

**Open selection for admission to Doctoral studies (PhD) at the University of Calabria  
(XXVII CYCLE)**

**Call for Proposal D. R. 25 del 11/01/2012**

**GURI n. 06 del 24/01/2012**

**DEADLINE: 12<sup>th</sup> February 2012**

**INFORMATION (SUMMARY) FOR FOREIGN STUDENTS**

This document is a short summary of the official statements available in the Official Journal of the Italian Republic and in the **call for applications** (you can download the Italian version of the call for application at the following link: <http://unical.ugmanager.it/>).

**This summary is provided only in order to assist non-Italian candidates during the application and selection procedures for doctoral studies.**

**QUALIFICATIONS/REQUIREMENTS FOR PhD COMPETITIVE EXAMINATION**

**Doctoral studies are open to candidates without any restriction on age and citizenship.**

The main requirement for participating in the selection procedure for admission to doctoral studies is the possession of a **second-level University degree of the Italian Education System**, generally equivalent to a Master degree.

**Candidates must obtain the degree before the deadline for applications.**

**ADMISSION PROCEDURES**

The application for admission must be done only through **postal mail**.

Applicants are requested to properly fill-in the fac-simile of the application form available in Italian at the following link: <http://unical.ugmanager.it/>.

Below you find a fac-simile with the English version of the items of the application form down the same Italian items (This is provided only to help the candidate to fill in the Italian application form. It is necessary to send by postal mail only the Italian version of the application form for the PhD Course/School competition of your interest).

**Al Magnifico Rettore dell'Università della Calabria  
- via Pietro Bucci - 87036  
ARCAVACATA DI RENDE (CS)**

First Name, Last Name \_\_\_\_\_, Italian Social  
Security Number (Codice Fiscale): \_\_\_\_\_.

Only for foreign candidates: I, the undersigned, declare not to have an Italian Social Security  
Number.

Place of birth \_\_\_\_\_ Date of birth (dd/mm/yyyy) \_\_\_\_\_ **Sex (M/ F)**

Permanent address (street, n°, city, province, State)

\_\_\_\_\_ zip code \_\_\_\_\_ tel.

\_\_\_\_\_ mobile \_\_\_\_\_

e-mail \_\_\_\_\_

contact information for the present application:

address (street, n°, city, province, state) \_\_\_\_\_

zip code \_\_\_\_\_ tel. \_\_\_\_\_

(only for foreign candidates without address in Italy) Embassy or Consulate in Italy:

address (street, n°, city, province) \_\_\_\_\_

zip code \_\_\_\_\_ tel. \_\_\_\_\_

I, the undersigned,

ASK

to apply to this competition for admission to the XXVII edition of the PhD School/Programme in \_\_\_\_\_ (of the School \_\_\_\_\_) curriculum/research field (optional) \_\_\_\_\_ taking place at the Università della Calabria.

I, the undersigned, under my own responsibility and aware of the penalties involved in case of false statements, fabrication or use of false documents with respect to art. 76 of Italian D.P.R. n. 445 (December 28, 2000)

DECLARE

1) to be \_\_\_\_\_ citizen (in the case of dual citizenship, whose one Italian, you must opt for Italian citizenship);

2) to enjoy civil and political rights;

3) to enjoy civil and political rights with respect to my Country of affiliation or origin and, with exception to Italian citizenship, to meet all the other requirements set out for the citizens of the Republic (only for foreign citizens);

4) to be holder of a university degree (previous 4-year system) in \_\_\_\_\_ awarded on (date) \_\_\_\_\_ by the University of \_\_\_\_\_ with the final mark of \_\_\_\_\_ ;

5) to be holder of a second-level specialization university degree (new system) in \_\_\_\_\_ awarded on (date) \_\_\_\_\_ by the University of \_\_\_\_\_ with the final mark of \_\_\_\_\_ ;

OR

will be awarded a university degree in the \_\_\_\_\_ session on (date) \_\_\_\_\_ by the University of \_\_\_\_\_ ;

ONLY FOR FOREIGN CANDIDATES

to hold a university degree in \_\_\_\_\_ awarded on (date) \_\_\_\_\_ by the University of \_\_\_\_\_ with the final mark of \_\_\_\_\_ and, therefore, I ask for it be recognized by the PhD Education Board as equivalent to an Italian degree for the sole purpose of admission to the present PhD programme

or

to hold a declaration of equivalence awarded by the University \_\_\_\_\_ Rector's Decree (D.R.) N. \_\_\_\_\_ of (date) \_\_\_\_\_.

