



PhD in SCIENZE E TECNOLOGIE ENERGETICHE E NUCLEARI / ENERGY AND NUCLEAR SCIENCE AND TECHNOLOGY - 39th cycle

PNRR 117 Research Field: STUDY AND DEVELOPMENT OF SYSTEMS FOR SPECTROMETRY AND DOSIMETRY OF NEUTRON FIELDS FOR BNCT

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

Motivation and objectives of the research in this field	To study and develop innovative detectors for the spectrometry and dosimetry of irradiation fields produced in hadron therapy. The research is focused mainly on complex neutron fields generated for Boron Neutron Capture Therapy applications.
Methods and techniques that will be developed and used to carry out the research	Monte Carlo simulations of the response of the the detection system at study. Development of analytical methods for the determination of the detector response function to neutrons. Characterization of the detector response and measurement of radiation fields of interest. Development of innovative methods for data analysis.
Educational objectives	To gain a high-level knowledge about radiation spectrometry and dosimetry, advanced detection techniques, low-noise electronics and medical applications of radiation.
Job opportunities	Radiation detector industry, hadron therapy facilities, particle accelerator industry and research centres.
Composition of the research group	2 Full Professors 0 Associated Professors 1 Assistant Professors 2 PhD Students
Name of the research directors	Stefano Agosteo, Andrea Pola



Contacts	
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http://www.energia.polimi.it/dipartimento/scheda_persona.php?id=48	
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Additional support - Financial aid per PhD student per year (gross amount)	
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Housing - Foreign Students	--
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Housing - Out-of-town residents (more than 80Km out of Milano)	--
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Scholarship Increase for a period abroad	
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Amount monthly	700.0 €
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By number of months	6
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National Operational Program for Research and Innovation	
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Company where the candidate will attend the stage (name and brief description)	Centro Nazionale di Adroterapia Oncologica - National Center for Oncological Hadrontherapy - Pavia (Italy)
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By number of months at the company	6
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Institution or company where the candidate will spend the period abroad (name and brief description)	
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By number of months abroad	6
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Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information

Educational activities: Financial aid per PhD student is available for purchase of study books and material, funding for participation to courses, summer schools, workshops and conferences, instrumentations and computer, etc.. This amount is equal to 10% of the annual gross amount, for 3 years.

Teaching assistantship: Availability of funding in recognition of supporting teaching activities by the PhD student. 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.

Computer availability: individual use.

Desk availability: individual use.

