POLITECNICO DI MILANO

PhD in SCIENCE, TECHNOLOGY AND POLICY FOR SUSTAINABLE CHANGE - 41st cycle

THEMATIC Research Field: ETHICAL ISSUES OF ACADEMIC RESEARCH ON DEFENCE TECHNOLOGY

Monthly net income of PhDscholarship (max 36 months)
1500.0 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	Warfare has always been tightly connected with scientific and technological research. This connection has also taken the shape of university involvement in military research activities. Recently, controversies on research collaborations between universities, governments, and industries have once again been brought to the fore. Studies measuring the actual extent of such collaborations reveal a notable “militarization” of academic research throughout the Western World. As discussions surrounding the role of scientists in the development of military technologies during World War II testify, similar debates are not new, while losing nothing of their contentiousness. Opponents claim that academic research should not be aimed at developing tools of death and destruction, but rather at building peace and mutual respect through international cooperation, knowledge exchange, and education. Engineering ethics also stresses that responsible engineers should “hold paramount the safety, health, and welfare of the public”, as stated in the NSPE Code of Ethics and analogous documents. Yet, the moral profile of the issue is far from being universally accepted. Counterarguments supporting the morality of academic military research could adopt various justifications ranging from just war theory to the morality of defensive war, the doctrine of mutual deterrence, and so on. Moreover, academic researchers could defend their position by invoking their status of

	public employees, which might come with obligations towards governmental research goals Although the complexity of the problem is evident and the urgency of its discussion is often emphasized, scholars inquiring into issues at the interface of engineering, ethics, and society are yet to bring this problem into focus and discuss its multifarious aspects. This proposal for a PhD position intends to fill such a critical gap by systematically assessing arguments in favor, against, or problematizing academic military research. In doing so, it aims at combining the perspectives of engineering ethics, research ethics, and war and military ethics to extensively explore the moral nuances of university involvement in military or dual-use projects, while at the same time taking stock of both studies on current academic participation in military or dual-use projects and studies on historical cases that might help shed light on the contemporary situation. This research is expected to offer a systematic analysis of the moral profile of conducting academic research on military technology that not only will help kickstart a philosophical debate on such a timely matter but also support engineers' and scientists' awareness in the effort of living up to the demands of responsible research and innovation.
Methods and techniques that will be developed and used to carry out the research	This thesis will be developed adopting mostly qualitative methods including traditional and interactive approaches. On the one hand, the PhD student will ground her/his critical study on an extended literature review encompassing fields such as engineering, military, and research ethics. On the other hand, and with the help of the supervisor, the PhD student will involve fellow PhD students, researchers, and professors working at the Politecnico di Milano in interactive sessions in which their moral intuitions will be explored and discussed with the aim of raising a participated debate on such a timely topic

	– which is expected to substantially enrich the research results.
Educational objectives	The candidate will have a unique opportunity of working in a multidisciplinary team and interacting with experts in both the ethics of technology and (mostly mechanical and aeronautical) engineering, which is fundamental to inquire into the research topic presented above. This entails a growth path for the candidate that will make her/him acquire different competencies, spanning from individual ethical research skills to the organisation of multidisciplinary workshops and the development of a research attitude capable of integrating the languages of moral philosophy and engineering. The research outputs will target publishing on international journals and presenting at international conferences, with specific attention to all the venues of interest for the different facets of the research.
Job opportunities	Beside academic contexts, professional opportunities will be in policy institutions, consultancy, and ONGs. Recent political decisions in Europe and beyond to increase investments in military equipment is bound to put pressure on political and policy institutions, academic administrations, and ONGs. Experts on ethical issues raised by defence technology will be able to provide valuable insights to decision makers at different levels. The PhD graduate will be an excellent candidate to work in this field and one with a unique expertise in context, given the limited and scattered literature currently available on the topic.
Composition of the research group	4 Full Professors 2 Associated Professors 20 Assistant Professors 3 PhD Students
Name of the research directors	Fabio Fossa / Viola Schiaffonati

Contacts
fabio.fossa@polimi.it viola.schiaffonati@polimi.it

Additional support - Financial aid per PhD student per year (gross amount)	
Housing - Foreign Students	--
Housing - Out-of-town residents	--

Scholarship Increase for a period abroad	
Amount monthly	750.0 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information

Educational Activity:
Fundings will be provided to cover expenses related to the participation in conferences and workshops.

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.

Computer Availability:
No

Desk Availability:
A desk will be provided at the Department of Mechanical Engineering, where the research activity will take place.

Any Other Information:
Good knowledge of the English language is required.

Fabio Fossa is a member of the META group (Social Sciences and Humanities for Science and Technology www.meta.polimi.it) which is currently composed of:

•4 full professors
•2 associate professors
•7 assistant professors
•13 post-docs
•3 PhD students
The PhD student will also interact with a research group on dual-use technology involving members of META and the Department of Aerospace Science and Technology