



CALL FOR APPLICATIONS FOR THE AWARD OF RESEARCH FELLOWSHIPS  
Regulation on Research Fellowships pursuant to Italian Law no. 240/2010  
Politecnico di Bari, issued by Rectoral Decree no. 252 of 05/07/2016

D.R. n. 126/2019

### **Purpose**

Applications are invited for the selection running at Politecnico di Bari for the award of:

- **n. 1** professional grant research fellowship, for the execution of research activities within the project entitled: **“Geo-hydro-mechanical method for the diagnosis of landslide mechanisms in clayey slopes in the Daunia Apennines, aimed at the design of mitigation strategies”**, according to the annexed Activity Programme:

*“The determination of landslide risk and the consequent determination of management guidelines are the necessary premise of a wise land-use that ensures the security of civil society, and of a consistent planning of the society development. For these purposes, especially in Italy, which is both one of the leading countries of scientific development in the field of hydro-geological risk and also one having the highest landslide susceptibility, the land management should be based on an effective transfer of the most advanced scientific results to the institutions responsible for its protection in the field of the analysis of landslide; as consequence the industry should acquire adequate awareness of the good land management guidelines and apply them in mitigation strategies.*

*The urgency of a progress in the application of geo-hydro-mechanical diagnosis of instability processes, in the context of landslide risk management strategies, is made evident by the impact that missed forecasts still have on civil society, in Italy and in the world, despite the risk zoning efforts at both regional and site-specific scale (Fell et al., 2005; Leroi et al., 2005). In fact, the number of victims due to landslide remains high: 32,322 victims (dead, missing and injured) in the world as a result of 2,620 landslide events from 2004 to 2010 (Petley, 2012). Only in Europe, during the last century, the economic losses due to landsliding amounted to over USD 1,700 million (Lacasse S. e Nadim F., 2009).*

*Advanced tools for the interpretation of landslide processes have been achieved and determined in many decades of research, both in Italy and abroad, as documented in several extensive revisions of the state of the art, from Brunsden D. and Prior D.B (1984), to the recent ones in A.A.V.V. (2012) and Corominas et al. (2013).*

*On the base of the available literature, this project proposed adopts the methods of analysis of the slope system, and the synergetic knowledge between analyses of different scientific fields: from geology, to geotechnical, hydraulic and structural engineering, recognizing in this synergy the prerequisite of a correct diagnosis of landslide risk.*

*The determination of the landslide risk on a geo-hydro-mechanical basis (Fell et al., 2005; Cascini et al. 2005; Picarelli et al., 2005) will be carried out on a deterministic basis and it will be aimed at recognizing the processes that determine the susceptibility of the slope to be the site of landslide phenomena (Cascini L., 2008; Fell et al., 2008). This assessment, in fact, will provide an interpretation of the slope status based on the laws of the equilibrium of the system and the geo-hydro-mechanics of the specific site, and on the measurement of the values of the parameters of these laws.*

*This interpretation will provide, therefore, a modeling of slope stability over time, which can be an instrument for predicting its eventual instability and its consequences for people and for structures in interaction (elements at risk - vulnerability; Cascini et al., 2013; Mansour et al., 2011; Palmisano F., 2011). This modeling will then become a tool for selecting and verifying mitigation strategies.*

*The application of this method of landslide risk assessment is more widely applied to slope scale, and is not contemplated on large area, since it requires a knowledge of the geo-hydro-mechanical characters of the soils and rocks, both the outcropping and in-depth ones; such analytical attempt is considered not feasible on the small scale. For these reasons, at the small scale, essentially heuristic or statistical approaches (Aleotti P. e Chowdhury R., 1999; Chacòn et al. 2006; Dai et al. 2002) prevail in the risk zonation (Fell et al.*

2008a), which do not contemplate geo-hydro-mechanical interpretations of the stability conditions. Therefore, at a regional scale, risk zonation does not provide in general indications on the causes and dynamics of the processes that may generate damage, whose knowledge should, on the other hand, be the guide for management decisions. From this awareness, there is the hope of progress in the application, even on a large area, of management guidelines based on the knowledge of geo-hydro-mechanical processes that cause landslide (Cotecchia et al. 2010).

With this aim, in this project we propose the application development of a methodology for the analysis of landslide hazard, based on geo-hydro-mechanical analysis both on slope scale and on large area, called Multiscalar Method for Landslide Mitigation (MMLM; Cotecchia et al., 2010, 2012, 2014, 2016, 2017 e Palmisano et al. 2016), whose generation was the result of the "Progetto strategico" (PS\_119; 2007-2010) financed by the Puglia Region, whose title was "Assessment of landslide risk for the planning of urban centres in chain areas: the case of Daunia". This method is multi-scalar because it connects the hazard analysis on large area (regional scale, or small scale) to the cognition of the active processes in individual slopes (large scale), according to a 'bottom-up' approach. In order to know if and how a bottom-up approach may be applicable on a small scale, one must start from the knowledge gained through geo-hydro-mechanical analyses of site-specific landslide processes".