6) to be/not be the holder of an Italian scholarship as a fellow researcher in the field of \_\_\_\_\_ at the University of \_\_\_\_\_ until (date) \_\_\_\_\_ ;

7) to be/not be a public worker at \_\_\_\_\_ in the position of \_\_\_\_\_ ;

8) to have/have not applied to a School of Specialization, Higher education programme or Master's programme and, in the affirmative, commit to suspend attendance before the beginning of the PhD programme;

9) to be/not be impaired according to the Italian law 104/92, integrated by the Italian law 17/99 and I ask to receive the following aid \_\_\_\_\_ ;

10) to commit to full-time attendance of the PhD programme according to the modalities set out by the PhD Education Board;

11) to know the following foreign language(s): \_\_\_\_\_;

12) to commit to promptly communicate any eventual change in my own permanent address or contact address;

13) to have/not have received a scholarship as a PhD student;

14) to have examined and accepted all the rules stated for the present competition.

15) to be informed that this competition is co-funded by the PON (National Operational Programme) Research & Competitiveness 2007/2013 - Convergence Regions - Priority I: "Support to structural mutations" - Operational Objective 4.1.1.1 "Research and technology areas triggering processes of change in productive system and creating new sectors" - Action II "Actions supporting industrial research", within the Project PON..... (not foreseen in the application form for the PhD School TELESIO);

16) as PhD student, if he/she wins the scholarship, will observe the provisions contained in the European Community regulations and Italian standards and law for projects co-financed by the PON R&C 2007/2013 (not foreseen in the application form for the PhD School TELESIO);

17) to be informed that, in accordance with and for the purposes of Art.13 of the Italian law D. Lgs. n. 196 (30/06/2003 ) – "Codice in materia di dati personali" – that the personal data collected will be treated, even by electronic means, only as part of the proceedings for which this statement is made and used, in aggregate form and for statistical purposes, by the Ministero dell'Istruzione, Università e Ricerca and the Università della Calabria;

18) to be informed that participation to this competition implies, with respect to the principles of law listed above, tacit acceptance that personal data will be published on the Università della Calabria's website.

19) to enclose the following documentation: \_\_\_\_\_

Date: \_\_\_\_\_

Signature\*

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\*ANNEX A COPY DULY SIGNED OF A VALID DOCUMENT OF IDENTITY UNDER THE ITALIAN LAW 445/2000.

After filling in the fac-simile of the application form, applicants must send it, **duly dated and signed**, by postal mail. It's necessary to annex to the application form the documentation requested in the call:

- 1) copy of the payment receipt of amount of 11,00 euros made on the bank account IBAN IT 90 F 01030 80880 000000010106 for University of Calabria with the following reason for payment: "Payment for admission to Unical PhD call for proposal XXVII cycle". The name of the bank is **Monte dei Paschi di Siena Spa** and the **SWIFT/BIC** code is: **PASCITMMXXX**.
- 2) research project, of the maximum size of n. 3 pages, duly signed about the research topic specified for each PhD course/school in the annex A for the call for proposal;
- 3) Curriculum Vitae et Studiorum duly signed;
- 4) (eventual) a list and a copy of publications and any other documents or qualifications useful for the selection;
- 5) declaration of equivalence;
- 6) a signed photocopy of the candidate's personal document;
- 7) a copy of the University academic degree in their original language and its legalised translation into Italian or English;
- 8) a final University transcript, including denominations of the courses taken, the marks received and the date of the award of the degree and its legalised translation into Italian or English;
- 9) reference letters;
- 10) citizenship certificate;
- 11) if in possession, the "dichiarazione di valore".

