



UNIVERSITÀ DEGLI STUDI
DI TRENTO

Call for Doctoral positions at the
PhD Programme in
Information and Communication Technology
32nd Cycle

ACADEMIC YEAR 2016/2017

N.B. Please note that only the Italian version of the present call issued with Rector's Decree no. 268 of 14.04.2016 is legally binding; the English version is provided for information only



Art. 1 – SUBJECT OF THE CALL

The University of Trento opens the call for positions for the 32nd Cycle (Academic Year 2016/2017) of the PhD Programme of the “International Doctoral School in Information and Communication Technology” as follows:

	Research Area A: <ul style="list-style-type: none"> • Bioinformatics • Machine Learning • Natural Language Processing • Computer Vision • Speech and Dialogue 	No.	Topics of reserved scholarships¹
Positions	University of Trento scholarships	3	-
	FBK Fondazione Bruno Kessler scholarship	1	A1- Quantifying Historical Cultural Evolution using Big Data
	Positions without scholarship	2	-
	No. of positions	6	-
	Supernumerary positions (see Art. 7)	1	-

	Research Area B: <ul style="list-style-type: none"> • Embedded Systems • Wireless Networking • Systems and Networks 	No.	Topics of reserved scholarships
Positions	University of Trento scholarships	3	-
	Department of Information Engineering and Computer Science scholarship	1	B1- Design, deployment, and management of Community Networks and their applications
	FBK Fondazione Bruno Kessler scholarship	1	B2- Automated verification of critical systems
	No. of positions	5	-
	Supernumerary positions (see Art. 7)	1	-

	Research Area C: <ul style="list-style-type: none"> • Social informatics • Human computer Interaction • Data Analytics and Management • Knowledge Management • Software Engineering • Security • Formal Methods 	No.	Topics of reserved scholarships
Positions	University of Trento scholarships	4	-
	Department of Information Engineering and Computer Science scholarship	1	C1- Digital Finance and Security
	TELECOM Italia S.p.A. scholarships	3	C2 - Real-time anomaly detection on Heterogenous Data Streams C3 - Secure and decentralized platforms for personal data markets C4 - Integrating geomarketing functions with telco network data for economic and ethic

¹ Reserved scholarships can only be assigned to those candidates who apply for and obtain the specific eligibility.



			analytics
	Positions without scholarship	2	-
	No. of positions	10	-
	Supernumerary positions (see Art. 7)	1	-

	Research Area D:	No.	Topics of reserved scholarships
	<ul style="list-style-type: none"> • Multimedia analysis • Signal processing • Pattern recognition • Remote Sensing and Radar • Distribute Sensing 		
Positions	University of Trento scholarships	4	-
	Department of Information Engineering and Computer Science scholarships	3	D1- Advanced techniques for the analysis of remote sensing images for cryosphere monitoring and hydrological parameter estimation D2 and D3 - Definition, design, implementation and validation of acquisition strategies and data analysis methodologies for the Radar for Icy Moon Exploration (RIME) in the framework of the JUpiter ICy moon Explorer (JUICE)
	FBK Fondazione Bruno Kessler scholarship	1	D4 - Remote Sensing image processing
	No. of positions	8	-
	Supernumerary positions (see Art. 7)	1	-

For further details on research topics see : http://ict.unitn.it/application/project_specific_grants

Any candidates selected by special committees for admission related to specific international mobility programmes in which the University of Trento participates, may also be admitted to the 32nd Cycle on additional positions, as described on the website of the call.

Deadline for application: May 26, 2016, hrs. 04.00 PM (Italian time, GMT +2)

Duration: three years

Start of the Academic Year: November 1, 2016

Selection website: <http://www.unitn.it/en/ateneo/1924/announcement-of-selection>

PhD School website (information on the programme, admission to subsequent years and to final examination): <http://ict.unitn.it/>

Rights and duties of doctoral students: <http://www.unitn.it/en/ateneo/52919/rights-and-duties-of-doctoral-students>

Doctoral scholarships: <http://www.unitn.it/en/servizi/1937/doctoral-scholarships>

Official language: English

Scientific areas:

Curriculum 1: Computer Science

INF/01 Computer Science

ING-INF/01 Electronics

ING-INF/05 Information Processing and Computer Engineering

Curriculum 2: Telecommunications

ING-INF/01 Electronics

ING-INF/02 Electromagnetic Fields

ING-INF/03 Telecommunications



The positions with scholarships or other forms of financial support may be increased after the publication of this call and no later than the opening date of the reserved application procedure (art. 4.3).

All the new available positions and the procedure to apply for them will be posted solely on the selection website.

N.B.

