POLITECNICO DI MILANO

PhD in INGEGNERIA DELL'INFORMAZIONE / INFORMATION TECHNOLOGY - 38th cycle

Research Area n. 4 - Telecommunications

PARTENARIATO PNRR Research Field: ALGORITHMS FOR FLEETS OF NETWORKED EDGE DEVICES

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	This research project is in the framework of RESTART PARTENARIATO ESTESO RESEARCH AND INNOVATION ON FUTURE TELECOMUNICATION SYSTEMS AND NETWORKS TO MAKE ITALY MORE SMART CUP D43C22003080001 Decreto di Concessione D.D. 1549 del 11/10/2022 The program investigates the development of new techniques that simplify the management and improve the performance of networks comprising large fleets of edge nodes.
Methods and techniques that will be developed and used to carry out the research	The research will be both theoretical and applied. Linux-based routers equipped with units for processing AI algorithms will be used to test the research hypotheses.
Educational objectives	Acquiring a comprehensive knowledge of the literature and the ability of elaborating it in a critical manner.Acquiring the skill to program algorithms for measuring network performance and machine learning algorithms for making control decisions.Moreover, becoming able to write scientific papers on the topic to be published in top international conferences and journals.

Job opportunities	R&D divisions of telecommunications and IoT manufacturers; service operators
Composition of the research group	3 Full Professors 7 Associated Professors 3 Assistant Professors 11 PhD Students
Name of the research directors	Giacomo Verticale

Contacts
giacomo.verticale@polimi.it

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

The funding for the scholarship comes from the project RESTART a comprehensive program, that aggregates and integrates the main stakeholders of the Italian Telecommunications sector. RESTART promotes TLC science and technologies advancement for both human and IoT users, applications and services in the most diverse sectors: agriculture, commerce, energy, finance, industry, media, health, safety/security, transportation.

LIST OF UNIVERSITIES, COMPANIES, AGENCIES AND/OR NATIONAL OR INTERNATIONAL INSTITUTIONS THAT ARE COOPERATING IN THE RESEARCH: Politecnico di Milano; Politecnico di Torino; TIESSE

EDUCATIONAL ACTIVITIES (purchase of study books and material, including computers, funding for participation in courses, summer schools, workshops and conferences): financial aid per PhD student
5.707,13 Euro

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

D.D. 341 del 15/03/2022 Avviso pubblico per la presentazione di Proposte di intervento per la creazione di "Partenariati estesi alle università, ai centri di ricerca, alle aziende per il finanziamento di progetti di ricerca di base" - nell'ambito del Piano Nazionale di Ripresa e Resilienza, Missione 4 "Istruzione e ricerca" - Componente 2 "Dalla ricerca all'impresa" - Investimento 1.3, finanziato dall'Unione europea - NextGenerationEU