



PhD in FISICA / PHYSICS - 40th cycle

THEMATIC Research Field: ATTOSECOND TRANSIENT REFLECTION SPECTROSCOPY OF ADVANCED MATERIALS

Monthly net income of PhDscholarship (max 36 months)

€ 1400.0

In case of a change of the welfare rates during the three-year period, the amount could be modified.

Context of the research activity

<p>Motivation and objectives of the research in this field</p>	<p>The research activity will take place in the laboratory "Attosecond Dynamics in AdvanCed matERials (AuDACE)", under the project FARE "PPhase Transition Ultrafast dyNAMics in Mott insulators (PHorTUNA)" id n. R209LXZRSL, CUP D43C22004090001 which aims to enter an unexplored region Physics and investigate ultrafast phase transitions happening in advanced materials on time scales below few femtoseconds.</p> <p>http://www.audaceproject.it/</p>
<p>Methods and techniques that will be developed and used to carry out the research</p>	<p>The candidate will work with attosecond time-resolved techniques such as transient absorption and reflection based on single or train of attosecond pulses in the extreme-ultraviolet spectral range. Particular attention will be given to the generation of attosecond circularly polarized pulses.</p>
<p>Educational objectives</p>	<p>The multidisciplinary character of this research will allow the candidate to gain new insights in atomic, molecular and solid-state physics, ultrafast laser technology, nonlinear optics.</p>
<p>Job opportunities</p>	<p>The PhD Program aims at developing an experimental approach in problem solving and a high level of professional qualification, opening job opportunities such as:</p> <ul style="list-style-type: none"> i) research in universities and research centers; ii) research and development in laser companies;



	iii) manager for innovation and technology.
Composition of the research group	1 Full Professors 1 Associated Professors 5 Assistant Professors 6 PhD Students
Name of the research directors	Mauro Nisoli, Matteo Lucchini

Contacts	
The group webpage can be found at: http://www.attosecond.fisi.polimi.it/	
matteo.lucchini@polimi.it, +39 0223996591,	
https://www.fisi.polimi.it/en/user/121	

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	700.0 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information	
<p>Educational activities: Educational activities (purchase of study books and material, funding for participation to courses, summer schools, workshops and conferences). Financial aid per PhD student per 3 years: max 5.707,20 euros per student.</p> <p>Teaching assistantship: 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>Computer and desk availability: <i>the computer will be individual while the desk will be shared for the first two years.</i></p>	