



PhD in INGEGNERIA AMBIENTALE E DELLE INFRASTRUTTURE / ENVIRONMENTAL AND INFRASTRUCTURE ENGINEERING - 39th cycle

Research Area n. 2 - Transport Infrastructures and Geosciences

THEMATIC Research Field: TRANSPORT INFRASTRUCTURES AND GEOSCIENCES

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	The researches concern: Sustainable infrastructures (re-use, recycling, etc.), Multipurpose pavements (photocatalytic pav.), new technologies for infrastructures, LCA (Lyfe Cycle Analysis), Pavement Management System, materials performance evaluation; applied geological and hydro geological analysis of the evolution of the slopes dynamics; the hydrogeological risk analysis correlated with excavation of tunnels; the study of water circulation in rock masses linked with environmental and civil engineering problems.
Methods and techniques that will be developed and used to carry out the research	Researches are developed at all levels: analytical, in situ and in lab experimental/instrumental (refraction seismic profiling, electric resistivity tomography, NAT- Nottingham Asphalt Tester), numerical (UDEC, Modflow, Ansys, Abaqus).
Educational objectives	The main objective is to form scientists or high level technicians in the engineering geology and transportation fields. In particular as regards the hydrogeological problems and road materials.
Job opportunities	Main opportunities in the job market include Universities, Research Centers, top level management in Authorities



	involved in environmental policy, and senior consultants for engineering companies.
Composition of the research group	3 Full Professors 2 Associated Professors 5 Assistant Professors 6 PhD Students
Name of the research directors	Monica Papini and Maurizio Crispino

Contacts	
<p>Monica Papini (Geosciences) Phone: +39 0341488708 Fax: +39 0341488751</p> <p>Maurizio Crispino (Transport Infrastructures) Phone: +39 02 2399 6606 Fax: +39 02 2399 6602</p> <p>Web pages of this research fields: www.dica.polimi.it/sezioni/infrastrutture/</p>	

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	597.75 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information
<p><u>Universities, Companies, Agencies and/or National or International Institutions that are cooperating in the research:</u></p> <ol style="list-style-type: none"> 1. USGS (Fort Lauderdale - Florida, USA) 2. WEATHERFORD (Texas) 3. CRISS (Roma) - (Centro Ricerca Interuniversitaria Sicurezza Stradale) 4. Virginia Tech University (Virginia, USA) 5. Australian Road Research Board (Australia) 6. Delft University (Netherlands)



Educational activities (purchase of study books and material, funding for participation to courses, summer schools, workshops and conferences): approximately 1660,00 euros per PhD candidate per year, on average.

Teaching assistantship (availability of funding in recognition of support to 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 and desk availability: individual assignment for the entire career.