



# PhD in BIOINGEGNERIA / BIOENGINEERING - 37th cycle

**THEMATIC Research Field: REALIZATION OF NEW HOSPITALS: THE ROLE OF CLINICAL ENGINEERING IN THE MEDICAL DESIGN OF TECHNOLOGIES, PROCESSES AND SYSTEMS. INNOVATIVE TOOLS AND SYNERGIES**

| Monthly net income of PhDscholarship (max 36 months)   |
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| <b>€ 1250.0</b>  |
| In case of a change of the welfare rates during the three-year period, the amount could be modified. |

| Context of the research activity  |   |
|---|---|
| <b>Motivation and objectives of the research in this field</b>                          | <p>The main objects of the research activity will be in the context of the clinical engineering and in particular in the realization of new hospitals. The attention will be focused on the medical design of technologies, processes and systems, innovative tools and synergies.</p> <p>Attention will be focused on the correct logistic and technological dimensioning, both for high technologies and for the hospital plant.</p> <p><a href="http://www.asst-spedalivicili.it/">http://www.asst-spedalivicili.it/</a></p> |
| <b>Methods and techniques that will be developed and used to carry out the research</b> | <p>The thesis is developed mainly in collaboration with Spedali Civili in Brescia, the largest hospital in Lombardy and one of the largest in Italy. The PhD Student will work mainly in Clinical Engineering department of the hospital, developing in particular integrated medical design models of technologies, processes and systems. Specific analysis model will be developed to address all aspects, from a technological, environmental and energy point of view</p>  |
| <b>Educational objectives</b>   | <p>The PhD student will have to learn processes and working methods of the hospital technical sectors, in particular of clinical engineering, in order to develop integrated medical design models to apply for new departments and pavilions.</p>  |
| <b>Job opportunities</b>  | <p>The PhD student will have the opportunity to learn</p>   |



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|  | processes and make experience in the field of clinical engineering and to create a background related to specifically to the developmental of integrated medical design models for new departments and pavilions. The acquired skills will be useful not only in the field of clinical engineering in other clinical institutes but also in an industrial context. |
| <b>Composition of the research group</b> | 1 Full Professors<br>1 Associated Professors<br>1 Assistant Professors<br>0 PhD Students   |
| <b>Name of the research directors</b>    | VERONICA CIMOLIN   |

| <b>Contacts</b>   |
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| <p>Prof. sa Veronica Cimolin (POLIMI)<br/>veronica.cimolin@polimi.it</p> <p>Ing. Gian Luca Viganò (Spedali Civili di Brescia)<br/>gianluca.vigano@asst-spedalicivili.it</p> |

| <b>Additional support - Financial aid per PhD student per year (gross amount)</b> |    |
|---|----|
| <b>Housing - Foreign Students</b>   | -- |
| <b>Housing - Out-of-town residents (more than 80Km out of Milano)</b>             | -- |

| <b>Scholarship Increase for a period abroad</b> |          |
|---|----------|
| <b>Amount monthly</b>                           | 566.36 € |
| <b>By number of months</b>                      | 6        |

| <b>Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information</b>  |
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| <p>The PhD student will have a desk complete with PC in clinical engineering at Spedali Civili in Brescia and at Politecnico. The participation to training events organized for clinical engineering staff, site inspection and access to the company canteen at a reduced cost will be planned. Teaching activities and participation to national and international conferences will be considered.</p> <p>Increase in the scholarship for stays abroad</p> |



? 566,36 per month, for up to 6 months