



**Annex n. 1**

**PhD Programme in BioRobotics**

<https://www.santannapisa.it/en/education/phd-biorobotics>

<b>Ph.D. Coordinator</b>	Prof. Arianna Menciassi e-mail: <a href="mailto:arianna.menciassi@santannapisa.it">arianna.menciassi@santannapisa.it</a> <b>Deputy Coordinators:</b> Prof. Calogero Maria Oddo e-mail: <a href="mailto:calogero.oddo@santannapisa.it">calogero.oddo@santannapisa.it</a> Prof. Stefano Palagi e-mail: <a href="mailto:stefano.palagi@santannapisa.it">stefano.palagi@santannapisa.it</a>
<b>Language</b>	English/Italian
<b>Duration</b>	3 years
<b>Academic Objectives</b>	The Ph.D. in BioRobotics provides interdisciplinary skills in the fields of engineering, including bioengineering and robotics, as well as mathematical and physical sciences. This program also provides exposure to issues related to life sciences, biotechnology, material science, social sciences, and humanities. You will develop the ability to approach complex problems to play a role both in Academia and in industrial innovation.
<b>Available Positions</b>	<p><b>n. 8 positions with a scholarship</b> funded by Sant'Anna School of Advanced Studies</p> <p>Further positions may be funded by active projects at Sant'Anna School of Advanced Studies and/or by additional financial resources or specific agreements.</p> <p>Further positions will be posted on the page: <a href="https://www.santannapisa.it/en/training/concorso-di-ammissione-phd-biorobotica-2024-25">https://www.santannapisa.it/en/training/concorso-di-ammissione-phd-biorobotica-2024-25</a></p> <p>Additional scholarships may be available in the framework of the following projects funded by the European Union – NextGenerationEU:</p> <ul style="list-style-type: none"><li>• <b>FIT4MEDROB</b> – “Fit for Medical Robotics” (CUP: B53C22006970001);</li></ul> <div data-bbox="537 1430 1308 1524" data-label="Image"></div> <ul style="list-style-type: none"><li>• <b>PRIN PNRR SurTact</b> - “Surgical Tactile Tools” (CUP J53D23017930001), Mission 4, Component 2, Investment 1.1 of NRRP;</li><li>• <b>MAD-2022-12376927</b> – “The etiopathological basis of gait derangement in Parkinson’s disease: decoding locomotor network dynamics” (CUP J84E22000650006), Mission 6, Component 2, Investment 2.1 of NRRP;</li><li>• <b>“BRIEF – Biorobotics Research and Innovation Engineering Facilities”</b> (CUP: J13C22000400007), Mission 4, Component 2, Investment 3.1 of NRRP;</li><li>• <b>“THE - Tuscany Health Ecosystem”</b> (CUP J13C22000420001), Mission 4, Component 2, Investment 1.5 of NRRP;</li><li>• <b>“ROGER – Robot-Assisted Gross pathology Examination of solid tumoRs”</b> (CUP J85E22000810009), Mission 6, Component 2, Investment 2.1 of NRRP;</li></ul>



Additional scholarships may be available in the framework of the following projects funded by INAIL:

- **DPI-SMART** - BRIC INAIL 2022-2024 CUP B83C23000220005;
- INAIL – SSSA projects (CUP: E57G23000260005):  
**BIOARMNEXT**  
**MIOPRO2**  
**WOUND**  
**HANDEVAL**
- INAIL partnership projects:  
**ADJOINT2**  
**BIOINTERNECT**  
**ELINER**



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**Additional information and documentation to be attached to the online application**

**In addition to all the mandatory documents listed in Article n. 3 of the Call for Applications, applicants must provide the following:**

- a) **Documentation of passed exams** (transcript or *Diploma Supplement* – and of the degree grade, if any) in the bachelor's degree courses. This should include the corresponding credits and grades achieved in each exam. Please note that the documentation must be in Italian or English
- b) **Weighted average of exam marks** obtained in the first and second-level degree courses (or in the single-cycle degree course)  
*For foreign degree courses, please provide the following details:*
  - *minimum and maximum marks that can be obtained on individual exams*
  - *minimum and maximum marks required for achieving the degree (if applicable)*
  - *conversion of the grade point average into CGPA (USA 4 points);*
- c) **3-page summary** of the **dissertation** (even if the degree has not yet been obtained)
- d) **Contact details of reference persons:** name, surname, and institutional e-mail address of two university professors who have followed the candidate's training process during their university studies. Professors will receive a link to directly upload their reference letter within 5 days after the deadline of this call
- e) Selection of a maximum of **three research lines** of interest chosen from the list published on the page <https://www.santannapisa.it/en/training/phd-biorobotics/research-lines>

**Optional documents:**

- f) Copy of any **other qualification** deemed appropriate (e.g., published or submitted articles – with documents attesting to their submission; course participation; internships; work or research activities)

**Evaluation Criteria**

**Evaluation of qualifications - maximum score: 30**



	<p>The Selection Committee will assess several documents, including the motivation letter (<b>max 1 page</b>), the <i>curriculum vitae et studiorum</i> (which includes details of the degree and average marks in the first and second-level degree courses), the second-level degree thesis, and any scientific qualifications (publications and related experiences) presented by the candidate. The Committee will provide a summary verdict and assign a score.</p> <p>Candidates will not be present during the evaluation of qualifications.</p> <p><b><i>Evaluation of the research plan - maximum score: 20</i></b></p> <p>The research plan must be focused on a topic related to the research lines of the Ph.D. in BioRobotics, consistent with the choice of the three research lines of potential interest.</p> <p>Please ensure that your plan (<b>max 3 pages</b>) includes the following details:</p> <ol style="list-style-type: none"><li>1. Title of the research</li><li>2. Scientific assumptions and literature references related to the theories and approaches that the research intends to follow</li><li>3. Overarching goal, objectives, and questions guiding the research</li><li>4. Methodologies to be adopted, which may include experimental, modelling, computational, and/or data analysis techniques.</li></ol> <p>The research plan of the candidate will be assessed based on the following criteria:</p> <ul style="list-style-type: none"><li>• Demonstrated understanding and accurate use of theories and pertinent literature</li><li>• Consistency, feasibility, and strength of the proposed research methods and approaches</li><li>• Originality and innovativeness of the research</li><li>• Clarity and thoroughness of presentation</li><li>• Relevance to the research areas of the PhD program in BioRobotics.</li></ul> <p>After the evaluation, the Commission will provide a summary verdict and a score to the applicants.</p> <p>Candidates will not be present during the evaluation of their research plan.</p> <p><u>Candidates with a score of 35/50 or above, which is the sum of their qualifications and research plan evaluations, will be eligible for the next interview round.</u></p> <p><b><i>Interview - maximum score: 50</i></b></p> <p>The interview will consist of a discussion that will cover the presented qualifications and research plan. The aim is to verify specific knowledge and technical-scientific skills, as well as motivation and propensity for research. Additionally, proficiency in the English language will be assessed.</p> <p><u>Candidates who score less than 35/50 in the interview will not be included in the final ranking list.</u></p> <p>The minimum score for inclusion in the final ranking list is 70/100.</p>
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