CALL FOR NR. 1 RESEARCH GRANT ART. 22 L. 240/2010 (TYPE B – GRANTS ON OTHER FUNDS)

AREA 09 - INDUSTRIAL AND INFORMATION ENGINEERING - SSD ING-IND/09 --CALL SECT. 09/C1 -

FLUID MACHINERY, ENERGY SYSTEMS AND POWER GENERATION

Title: “Modeling, simulation, and optimization of complex energy systems and micro-grids powered by renewable energy sources and integrated with energy storage systems”

Scientific Manager: Ordinary professor Prof. Giorgio CAU

Selection code: 268

PUBLISHED ON THE UNIVERSITY OFFICIAL SITE: March 3rd, 2015

DEADLINE FOR APPLICATIONS: April 9th, 2015

THE PRORECTOR

HAVING REGARD TO Law 9th May 1989 nr.168;

HAVING REGARD TO Law 30th December 2010 nr. 240 involving “Regulations for the organization of the Universities, of the academic staff and their recruitment, as well as proxy to the Government for the motivation to quality and efficiency of the University system ” and in particular the art. 22 “Research grants”;

HAVING REGARD TO the University Statute issued by the D.R. nr. 339 on 27.03.2012, published on the O.G. General Series nr.89 on 16.04.2012; 

HAVING REGARD TO the University Regulations about the Awarding of Research Grants;

HAVING REGARD TO the departmental resolution approving the request for the opening of the Research Grants provided for in this call;

CONSIDERED the need to call a public selection for the awarding of the above given grants;

ESTABLISHED the availability of the funds.

DECREES

ARTICLE ONE

(Charactersitic of the project programme)

A selection, based on qualifications and interview, is called for the awarding of grants aimed at implementing the research under the following characteristics:

Place for the implementation of the research: Department of Mechanical, chemical and material engineering.

Scientific Manager: Ordinary professor Prof. Giorgio CAU.

Department resolution: n. 2 del 16/02/2015.

Note of the Adm.ve Department Research and Territory: March 13rd, 2015, Prot.9065.

Grant number: 1 research grant.

Grant duration: 24 months.

Area: Area 09 - Industrial and information engineering.

Examination Section: 09/C1 - Fluid machinery, energy systems and power generation.
Scientific Disciplinary Section: ING-IND/09.

Title of the project (Italian): Modellazione, simulazione e ottimizzazione di sistemi energetici complessi e di micro-reti alimentati con fonti energetiche rinnovabili e integrati con sistemi di accumulo energetico

Brief description of the project (Italian): L’assegnista sarà coinvolto in un progetto di ricerca concernente lo studio di sistemi innovativi di generazione elettrica da fonti energetiche rinnovabili basati principalmente sull'energia solare concentrata e sulle micro-reti alimentate con diverse tipologie di fonte rinnovabile (olica, solare, ecc.). Caratteristica fondamentale di tali sistemi sarà l'accumulo energetico in forma elettrica, termica e chimica (idrogeno).

L'attività dell’assegnista sarà inquadrata nelle seguenti attività di ricerca teoriche e sperimentali:
- Sviluppo di modelli di simulazione di componenti di impianti a fonti rinnovabili e di sistemi di accumulo dell'energia;
- Sviluppo di modelli di gestione ottimale di micro-reti alimentate con fonti rinnovabili dotate di sistemi di accumulo di energia elettrica, termica e con produzione, accumulo e utilizzo di idrogeno;

Partecipazione alla sperimentazione di sistemi e componenti basati sulle suddette tecnologie.

Title of the project (English): Modeling, simulation, and optimization of complex energy systems and micro-grids powered by renewable energy sources and integrated with energy storage systems.

Brief description of the project (English): The fellow will be involved in a research project on the study of innovative power generation systems from renewable energy sources mainly based on the concentrated solar and micro-grids fed with different types of renewable sources (wind, solar, etc.).

The activities of the fellow will be framed, in particular, in a theoretical and experimental research program as specified below:
- Development of simulation models of renewable energy system components and of thermal energy storage systems;
- Development of models of optimal management of micro-grids powered with renewable energy sources equipped with electrical and thermal energy storage systems and with systems of production, storage and use of hydrogen;
- Participation in the experimentation of systems and components based on these technologies.