The call for applications for the research fellowship issued pursuant to the University Regulation issued by Rectoral Decree (D.R.) no. 252/2016.

The activities shall be carried out under the supervision of a tutor, Scientific Responsible Prof. Federica Cotecchia in a non-subordinate relationship with no set working hours.

The main place of work will be: Geotechnical Engineering Section of the Dicatech Department of the Politecnico di Bari (VIA ORABONA,4 , BARI, ITALY) and regional ASSET Office of the Apulia region.

-n. 1 professional grant research fellowship, for the execution of research activities within the project entitled: "**Construction of Guidelines for the Enhancement and Integrated Redevelopment of Coastal Landscapes of Puglia**", according to the annexed Activity Programme:

*"The research proposal aims to investigate what is being developed the Puglia PPTR, three years after the date of approval, defining specific Guidelines for the Strategic Project "Enhancement and Integrated Redevelopment of Coastal Landscapes" (as governed by Article 6 paragraph 6 of the NTA of the PPTR), so that they can be a reference for the verification and assessment of the landscape constraints of the Coastal Territories as established by the art. 44/45 of the NTR of the PPTR in the Municipal Planning phase (PUG). The Guidelines would represent addresses for systematically developing and guiding the drafts of planning tools, as well as the provision of sectorial interventions. To this end, the Guidelines would be accompanied by abacuses containing best practices, collected not only at local level, useful for directing towards a correct practice of project interventions and redevelopment on the coast."*

The call for applications for the research fellowship issued pursuant to the University Regulation issued by Rectoral Decree (D.R.) no. 252/2016.

The activities shall be carried out under the supervision of a tutor, Scientific Responsible Prof. Nicola Martinelli in a non-subordinate relationship with no set working hours.

The main place of work will be: Department of civil engineering and architecture of the Politecnico di Bari, VIA ORABONA,4 , BARI, ITALY / Department of Mobility, urban quality, public works, ecology and landscape of Apulia region, section protection and enhancement of the landscape of the Apulia region.

-n. 1 professional grant research fellowship, for the execution of research activities within the project entitled: "**New settlement models for the rehabilitation of the 'urban sprawl' and of 'informal landscapes'**", according to the annexed Activity Programme:

*"The proposed research intends to investigate the urban forms and structures of those large areas of the Apulian coast which have been occupied by 'informal' or abusive buildings. The aim is to relaunch these places with respect to tourism, especially through the recognition and consolidation of intrinsic beauty values of the natural landscapes.*

*This objective will be pursued, theoretically, through analytical studies aimed at developing strategies for the recovery of landscape and urban quality and, at a practical level, through the assumption of*

*paradigmatic case studies (such as the Ionian coast - Campo Marino and the isthmus of the lake of Lesina - Torre Mileto) and design experimentation. The crossover of these data will allow to elaborate a "manual of the compositional strategies" reported - and applicable - to the innovative transformation of the coastal territories affected by the phenomenon of the urban sprawl, a useful manual both to the regional and local government and to the actors of the transformation of the cities and territory"*

The call for applications for the research fellowship issued pursuant to the University Regulation issued by Rectoral Decree (D.R.) no. 252/2016.

The activities shall be carried out under the supervision of a tutor, Scientific Responsible Prof. Carlo Moccia in a non-subordinate relationship with no set working hours.

The main place of work will be: Department of civil engineering and architecture of the Politecnico di Bari, VIA ORABONA,4 , BARI, ITALY, and Department of Mobility, urban quality, public works, ecology and landscape of Apulia region, section protection and enhancement of the landscape.

**-n. 1** professional grant research fellowship, for the execution of research activities within the project entitled: ***"Models for the integrated transport and land-use planning"***, according to the annexed Activity Programme:

*"This study proposes a systemic and quantitative approach to the integration of transportation and land-use planning by defining a decision support systems that take into account the interaction between transportation and land-use. A set of indicators will be specified in order to estimate the impacts (i.e. costs and/or benefits) of such interactions. The ex-ante values of these indicators will be estimated by means of the defined system of simulation models based on the recent developments in the fields of transportation systems and urban economics theories"*

The call for applications for the research fellowship issued pursuant to the University Regulation issued by Rectoral Decree (D.R.) no. 252/2016.

The activities shall be carried out under the supervision of a tutor, Scientific Responsible Prof. Michele Ottomanelli e Prof Angela Barbanente in a non-subordinate relationship with no set working hours.

