation Workshop** in which PhD students will meet experts in the performing arts, artists in residence, scholars, scientists, experts in artistic technologies, operators involved in artistic production, and tutors who will help them to address the different creative and production phases that articulate an innovative event, paying particular attention to the creative contribution that comes from practices of improvisation.
- 3. The integration of young PhD students into the job market will be entrusted to a *Production and Communication Workshop*, aimed at *fundraising* and *incentivizing the artistic career of PhD students*.

The productions created within the Workshop will be supported, promoted, and made public through the creation of:

- a *festival* spread throughout the territory with events that will add to the cultural offer of Venice, which aims to become a "città studi," a pole of attraction for artistic residencies, a meeting place between art and science, a world capital of sustainability, and a model for quality tourism
- a *network of events* in collaboration with prestigious national and international production institutions
- a *Summer School* with internationally renowned teachers in which to experiment with a concept of performance that is open to interdisciplinarity and new technologies.
- 4. In line with the Fourth Mission entrusted to Universities, the PhD program will contribute to promoting the spread of **music education** in the territory, through the involvement of schools of all levels and the support of **SIEM** (Italian Society for Music Education). Particular attention will be dedicated to students with special educational needs, through the foundation of a *Musical Therapy Center* for the experimentation of rehabilitation paths and support for disability.

PhD Scholarships

The course offers 4 thematically-bound scholarships and 2 positions without a scholarship for a total of 6 scholarships divided as follows:

1. <u>2 NRRP (National Recovery and Resilience Plan) Research Scholarships pursuant to</u> Ministerial Decree 629/2024

The PhD scholarships pursuant to Ministerial Decree 629/2024 aim to carry out research projects related to the NRRP research themes concerning **Mission 4**, **Component 1** "Strengthening the supply of education services: From nurseries to universities," with particular reference to:





- *Investment 3.4 Advanced university teaching and skills* and its three strategic objectives:
 - a) Digitalization
 - b) Culture of innovation
 - c) Internationalization
- and <u>Investment 4.1</u>: Extension of the number of PhD programs and innovative doctoral programs for public administration and cultural heritage, to increase the pool of human capital engaged in research-oriented activities, public administrations, and cultural heritage.

Research Project Themes

The projects that will be considered are those that can combine the improvement of *performance and creative skills* with an *artistic research* itinerary aimed at renewing the concepts of performance and artistic production through a prolific dialogue between art, science, new technologies, and improvisational practices supported by archival research, a survey of sources, and consequent publication of new editions that highlight the specificity of the *Venetian heritage*. An itinerary that also shows sensitivity to educational aspects aimed at exploring specific strategies for the transversality of learning and *Special Education for Inclusion*, following the innovative components introduced by research in the field of music neuroscience.

2. 2 PhD Research Scholarships pursuant to Ministerial Decree 630/2024

The two PhD scholarships pursuant to Ministerial Decree 630/2024 concern **Mission 4, Component 2 "From Research to Business," Investment 3.3** "Introduction of innovative doctorates that meet the innovation needs of businesses and promote the hiring of researchers by businesses," and are cofunded by companies for the realization of innovative doctoral itineraries in order to meet research and innovation needs.

Research Project Themes

1. The CAMPANA PROJECT:

The CAMPANA project (Connect art, music, and physics to accelerate innovation) aims to facilitate communication between scientists on the topic of nuclear fusion involving scholars and young music composers. The scientific and training objective/project that the Institution and the Company aim to implement with participation in the doctoral course is as follows:

- Implementing the sonification of scientific data on hydrogen fusion, obtained from experimentation on the "Consorzio RFX" research plants, with the aim of "visualizing" through sounds the phenomena at the basis of magnetic confinement of plasma and acceleration of high-energy neutral particles. The RFX-mod2 fusion plant uses a magnetic field to confine a ring of fire in a vacuum at a temperature higher than that of the Sun's core. The ultimate goal of the research is to generate electricity from the fusion of hydrogen. The wide visualization and sonification of data can help achieve this goal more quickly. During a single RFX-mod2 experiment, more than a thousand signals will be acquired. Sonification will allow for a quick overview of the entire data set even in the short time available between one discharge and the next.





2. VOICES: CHORAL DIRECTION AND COMPOSITION

Word, voice, song, choir. The coming together of ancient and modern, innovation and heritage enhancement, and the safeguarding and dissemination of the choral, linguistic, and cultural repertoire.

Italy and Venice have marked some important milestones in cultural and human history from the point of view of: Research and study of sources; comparison of documents and performance practices; discussions on musical restoration interventions and those regarding the valorization of the repertoire and its dissemination; the extraordinary musical and cultural innovations proposed through a new use of space and sound; and the coming together of languages, cultures, rites, traditions through choral music.

The research project will have to develop the themes related to choral singing and its development over the centuries in an interdisciplinary and in-depth way, without forgetting the value of performative dissemination and technological innovation and paying particular attention to the relationship between the musician and the cultural context in which he/she operated.

3. 2 Positions without a scholarship pursuant to Ministerial Decree 470/2024:

The PhD program also offers two positions without a scholarship: one on themes consistent with the areas of the NRRP and the objectives of the PhD in Music, Performance and Scientific Innovation; and one on a project aimed at enhancing the historical bibliographic-musical funds that are held in the Conservatory Library, with particular reference to manuscript and printed sources of collections that are an expression of the Venetian musical tradition. The artistic research activity will have to build an itinerary path that, starting from archival and historical-bibliographical research, leads to the identification of significant musical testimonies of which to produce editions and performances.

PHD STUDENT ACTIVITIES

The training activities, which PhD students are required to attend in person and/or remotely (if authorized by the PhD Board), are organized into:

- a) Common training activities, aimed at providing PhD students with the skills related to the techniques and methods of carrying out artistic, scientific and technological research, as well as the basic knowledge common to the pursuit of the program's training objectives;
- b) Specific training activities aimed at providing and/or completing the knowledge and skills of PhD students;
- c) Other external training activities chosen by the student and approved by the PhD Board, which will verify its coherence with the training itinerary and/or with the PhD student's thesis project.

As a guideline, the number of teaching hours for each activity is as follows, calculated over the three academic years for a total of approximately 150 hours:

- 1. Disciplinary/Interdisciplinary Training (90 hours)
- 2. Language Training (10 hours)
- 3. Computer Training (10 hours)
- 4. Research Project Management (30 hours)
- 5. Training on artistic research methodologies (10)

Other teaching activities (seminars, workshop and research activities, as well as interdisciplinary,





multidisciplinary and transdisciplinary training) are also organized over the three academic years. PhD students must also carry out tutoring and supplementary teaching activities (80 hours) and third and fourth mission activities (40 hours).