Academic qualification required IN TOPIS RELATED TO THE INDUSTRIAL-MECHANICAL ENGINEERING WITHIN THE AMBIT OF FLUID MACHINERY AND ENERGY AND ENVIRONMENTAL SYSTEMS

OR

BA Honours degree, specialistic or master degree (II level) in MECHANICAL ENGINEERING (FIVE YEARS COURSE) with at least one of the following options:
- national or international research and higher education grants;
- regional grant pursuant to the call of the Autonomous Region of Sardinia, published in the BURAS on 31.12.2008 according to the L.R. of 7th August 2007 nr.7;
- previous research contracts for no less than two years, though non continuous ones.

Foreign Language, whose knowledge will be assessed during the interview: English. This assessment is not required for applicants certifying at least a B1 level of the language, or a comparable one.

Funding Authority: Riassegnazione fondi DIMCM - Convenzione Sotacarbo
Riassegnazione fondi
Riassegnazione Fondi Convenzione Sotacarbo annualità 2014

Settore Concorsi Personale T.A. / SEDE: Palazzo del Balice, Via Università 40, 09124 CAGLIARI
Tel. 070.675.2375-2320-2055 - mail: concorsi@amm.unica.it - http://www.unica.it/concorsi
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Annual gross pay, net of taxes charged on the Management: 19,367,00 euros.

Deadline for handover or mailing applications: April 9th, 2015

The Management may not consider the applications delivered five working days later than the above given deadline, even if sent by mail within this time.

Date and place for the interview and the possible language assessment: April 29th, 2015, h.10.00

at nell'edificio della Sezione di Meccanica presso il Dipartimento di Ingegneria Meccanica, Chimica e dei Materiali - via Marengo, 2 - Cagliari

ARTICLE TWO

(Entry qualifications, incompatibility and duration)

Entry qualifications must be held by the deadline given for the presentation of applications to the selection.

The applicant is accepted to the selection conditionally; failing these qualifications, the Rector can decide at any time, through a motivated decision, to reject the application.

Participation to the selection is free, without any restrictions as for nationality.

However, the overall duration of the relations established according to the art. 22 of the L.240/2010, included any possible renewal, cannot be longer than four years, apart from the period when the grant was held during the Ph.D., and up to the maximum legal time limit of the referred course. Therefore, if summing up any previous terms as grant holders under the art. 22 of the L.240/2012 to the term of the grant awarded in this call, applicants might exceed the above said limit, they will not be admitted to the selection.

Applicants will not be admitted to the selection as it further follows:

a) if public permanent employees in this University, in the institutions and public centres for research and experimentation;

b) if relatives and up to twice removed kinsmen of a teacher working at the university, or of the Rector, the General Manager, or of a member of the Board of Directors at the University (art. 18, par. 1, lett. B and c, law 240/2010);

c) if they have had any other relations with the University of Cagliari, or with other Universities, or with the authorities included in the art. 22, par. 1 of the law 240/2010, even for non continuous periods, as researchers for fixed terms, in accordance with the art. 24 of the L. 240/2010, and as grant holders according to the art. 22 of the law 240/2010 for more than twelve years, summing up the duration of the grant awarded in this call. The periods spent off work for pregnancy or for health problems will not be taken into account (par. 9, art. 22, law 240/2010).

Holding a grant is not compatible with a salaried occupation, for a specified or an unspecified period, at either public and private authorities or institutions. Grant holders working in public administrations, except for permanent employees at the institutions specified in the art.22, par.1, of the L.240/2010, can be given extended leave without benefits.

Furthermore, the grant holding is incompatible with the participation, both in Italy and abroad, to a degree course, a specialist or master degree, a Ph.D. on a scholarship or a medical specialisation.