**The application form and all the documents must** be sent by recorded delivery with acknowledgement of receipt, or preferably by courier, at the following address:

"Magnifico Rettore dell'Università della Calabria

Via Pietro Bucci

87036 Arcavacata di Rende (CS) – ITALY",

**within the date of deadline. In any case the application forms that arrive 5 days after the date of deadline will be not evaluated.**

#### **DECLARATION OF EQUIVALENCE**

Candidates with academic degree awarded by a foreign University, not officially declared equivalent to the Italian academic degree, must fill in the form "Declaration for equivalence" (see **Addendum A** below), sign and send it, together with the other documents, **within the deadline for applications**.

ADDENDUM A

To the Rector of  
the University of Calabria  
Via Pietro Bucci  
87036 Arcavacata di Rende (CS) - ITALY

The undersigned

SURNAME	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>
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CITIZENSHIP	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>

IN ORDER TO BE ADMITTED TO THE COMPETITION FOR A PhD POSITION IN

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ASKS  
FOR THE DECLARATION OF EQUIVALENCE TO THE ITALIAN TITLE  
OF THE FOLLOWING FOREIGN ACADEMIC TITLE:

ACADEMIC DEGREE

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ISSUED BY THE  
UNIVERSITY OF

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COUNTRY

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FOR THIS PURPOSE, THE FOLLOWING DOCUMENTS ARE  
ATTACHED:

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DATE 

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 SIGNATURE

**Candidates must attach to the Addendum A the following documents:**

- a) a signed photocopy of the candidate's **personal document** (passport or ID card);
- b) a copy of the University **academic degree** in their original language and its legalised translation into Italian or English;
- c) a final **University transcript**, including denominations of the courses taken, the marks received and the date of the award of the degree and its legalised translation into Italian or English;
- d) if in possession, the “**dichiarazione di valore**”, issued by the Italian Embassy or Consulate. The “dichiarazione di valore” is a document certifying that the academic degree has legal validity in the country where it was obtained. The declaration should also specify that the academic degree was delivered after a full first + second level University curriculum (a total of at least 4 years) and that it is a qualifying title for being admitted to doctoral studies. If the first-level and second-level degrees are obtained in two different Universities, only a certification about the second level degree is required, though the “Dichiarazione di valore” should mention the full University curriculum - for instance that the Master degree was obtained after 5 years of university studies and that the first-level degree had been previously obtained in another university. Only successful candidates will have to deliver the “dichiarazione di valore”, if not submitted yet, within a period of time agreed with the Administration.
- e) one or more **letters of introduction (references/recommendation letters)** of your university.

**EXAMINATION PROCEDURES**

The competition for admission to doctoral courses consists of qualifications and oral examination. Candidates can take the oral examination by videoconference (for example over skype, through web cam).

In many cases candidates are allowed to take the exams in English. Students will be required to send **a list of qualifications as specified for each Doctorate in the call for application**.

Scholarships<sup>1</sup> will be awarded to successful candidates following the merit ranking order. On the basis of the number of available positions and scholarships: candidates with a high position in the ranking will gain a scholarship; if their position in the ranking is lower, they will be admitted to the course without scholarship; candidates with a low position in the final ranking won't be admitted to the course.

<sup>1</sup> The amount of the fellowship is € 13.638,47 per year. This amount can be increased up to 50% for PhD student who decide to spend a period of time abroad (maximum 18 months in the three-year PhD course).

The **PhD Schools and Course of the University of Calabria XXVII cycle**, provides n. 8 (eight) doctoral Positions, of which n. 4 (four) with scholarship.

The research areas, the examination procedures and the dates of the exams, contacts are specified for each PhD Courses/Schools in the Schedule of the Annex A of the call for proposal that you find below in English:

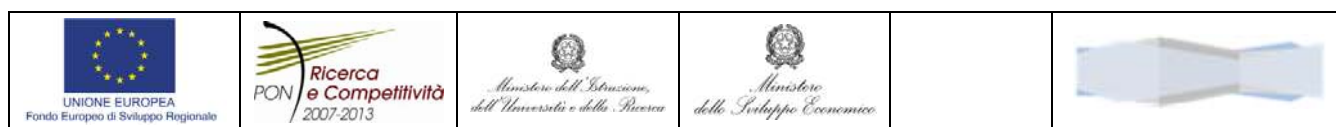
## The “Bernardino Telesio - Doctorate School of Science and Technique”