The main place of work will be: Dicatech Department of the Politecnico di Bari (VIA ORABONA,4 , BARI, ITALY) and regional Office of the Apulia region.

**Requirements for candidacy**

The selection is open to candidates in possession of the following qualification:

<b>Research title</b>	<b>Access requirements</b>
Geo-hydro-mechanical method for the diagnosis of landslide mechanisms in clayey slopes in the Daunia Apennines, aimed at the design of mitigation strategies	Residence in Apulia region. Single cycle degree or second cycle degree in Civil Engineering, address geotechnical engineering, achieved in the last five years
Construction of Guidelines for the Enhancement and Integrated Redevelopment of Coastal Landscapes of Puglia	Residence in Apulia region Single cycle degree or second cycle degree in Architecture, achieved in the last five years
New settlement models for the rehabilitation of the 'urban sprawl' and of 'informal landscapes'	Residence in Apulia region. Single cycle degree or second cycle degree in Architecture, achieved in the last five years

Models for the integrated transport and land-use planning	Residence in Apulia region.  Single cycle degree or second cycle degree in Civil Engineering or Engineering for the Environment and the Territory, achieved in the last five years

Candidates must possess the admission requirements on the deadline for submission of applications laid down in this call.

The selection is not open to any persons who are related by blood or by marriage up to the fourth degree, to a professor working in the department or structure for which the call is issued, or to the Rector, Director General or a member of the Board of Governors of the University.

The selection is also not open to anyone who has held research fellowship contracts with any institution, pursuant to Italian Law no. 240/2010, for a period which, summed to the foreseen duration of this contract, exceeds a total of 6 years, excluding any period in which the contract coincided with a PhD without scholarship, for the maximum limit of the legal duration of the PhD programme.

Furthermore the selection is not open to anyone who has had research fellowship or fixed-term researcher contracts at the Politecnico di Bari or any other state-funded, private-funded or distance-learning Italian university pursuant to articles 22 and 24 of Italian Law 240/2010, or with any other body listed in paragraph 1 of Art. 22 of Italian Law 240/2010 for a period which, summed to the foreseen duration of this contract, exceeds a total of 12 years, even if not consecutive. For the purposes of the duration of the above-described periods, in compliance with the laws in force any periods of maternity or sick leave shall not be calculated.

### **Application**

The application for selection, in a sealed envelope and bearing the title indicated in the call for proposal for the Research Fellowship, addressed to the magnificent Rector of Politecnico di Bari, via Amendola 126/b , 70126 Bari, Italy, drawn up on unmarked paper (according to the annexed model), shall be delivered not later than **28/03/2019**.

Any applications received beyond the deadline will not be accepted. The application may be presented:

- Shipping by registered mail with return receipt, not later than **28/03/2019** at: Politecnico di Bari, Via Amendola n. 126/B, 70126 Bari (Italia);
- Shipping by e-mail PEC at: [politecnico.di.bari@legalmail.it](mailto:politecnico.di.bari@legalmail.it) not later than 28/03/2019.
- delivered by hand at Protocol Office of Politecnico di Bari ,Via Amendola, 126/b - 70126 Bari – not later than 28/03/2019 at the following times: Monday. – Thursday From 10.00 to 12.00, Tuesday from 15,00 to 16,30

The structure shall assume no liability for the non-delivery of correspondence which is not the result of errors made by its own staff.

In the application the candidates must, under their own responsibility, indicate:

- surname and name;
- date and place of birth;
- nationality;
- residence and chosen address for correspondence for the purposes of this selection;
- that they do not have a criminal record and are not involved in any current criminal proceedings (or if so, state which);
- that they possess the qualification of..... in ....., obtained from..... on (date)..... (indicate the qualifications required as stated in article 2 of the call for applications

or

- that they possess an academic qualification obtained abroad, which is deemed equivalent.  
The candidates in possession of a qualification obtained abroad must annex to their applications a translation into Italian of their foreign qualification, accompanied by a sworn statement that it is a faithful translation of the original certificate.

The foreign qualification may be declared admissible by the Evaluation Board, solely for the purposes of admission to the selection procedure.

In case of award, the winning candidates having obtained their qualification in a country outside of the European Union, must provide the Structure, in the same manner as laid down for the presentation of applications, the official translation with a declaration of value of the foreign qualification issued by the competent diplomatic representation or Italian consulate in their home country, in accordance with the applicable laws.

Candidates must enclose the following with their applications:

- their scientific and professional curriculum vitae;
- thesis;
- certificates of all qualifications to be assessed according to art. 3 of this call for applications. Academic and professional qualifications issued by Italian public administrations must be self-certified or submitted in an unstamped photocopy, as provided for in art. 15 of Italian law no. 183/2011, by way of a simple declaration of certification pursuant to articles 46 and 47 of Italian Presidential Decree (DPR) 445/2000.