The grant cannot be cumulated to grants awarded to any right, except for the ones given by national or foreign institutions aimed at integrating, with stays in a foreign country, any research activity implemented by the grant holder. Any other reasons for incompatibility occurring after the agreement will have to be immediately communicated to the University.
ARTICLE THREE
(Applications)

Applications to the selection will have to be submitted within the date given in the art.1 to avoid exclusion, following one of the given procedures:

- handover, at the offices of the Area Staff Competitions T.A.A., located in Cagliari, Palazzo del Balice, Via Università 40, from Monday to Friday from 10:00 a.m. to 1:00 p.m. The date on the reference note released at the receiving office, will be evidence of the obedience to the deadline;
- mailing through post office, with a receiving note, at the University of Studies in Cagliari, Area for Technical Administrative Staff Competitions, Via Università n.40 – 09124 Cagliari. The stamp and the date of the receiving post office will be evidence of the obedience to the deadline.
- Any application delivered later than five days from the given date, even if sent through post office within the given term, will not be taken into consideration.

Applications through fax or email will not be admitted.

Applications will have to be written according to the template given in annex A, including all the required elements.

Applications will have to include:

a) A scientific professional curriculum suitable for the project implementation;

b) A Substitute declaration of certifications, issued according to the agreement in the D.P.R. 28.12.2000, nr. 445, as for the possession of the assessable qualifications, drawn up according to the scheme in Annex B, with all the required elements.

c) The publications, attached in the true copy or in a certified photocopy (publications will have to include a self declaration in substitution of attested affidavit in attachment (Ann. C), even a collective one, issued according to the agreement in the D.P.R. 28.12.2000, nr. 445, certifying its compliance to the authenticated copy); for any work printed in Italy authors, title, printing press, date and printing place or title, number of the collection or of the volume and year of reference must be clearly stated. As for the works printed abroad, they must include date and possibly place of publication. Publications must be in compliance with what provided for by the the current regulations.

d) If the qualifications for the admission to the selection have been taken abroad, a copy of the provision for its recognition stating its validity in Italy, or the declaration of validity DV released by the diplomatic-consular representative in charge for the territory in the country, whose system the educational qualification or any other document useful to assess the eligibility of the qualification itself to the implementation of the project refers to.

e) Form for the application for the interview via Skype (Ann. D) including all the required information;

f) Double sided photocopy of a valid identity document, in colours

g) On the envelope, applicants will have to write their surname and name, their address, the Scientific Manager, and the title of the project.

Qualifications submitted to the above said Administrative office beyond the deadline given for the presentation of applications to the selection will not be considered.

This Administrative office accepts no responsibility for lost applications or documents where this is due to the applicant having provided incorrect contact details or having failed or delayed in notifying any changes to these, nor for any possible misdelivery or telegraph error.

ARTICLE FOUR
(Selection Committee and selection procedure)
The Selection Committee will be appointed pursuant to the art.7 of the University regulation by the Rector’s Decree and is composed of three teachers, at least two of them full faculty members, concerning the Department and/or the Departments the connected project plan refers to, including the scientific manager of the project.

The selection will take place on the basis of the qualifications and the interview, through internationally recognized standards, in agreement with what provided for in art. 2 and 3 of the M.D. 28.07.2009, prot. 89/2009, “qualifications and scientific publications assessment ”.

The assessable qualifications will include the final grades, the Ph.D., the scientific publications, the certificates of attendance of any post-graduate courses, taken in Italy or in a foreign country, as well as the implementation of a well supported project at public and private authorities through regular contracts, grants or appointments, either in Italy and abroad, and any other qualification that can be assessed from time to time.

Apart from the final grades, considered independently from the awarding date, qualifications will be taken into account if awarded within six years before the deadline given for the presentation of the application to the selection.

During the selection, aimed at assessing the suitability of the applicants to the projects they are applying for, after the detailed assessment of the scientific-professional curriculum, the Committee will have to assess the knowledge of a foreign language for applicants with none of the certifications specified in Art.1 of the current call for the selection.

The applicants’ assessment by the Committee appointed by a special decree will be marked in percent. Scores will be given as follows:
- up to a maximum of 80/100 for the qualifications assessment;
- up to a maximum of 20/100 for the oral examination.

Applicants achieving a total score of at least 60/100 (in which 40/100 is given for the qualifications assessment and 10/100 for the oral examination) and the qualification in the language test – whether no level certification is submitted- will be included in the ranked list on a decreasing order. Scores being equal, younger applicants will prevail.