<b>Director</b>	Prof. Roberto Bartolino, Department of Physics, Via Pietro Bucci, Cubo 33B, Telefono: 0984/496122, E-mail: <a href="mailto:bartolino@fis.unical.it">bartolino@fis.unical.it</a> , SSD: FIS/07.
<b>Department</b>	Department of Physics
<b>Italian References CUN Area</b>	02 – Physical Sciences
<b>Italian Supplemtar CUN Areas</b>	01 - Mathematics and computer sciences, 03 - Chemistry, 04 - Earth Sciences, 05 - Biological Sciences, 08 - Civil Engineering and Architecture
<b>Scientific sectors</b>	From FIS/01 to Fis/08 From CHIM/01 to CHIM/12 From MAT/01 to MAT/09 INF/01 From ING-INF/01 to ING-INF/07 From Ing-Ind/01 to ING-IND/35 From Icar01 to Icar09
<b>Admission requirements</b>	<p>a) Old regulation Italian degree before D.M. 509/99; or b) Italian Specialistic degree (D.M. n. 509/99); or c) Italian Master Degree (D.M. 270/04); or d) Academic equivalent degree hold by foreign University.</p>
<b>Associated Universities</b>	None
<b>Educational Goals</b>	<p>The School aims to train highly qualified researchers in the technical and scientific areas that refer to the school (typically physical area, the chemical and materials science in the broadest sense, from design and construction of the material to their use in many different areas ) with a capacity of full inclusion in the industrial and university research laboratories active in this field but with skills that allow immediate entry into similar structures operating in related fields of research. In more detail the specific profile of the doctor who intends to form a basic training is geared towards enabling to operate in the field of innovation and production development, advanced design, planning and scheduling, management of complex systems and skills and diagnostics. In any case, the doctors of the school should have:</p> <ul style="list-style-type: none"> <li>• knowledge of basic sciences with attention to methodological and operational aspects;</li> <li>• ability to use mathematical tools and computer modeling of complex systems;</li> <li>• laboratory skills, with knowledge of methods of investigation and also sophisticated ability to implement and use them for research basic and applied;</li> <li>• ability to independently design and manage highly complex experiments gained through conducting a major research fundamental part of the PhD thesis;</li> <li>• ability to conceive, plan, design and manage systems, processes and complex and / or innovative;</li> <li>• the skills and tools for communication and information management;</li> <li>• ability to work professionally in areas such as scientific support to some of the industrial, food processing, chemicals and pharmaceuticals and those relating to</li> </ul>

	<p>the environment and energy saving;</p> <ul style="list-style-type: none"> <li>• context knowledge and ability to fit in the workplace following the evolution of scientific, technological, industrial and economic sectors.</li> </ul> <p>The doctoral-level training, would help fill some of the cultural gaps that exist in training and a graduate student, especially with the new regulations: two types of gaps that are opposite. On the one hand the new regulations in particular tend to form too early a (pseudo)-specialization omitting cross-cultural aspects that should be the basic elements of knowledge itself and the "culture" in general. Moreover, the level of advanced training (not necessarily specialist) is clearly not appropriate in general.</p> <p>The curricula relate in part to research, in the sense that in them still contain specializations (Options) different. The philosophy of the curriculum is to put out so attractive to extra-regional and international level, even those lines of research are particularly significant and competitive.</p>
<b>Duration</b>	3 years.
<b>Available positions</b>	<p>4 (four) positions of which:</p> <p>2 (two) with scholarship</p> <p>2 (two) without scholarship.</p>
<b>Scholarships</b>	<p>Scholarships: 2 (two) of which:</p> <p>N. 1 scholarship funded by the Department of Physics</p> <p>Scope of inquiry: "Optical properties of meta materials and plasmonic nano-structured" field research project "Self-organized nanomaterials for optical and electrical properties tailored" - NANOGOLD, funded under the 7<sup>th</sup> Framework Programme NMP-2008-2.2 -2 Nanostructured meta-materials, NMP-2008-2.1-2 Nanostructured materials Processing and upscaling of - project Reference: 228455.</p> <div data-bbox="790 1243 1077 1310" data-label="Image"> </div> <p>N. 1 Scholarship Italian MIUR</p> <p>Scope of inquiry: "ICT and electronic components" – field research project: Auto - assembly of structural defects and nano - objects in films of liquid crystals.</p>
<b>Admission procedures</b>	<p>Applicants must submit, under penalty of exclusion, under the art. 5 of the call, together with the application form:</p> <ol style="list-style-type: none"> <li>1) a research project, of the maximum size of n. 3 pages, duly signed, about research topics listed under the above mentioned item "Scholarships";</li> <li>2) a curriculum vitae et Studiorum, duly signed;</li> <li>3) (eventual) a list and a copy of publications and any other documents or qualifications useful for the selection;</li> <li>4) a signed photocopy of the candidate's personal document;</li> </ol> <p>within the deadline of the call to the following address: University of Calabria - Via Pietro Bucci - Arcavacata 87036 Rende (CS), with the following header: "Application for participation PhD XXVII cycle", and identifying the sender.</p>
<b>Examination procedures</b>	<p>The examination will consist of:</p> <ul style="list-style-type: none"> <li>- Evaluation of qualifications (selective testing);</li> <li>- Oral exam (for the candidates who have passed the qualification evaluation). The oral examination, if necessary, can be done via computer, with the appropriate level of assurance and security. The knowledge of English language will be</li> </ul>



