POLITECNICO DI MILANO

PhD in INGEGNERIA STRUTTURALE, SISMICA, GEOTECNICA / STRUCTURAL SEISMIC AND GEOTECHNICAL ENGINEERING - 39th cycle

PARTENARIATO PNRR Research Field: MULTI-RISK RESILIENCE OF (ASSESSMENT ON) CRITICAL INFRASTRUCTURES BY USING SMART INDUSTRIALIZED SOLUTIONS

Monthly net income of PhDscholarship (max 36 months)
€ 1195.5 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	**RETURN: PARTENARIATO ESTESO MULTI-RISK SCIENCE FOR RESILIENT COMMUNITIES UNDER A CHANGING CLIMATE** CUP D43C22003030002 - Decreto di concessione D.D. 1552 del 11/10/2022 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 Prof Marco Di Prisco is coordinating a PNRR project on this topic for Politecnico di Milano Unit (TS2 Unit). The main objective will be SMART SOLUTIONs to check the safety of bridges with particular attention to exceptional transports. The job will consider soil/structure interaction and will be developed in coordination with other two departments: Mechanics and ABC.
Methods and techniques that will be developed and used to carry out the research	Experimental activity as well as numerical modelling will be used to check the reliability of the solutions proposed.

Educational objectives	The idea is to prepare a new PhD researcher able to investigate the problem of the risk of critical infrastructures when subjected to exceptional loads and to find a smart solution to speed up the safety check of the infrastructure.
Job opportunities	In many company managing the maintenance of the bridges.
Composition of the research group	1 Full Professors 2 Associated Professors 2 Assistant Professors 2 PhD Students
Name of the research directors	Marco Di Prisco

Contacts
marco.diprisco@polimi.it https://www.dica.polimi.it/persona/?uid=59385

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	597.76 €
By number of months	6

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

Universities, Companies, Agencies and/or National or International Institutions that are cooperating in the research: Prof Di Prisco is coordinating the activity of a larger group involving Parma, Napoli, Roma and Pavia. Many universities like EPFL Losanna (Aurelio Muttoni), Madrid (Hugo Corres), Budapest (Balazs) and Repubblica Ceca (Vitek) are in contact for the same topics inside of fib community.

Educational activities (purchase of study books and material, funding for participation to courses, summer schools, workshops and conferences): The Ph.D. course supports the educational activities of its Ph.D. students with an additional funding equal to 10% of the scholarship, starting from the first year.

Teaching assistanship (availability of funding in recognition of support to teaching activities by the

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PhD student): Ph.D. students are encouraged to apply, upon prior authorization, to the calls to support teaching activities at the undegraduate and Master levels at Politecnico, being paid for that. The teaching assistantship will be limited up to about 80 hours, maximum half of them devoted to teaching and classroom activities and the rest to support classworks and exams.

Computer availability and desk availability: Each Ph.D. student has his/her own computer for individual use.Each Ph.D. student has his/her own desk, cabinet and locker.