Candidates are admitted to the selection procedure with reserve.

At any time, even after participation in any tests, the Administration may, with justification, exclude them from the selection procedure. The concerned candidate will be notified of such exclusion.

### **Comparative assessment of the candidates and the Evaluation Board**

The candidates will be assessed comparatively by a Commission appointed by a Rectoral Decree, and formed by three professors of Politecnico di Bari.

The selection procedure focuses on the examination of the selection criteria laid down in advance by the Commission, the candidates' scientific-professional curriculum and the scientific work and publications resulting from the documents enclosed with the application as well as an interview, aiming to verify the suitability of the candidate for carrying out the research programme.

During the interview, the Commission will also verify the candidates' knowledge of the foreign language(s) required in the announcement on relevant sectoral topics.

Only for candidates residing or domiciled outside the Italian territory, upon their request, the oral exam may be held also by using Skype. These applicants have to prove their identity to Commission by showing the colour ID document already attached in the application. In that case these candidates will also have to produce, together with the documentation pursuant to art. 3, Annex C duly filled.

Notice about date and location where the oral examination will be published on the online register praetorian (Albo pretorio) of the Politecnico of Bari.

To be admitted for interview, the candidates must show a valid ID document.

At the end of the selection procedure, the Board will draw up a list of candidates with relative scores, and the final ranking of the selection will be published on Politecnico's online register praetorian by a Rectoral Decree.

If two candidates receive the same scores, preference will be given to the younger candidate.

The successful candidate has to send to Protocol office of Politecnico di Bari, Via Amendola n. 126/B, 70126 Bari, within 15 days starting from the day after of final ranking publication the following documents:

- a) declaration of acceptance of the research fellowship, by filling up the form available on [www.poliba.it/Ricerca/Assegni di Ricerca](http://www.poliba.it/Ricerca/Assegni di Ricerca);
- b) photocopy of ID documents
- c) photocopy of Italian fiscal code (if available).

### **Duration and amount of the contract**

The contract has a duration of 24 months and may be renewed and/or extended in the terms laid down in the University Regulation concerning research fellowships, as issued by D.R. no. 252/2016.

The gross amount of the research fellowship contract is € 19.367,00 (professional), per annum. The amount is exempt of withholding tax and includes all statutory social security charges the Research Fellow is subject to.

The amount will be paid in deferred monthly payments.

### **Non-accumulation, incompatibility, leave**

1. The position of research fellow is incompatible with the following positions:

a) fixed-term and full-time staff employed by the bodies listed in art. 22 para. 1 of Italian Law no. 240/2010;

b) persons employed by any private bodies, on a fixed term, permanent or part-time basis; For staff of any Public Administration other than those listed in letter a) refer to the provisions of point 2 below;

c) persons with fixed-term research contracts with any university;

d) adjunct professors with official teaching responsibilities in degree programmes or specialisation schools in any university;

e) persons enrolled in any first, second or single cycle degree programmes, PhD programmes with scholarships or specialisation school. Self-funded research contracts are compatible with enrolments in non-medical specialisation schools, for which no study grant or contract is foreseen or master's degree only where authorised in advance by the structure Director, and having sought the opinion of the tutor.

f) persons awarded research fellowships at any other body.

2. Employees of public administrations other than those listed in point a) with a fixed-term, permanent or part-time contract shall take unpaid leave of absence for the whole period of the research contract.

3. Freelance professional activities are compatible with the research fellowship contract where authorised in advance by scientific responsible and having verified that the activities in addition to the research fellowship do not prejudice the regular execution of the contract.

4. The accumulation of the research fellowship contract with study grants awarded for any purpose is not permitted, with the exception of those granted by national or foreign institutions for the purposes of integrating the research activities with study periods abroad.

5. The above requirements must be possessed from the moment of entry into force of the contract. The winning candidate shall sign a specific affidavit undertaking to notify the department of any variations in the declared situations as soon as they occur.

### **Reference norms**

For any matters not laid down in this call for applications, refer to the "Politecnico di Bari Regulation for the awarding of grants for cooperation in research activities" by Rectoral Decree no. 252 dated 05.07.2016 and other statutory regulations in force.

The personal data provided by the candidates in their applications, pursuant to articles 7 and 13 of Italian Legislative Decree no. 196 of 30.06.03, shall be processed for the purposes of managing the selection procedure and the contract.

This call for applications will be published on the Politecnico di Bari Portal, on the MIUR website.

Date, 26/02/2019

The Rector  
Prof. EUGENIO DI SCIASCIO