	established during the oral examination.
<b>Qualifications to be presented</b>	Research project of the maximum size of n. 3 pages, duly signed; Curriculum Vitae et Studiorum, duly signed; Eventual Scientific publications and any other documents or qualifications useful for the selection related to the thematic areas of interest of the school.
<b>Date of evaluation of qualifications</b>	Wednesday, 22 <sup>nd</sup> February, 2012. The results will be published on the web site <a href="http://www.fis.unical.it/telesio">www.fis.unical.it/telesio</a> .
<b>Date of oral examination</b>	Thursday, 23 <sup>rd</sup> February 2012, 9:00 am in the Seminar Room (CUBE 31 c) Department of Physics - University of Calabria - Arcavacata Rende (CS).
<b>Foreign language</b>	English
<b>Examination program</b>	Examination subjects and topics are related to the thematic areas of interest of the school and to the research project proposed by the candidate.
<b>E-mail address for information</b>	School Director: E-mail: <a href="mailto:bartolino@fis.unical.it">bartolino@fis.unical.it</a> .
<b>PhD School Website</b>	<a href="http://www.fis.unical.it/telesio/">http://www.fis.unical.it/telesio/</a> .



## Doctoral School in Systems Engineering, Informatics, Mathematics, Operations Research – PhD in Systems Engineering and Informatics - ISIMR

### PhD in Systems and Computer Engineering

<b>Coordinator</b>	Prof. Luigi Palopoli, Department of Electronics, Informatics and Systems (DEIS), Via Pietro Bucci, Edificio41C - Piano 4, Telefono: 0984/494749-89, E-mail: <a href="mailto:palopoli@deis.unical.it">palopoli@deis.unical.it</a> , SSD: ING-INF/05
<b>Department</b>	Department of Electronics, Informatics and Systems (DEIS)
<b>Italian Reference CUN Area</b>	09 – Industrial and Information Engineering
<b>Italian Supplementar CUN area</b>	01 – Informatics and Mathematic Sciences
<b>Scientific sectors</b>	ING-INF05, ING-INF/04; ING-INF/02; MAT/08; ING-INF/03; ING-INF/07; ING-IND/32
<b>Admission Requirements</b>	a) Old regulation Italian degree before D.M. 509/99; or b) Italian Specialistic degree (D.M. n. 509/99); or c) Italian Master Degree (D.M. 270/04); or d) Academic equivalent degree hold by foreign University.
<b>Other institutions involved</b>	None
<b>Educational Goals</b>	<p>The <b>PhD Program in Systems and Computer Engineering</b> at the <a href="#">Department of Electronics, Informatics and Systems (DEIS)</a> of <a href="#">University of Calabria (UNICAL)</a> offers to people holding an Italian “laurea magistrale” in scientific disciplines (or equivalent foreign degree) advanced education and introduction to research activities in the areas of automation, electronics, computer science and telecommunications.</p> <p>These research fields are of great scientific relevance and remarkable practical interest for industries and the advanced tertiary sector. The PhD program opens interesting possibilities of exhaustive study and participation to top researches on information technologies, which includes computer science, automation, electronic systems, measurement systems, telecommunication networks, decision support systems.</p> <p>The scientific collaboration of the PhD Technical Staff Members with prestigious research institutions in Europe, USA and other countries, makes easy the placement in the world of international research through meetings with scientific personalities and permanence in foreign laboratories. The industrial</p>

