



# PhD in FISICA / PHYSICS - 37th cycle

## THEMATIC Research Field: LIGHT-MATTER INTERACTION AT THE NANOSCALE

Monthly net income of PhDscholarship (max 36 months)
<b>€ 1300.0</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>	Modern nano-fabrication techniques allow structuring of surfaces, far below the wavelength of visible light. Such possibility already proved designing and realization of optical metasurfaces that enabled unprecedented manipulation of light. The thesis aims at investigating light-matter interaction at the nanoscale by means of the realization of new nanostructured surfaces.
<b>Methods and techniques that will be developed and used to carry out the research</b>	Nano-imaging and nano-spectroscopy will be used to investigate light-matter interaction at the nanoscale.
<b>Educational objectives</b>	Investigation of light-matter interaction at the nanoscale.
<b>Job opportunities</b>	Developing new functionalities in nano-imaging microscopy and spectroscopy is constantly part of the research efforts of microscopes manufactures. Moreover, the application to 2D materials open to new possibilities in the emerging field of flat lightweight electronics.
<b>Composition of the research group</b>	1 Full Professors 0 Associated Professors 4 Assistant Professors 3 PhD Students
<b>Name of the research directors</b>	Antonio Ambrosio

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

Scholarship Increase for a period abroad	
Amount monthly	564.01 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information
<p><b>Educational activities per year :</b>            1<sup>st</sup> year: 0            2<sup>nd</sup> year: 1534 euros per student            3<sup>rd</sup> year: 1534 euros per student.            or 1022 euros per student for each year.</p> <p><b>Teaching assistantship:</b>            There are various forms of financial aid for activities of support to the teaching practice.            The PhD student is encouraged to take part in these activities, within the limits allowed by the regulations.</p> <p><b>Computer and Desk availability:</b> shared use.</p>