Applicants residing or domiciled out of the regional area, making a specific request, will take the above said selection test via Skype on the computer, provided the applicant’s identity can be assessed through the concurrent display of the same document in colour enclosed in the application.

This notice is to be fully taken as a call. There will be no further communication to the applicants’ address.

**ARTICLE FIVE**

(Contract drafting, start and implementation of the project, withdrawal)

The grant will be awarded according to the order in the general ranked list drawn up for the project.

The highest ranked candidate will have to provide, within fifteen days from the receipt of the formal notification of the award, starting from the day following it, a declaration of acceptance of the contract to the University, accompanied by a self-certification of the birth place, the nationality, the residence, the tax code, and the non-existence of situations of incompatibility as stated in the art. 2 of this call.

At the same time, the applicant will draw up an ad hoc contract of private law for self-employment regulating the terms of cooperation, considering that the project must be flexible but consistent with its requirements, it must be uninterrupted, not merely occasional and connected to the overall activity for its implementation. The latter will take place autonomously, without a fixed working time.

The grant holder will carry out the project under the direct responsibility of the manager of the project the grant has been awarded for.
The grant holder will work on the project at the scientific manager’s related Department, using any equipment and service available in it. Upon the project manager’s permission, the project can be carried out also in other University research facilities, or in qualified ones and/or Italian or foreign centres.

In case of renunciation or non-acceptation within 15 days from the notification, or in case of withdrawal within 90 days from the start of the activity, the grant will be awarded to the next applicant qualified in the ranked list.

To avoid forfeiture, the grant holder will have to start working on the project, within the first day of the month following the date of the contract draft.

The start of the activity will have to be certified providing a declaration of acceptance issued by the project Manager to the Rector, through the Manager of the related Department.

The contract does not ensure any right to permanent staff positions in the University.

The grant holder deciding to break the contract before the deadline will have to communicate it in writing to the scientific manager or to the Central Administration offices at least 30 days in advance. Failing this, the reimbursement of a monthly salary amount from the grant will be requested.

For any fiscal and social security term the art.11 of the University Regulation for the awarding of research grants will be considered.

The grant holder will be asked to issue an activity report every 12 months, that will be evaluated by the department Board through its Scientific Manager. The grant can be renewed in agreement with the procedures and with the requirements given in the art. 5 of the University Regulation for Research Grants awarding, provided there is a financial backing.

ARTICLE SIX
(Personal data processing)

Any data given for the selection will be mainly digitally processed and only for the selection they were given for or for the related proceeding. They will be saved, according to agreement in the L.D.196/03, only for the period they are used within the administrative procedure connected to it.

Giving and collecting data is compulsory for the preparation of the selection procedure and, whether they are personal ones, under the Law 5th February 1992, n. 104 "Framework Law for the care, social integration and rights of disabled people", and the Law 12th March 1999, nr. 68 "Regulations for the right to work of disabled people ".

The person responsible for these data is the Rector of the University of Cagliari, and the Manager for data processing is the Staff Manager at this University. The people concerned will be able to exercise the rights specified in the art. 7 of the L.D. 30.06.2003, nr.196. with the person responsible for the data processing.

It is further specified that the Data Processing Managers’ list is available in the Management web site, www.unica.it.

Under what provided for in the art. 5 of the Law 7th August 1990, nr. 241, the Manager for the selection procedures related to this call is Mrs. Maria Luigia Broi, Manager of the Technical Staff Competitions Department, Adm.ve and Dept.al, at the Staff Management in this University.

ARTICLE SEVEN
(Advertising and safety regulations)

The current call will be published on the web site of the University (www.unica.it/concorsi ), on the site of the Ministry for Education, Universities and Research (http://bandi.miur.it) and on the European Community site (http://ec.europa.eu/euraxess ).

For what not explicitly mentioned in this announcement the University shall act in compliance with the rules included in the Law nr.240/2010 and the regulations in force concerning the awarding of
research grants in this University. In case of dispute, refer to text in Italian.

Cagliari, March 18th, 2015

The PRORECTOR
(Giovanna Maria LEDDA)