	<p>collaboration in the applied research areas allows the PhD student to know the activities of the most technologically advanced companies, thus acquiring all necessary elements to make a proper choice between a career in the industrial or academic research.</p> <p>The PhD Program in Systems and Computer Engineering includes the following main scientific areas:</p> <ul style="list-style-type: none"> <li>- Computer Science and Engineering</li> <li>- Telecommunications</li> <li>- Automation and Systems</li> <li>- Electrical and Electronics Measurements</li> <li>- Electromagnetic Fields</li> <li>- Numerical Analysis</li> <li>- Renewable Energies</li> </ul>
<b>Duration</b>	3 years
<b>Available Positions</b>	<p>2 (two) positions of which:</p> <p>1 (one) with scholarship;</p> <p>1 (one) without scholarship.</p>
<b>Scholarships</b>	<p><b>N. 1 scholarship</b> concern “<b>Analysis, simulation, synthesis and measurement of antennas, with specific focus on frequency bands of RADAR used as sounders</b>”.</p> <p>The scholarship is funded by the European Program: <i>PON Ricerca&amp;Competitività 2007/2013 – Regioni Convergenza - Asse I “Sostegno ai mutamenti strutturali” – Obiettivo Operativo 4.1.1.1 “Aree scientifico-tecnologiche generatrici di processi di trasformazione del sistema produttivo e creatrici di nuovi settori” - Azione II “Interventi di sostegno della ricerca industriale”</i>, in the framework of the project PON01_01530 “<b>INTEGRATED SYSTEMS FOR HYDROGEOLOGICAL RISK MONITORING, EARLY WARNING AND MITIGATION ALONG THE MAIN LIFELINES</b>”, approved by Italian MIUR with ordinance n. 678/Ric of October 14<sup>th</sup> 2011.</p> <p><b>The PhD student must observe the provisions contained in the European Community regulations and Italian standards and law for projects co-financed by the PON R&amp;C 2007/2013.</b></p> <p><b>In particular, it is mandatory to report an explicit reference to the source of funding in all documents and publications of scientific or technical type relating to the monitoring and reporting requirements of the intervention.</b></p>
<b>Admission procedures</b>	<p>Applicants must submit, under penalty of exclusion, under the art. 5 of the call, together with the application form:</p> <ol style="list-style-type: none"> <li>1) a research project, of the maximum size of n. 3 pages, duly signed, about research topics listed under the above mentioned item “Scholarships”;</li> <li>2) a curriculum vitae et Studiorum, duly signed;</li> </ol>

	<p>3) (eventual) a list and a copy of publications and any other documents or qualifications useful for the selection;</p> <p>4) a signed photocopy of the candidate's personal document;</p> <p>within the deadline of the call to the following address: University of Calabria - Via Pietro Bucci - Arcavacata 87036 Rende (CS), with the following header: "Application for participation PhD XXVII cycle", and identifying the sender.</p>
<b>Examination Procedure</b>	<p>The examination will consist of:</p> <ul style="list-style-type: none"> <li>- Evaluation of qualifications (selective testing);</li> <li>- Oral exam (for the candidates who have passed the qualification evaluation).</li> </ul> <p>The oral examination, if necessary, can be done via computer, with the appropriate level of assurance and security. The knowledge of English language will be established during the oral examination.</p>
<b>Qualifications to be presented</b>	<p>Research project of the maximum size of n. 3 pages, duly signed;</p> <p>Curriculum Vitae et Studiorum, duly signed;</p> <p>Eventual Scientific publications and any other documents or qualifications useful for the selection related to the thematic areas of interest of the PhD program.</p>
<b>Date of evaluation of qualifications</b>	<p>The evaluation for qualifications will take place on February 22<sup>nd</sup>, 2012. The results will be published on the PhD website and will also be posted at the showcase of the DEIS.</p>
<b>Date of oral examination</b>	<p>February 23<sup>rd</sup>, 2012 at 9:30 AM, in the meeting room, Cube 42 C, V floor, of DEIS – Università della Calabria – Arcavacata di Rende (CS).</p>
<b>Foreign Language</b>	<p>The knowledge of English language will be established during the oral examination.</p>
<b>Examination program</b>	<p>All issues relevant to the scientific areas listed above.</p> <p>Oral exam: in-depth interview on the proposed research project and, where appropriate, on subjects of interest of the PhD program.</p>
<b>E-mail Address for information</b>	<p>Prof. Luigi Palopoli – E-mail: <a href="mailto:palopoli@deis.unical.it">palopoli@deis.unical.it</a></p>
<b>PhD Website</b>	<p><a href="http://www.mat.unical.it:8180/content/isi/site/map.html">http://www.mat.unical.it:8180/content/isi/site/map.html</a></p>



## "PYTHAGORAS" DOCTORAL SCHOOL OF ENGINEERING SCIENCES

The "Pythagoras" Doctoral School coordinates four different PhD courses in order to properly organize educational activities and research training of graduate students.

### Ph.D. in Mechanical Engineering

<b>Coordinator</b>	Prof. Sergio Rizzuti, Mechanical Engineering, Via Pietro Bucci, Cubo 44/C, Tel.: 0984 494601, e-mail: <a href="mailto:rizzuti@unical.it">rizzuti@unical.it</a> , SSD: ING-IND/15.
<b>Department</b>	Mechanical Engineering
<b>Italian Reference CUN (National University Council) Area</b>	09 - Industrial and Information Engineering
<b>Scientific sectors (SSD – Subject areas and research programmes)</b>	ING-IND/08 - Fluid machinery , ING-IND/09 - Systems for energy and environment, ING-IND/10 - Industrial technical physics, ING-IND/11 - Environmental technical physics, ING -IND/13 - Applied mechanics, ING-IND/14 - Mechanical design and construction of machinery, ING-IND/15 - Design and methods of industrial engineering, ING-IND/16 - Technology and manufacturing systems, ING -IND/17 - Industrial mechanical plants, ING-IND/34 - Industrial bioengineering
<b>Admission Requirements</b>	a) Old regulation Italian degree before D.M. 509/99; or b) Italian Specialistic degree (D.M. n. 509/99); or c) Italian Master Degree (D.M. 270/04); or d) Academic equivalent degree hold by foreign University.
<b>Other institutions involved</b>	None
<b>Educational Goals</b>	<p>The PhD in Mechanical Engineering covers a large number of scientific subject areas: all those present at UNICAL in the sector of mechanics. The research activities developed in recent years were focused on many areas, even across different sectors, giving the opportunity to make an intervention, in a professional way, in six over the nine priority areas identified by the Regional Council of Calabria. The PhD program is then an absolute and unique novelty in the Calabrian scenario, and represents a point of reference for the manufacturing/mechanical industries in Calabria and Southern Italy. For this reason, the main educational goal is to provide students with a solid methodological basis of a scientific nature, after the conclusion of the five-year course of study, through the specific teaching of advanced and intersectoral subjects. Students are required to follow the courses, even abroad or in other Italian universities, and take part to researches and applications conducted in the leading sectors of mechanical engineering. For the purpose of training, the PhD program will be based, in order to outline the educational project of each student, the courses that the "Pythagoras" Doctoral School in Engineering Sciences prepares annually. With regard to the educational goals that are closer to the industrial world, one of the strategies that the PhD. in Mechanical Engineering is pursuing is the possibility of creating professional profiles of industrial researchers who can apply the knowledge and the basic methods</p>

	acquired during the three-year doctoral course to industrial issues, i.e issues with a high added value and high content of research. This aspect is necessary to give more appeal to the title of PhD, whose marketability should not be solely related to the University world. The education program is intended to train young professionals having a solid methodological basis and a detailed knowledge of major computer-based tools, commonly used in professional practice; the ability of analysis and formalization of complex problems; the ability to find efficient and effective solutions in highly competitive environments.
<b>Duration</b>	3 years
<b>Available positions</b>	2 (two) positions of which: 1 (one) with scholarship; 1 (one) without scholarship.
<b>Scholarships</b>	<p><b>N. 1 scholarship funded by the Department of Mechanical Engineering.</b> Scope of inquiry: <b>"Study of optical techniques for underwater survey of archaeological artifacts."</b></p> <p>The scholarship is co-funded by the PON (National Operational Programme) Research &amp; Competitiveness 2007/2013 - Convergence Regions - Priority I: "Support to structural mutations" - Operational Objective 4.1.1.1 "Research and technology areas triggering processes of change in productive system and creating new sectors" - Action II "Actions supporting industrial research", within the Project PON01_02140 "Programmed Preservation in situ of Underwater Archaeological Artifacts," funded by MIUR (Italian Ministry of Research and University) with Director's Decree prot.no. 692/Ric, October 14, 2011, CUP B11C11000600005.</p> <p><b>The PhD student must observe the provisions contained in the European Community regulations and Italian standards and law for projects co-financed by the PON R&amp;C 2007/2013.</b></p> <p><b>In particular, it is mandatory to report an explicit reference to the source of funding in all documents and publications of scientific or technical nature relating to the monitoring and reporting requirements of the action.</b></p>
<b>Admission procedures</b>	<p>Applicants must submit, under penalty of exclusion, under the art. 5 of the call, together with the application form:</p> <ol style="list-style-type: none"> <li>1) a research project, of the maximum size of n. 3 pages, duly signed, about research topics listed under the above mentioned item "Scholarships";</li> <li>2) a curriculum vitae et Studiorum, duly signed;</li> <li>3) (eventual) a list and a copy of publications and any other documents or qualifications useful for the selection;</li> <li>4) a signed photocopy of the candidate's personal document;</li> </ol> <p>within the deadline of the call to the following address: University of Calabria - Via Pietro Bucci - Arcavacata 87036 Rende (CS), with the following header: "Application for participation PhD XXVII cycle", and identifying the sender.</p>
<b>Examination Procedure</b>	<p>The examination will consist of:</p> <ul style="list-style-type: none"> <li>- Evaluation of qualifications (selective testing);</li> <li>- Oral exam (for the candidates who have passed the qualification evaluation) with discussion of the project. The oral examination, if necessary, can be done via computer, with the appropriate level of assurance and security. The knowledge of English language will be established during the oral examination.</li> </ul>
<b>Qualifications to be presented</b>	<p>Research project of the maximum size of n. 3 pages, duly signed; Curriculum Vitae et Studiorum, duly signed; Eventual Scientific publications and any other documents or qualifications</p>

	useful for the selection related to the thematic areas of interest of the PhD program.
<b>Date of evaluation of qualifications</b>	Wednesday, February 22 <sup>nd</sup> , 2012. The results will be published on the following website: <a href="http://www.unical.it/portale/strutture/dipartimenti/meccanica/">http://www.unical.it/portale/strutture/dipartimenti/meccanica/</a> and will also be posted at the Notice Board of the Department of Mechanical Engineering.
<b>Date of oral examination</b>	Thursday, February 23 <sup>rd</sup> , 2012 at 9:30 AM, Meeting Room ( <i>Aula Seminari</i> - Pedestrian Level of Pietro Bucci Bridge), Cube 44/C of the Department of Mechanical Engineering ( <i>Dipartimento di Meccanica</i> ) - University of Calabria - Arcavacata di Rende (CS) - ITALY.
<b>Foreign Language</b>	Test of foreign language proficiency (English) during the oral examination.
<b>Examination program</b>	All the topics pertinent to the scientific subject areas listed above. Oral examination: In-depth interview on the proposed research project and, where appropriate, on issues related to the scientific subject areas of the PhD programme.
<b>Contacts</b>	Prof. Sergio Rizzuti, Mechanical Engineering, Pietro Bucci Bridge, Cube 44/C (last floor), tel. 0984 494601, mob. 320 4258036, e-mail: <a href="mailto:rizzuti@unical.it">rizzuti@unical.it</a>