- a. All selection results (interim and final), the possible exclusion from the selection for incomplete application and exclusion for foreign qualifications not recognized as suitable, will be published only on the selection webpage; the candidates will be identified through the application ID. The publication on the website is to all intents and purposes valid as official notification.
- b. Without exception, all possible communication from the University of Trento to applicants will be managed via e-mail to the email address specified in the application online. Candidates are advised to check their mail box regularly and keep the Science & Technology - PhD Office (Doctorate Office S&T - phd.office-st@unitn.it) promptly informed of any change of their email account.

Art. 2 – ADMISSION REQUIREMENTS

1. Applications for doctoral positions are accepted from applicants, regardless of gender, age and nationality, who hold:
 - a. an Italian “Laurea Magistrale”, according to the Ministerial Decree no. 270 of 22.10.2004 and subsequent amendments, or
 - b. an equivalent Italian academic degree (previous regulations in force, “Laurea Specialistica”, AFAM), or
 - c. an equivalent foreign degree (*Master’s degree*) obtained at an officially acknowledged academic institution, valid for admission to PhD studies in the country of issue and similar (duration and level²) to the Italian degree, recognized as equivalent by the Admissions Committee for the sole purpose of access to the PhD Programme.
2. Applications are also accepted from students expecting to obtain the necessary degree **by October 31, 2016**. Admission to the Doctoral Programme for successful applicants who have not yet graduated will be “conditional” and the applicant will have to submit to the Doctorate Office S&T (via email to: phd.office-st@unitn.it) **by November 4, 2016**, on penalty of exclusion, a certificate or self-declaration (see Annex A) of the degree awarded.
3. Applicants with a foreign qualification that has not been officially recognised as equivalent³ to an Italian degree (*Laurea Magistrale/Specialistica/vecchio ordinamento*) will be considered as requesting equivalence in their application, attaching the necessary supporting documents. The Admissions Committee may require the applicant to provide additional documentation if deemed necessary for the purpose of assessing the suitability. The ID list of applications whose academic qualifications have been considered not eligible for admission to the selection process will be made available at the webpage of the admission procedure.

Art. 3 – APPLICATION PROCEDURE

The application⁴ must be **completed and submitted by 4.00 PM Italian time (GMT +2) on May 26, 2016, solely by the online system:** <http://www.unitn.it/en/apply/dott>.

Candidates who do not have an account at the University of Trento must register in advance at⁵: <http://www.unitn.it/account>.

The application is subject to the payment of an application fee - non-refundable - amounting to € 15 to be paid by credit card according to the instructions given in the appropriate section of the online application.

² Italian: <http://www.studiare-in-italia.it/study/new-degrees.html>, English: <http://www.study-in-italy.it/study/new-degrees.html>

³ For further information visit <http://www.cimea.it/default.aspx?IDC=134>

⁴ The candidate can choose either Italian or English to fill in the [application online](#)

⁵ Candidates are advised to register well in advance of the deadline because the issue of the username and password (sent via email), necessary to enter UNITN's online services, may require up to 2 working days.



The application online can be saved and modified several times until the submission. Afterwards it can no longer be changed.

It is the sole responsibility of the applicant to verify and submit with correct closure the online application (ensuring reception of the email notification). The University refuses any liability for all applications not properly submitted by candidates.

When filling out the online application, applicants must choose one or a maximum of two Research Area/s in which they are interested, specifying it/them in the "Research area/s of interest" Section.

If an applicant is short-listed in more than one Research Area, he/she will be enrolled in the research area selected as first choice in the online application and deleted from the other ranking list.

The online application is considered to be a self-declaration of personal data and qualifications with full legal effect.

MANDATORY ATTACHMENTS (failure to upload one or more mandatory attachments results in automatic exclusion from the selection⁶)

1) Identifying document (ID):

- A copy of the applicant's valid **identity card** (only EU citizens) or **passport** (non-EU citizens), in particular of the pages reporting his/her photograph, personal data, number, place and date of issue, expiry date and signature;

2) Academic certificate:

- **Italian qualification:**

already obtained: a self-declaration, in accordance with Presidential Decree art. 46 no. 445 of 28.12.2000 and subsequent amendments, declaring the possession of a degree with examinations taken, credits and grades obtained (by using Annex A); graduates from the University of Trento may only declare the place and the date of award as the other information will be collected ex officio;

to be obtained: a self-declaration, in accordance with Presidential Decree art. 46 no. 445 of 28.12.2000 and subsequent amendments, declaring the possession of a degree with examinations taken, credits and grades obtained and the possible award date (by using Annex A); future graduates of the University of Trento may only declare the place and the foreseen date of award as the other information will be collected ex officio;

- **foreign qualification⁷:**

already obtained: copy of the academic certificate (necessary for access to doctoral studies) accompanied by a list of examinations with their credits and grades. if this document is not in English, applicants must provide a translation of the academic certificate accompanied by a list of examinations with grades, duly undersigned.

If available, the Diploma Supplement⁸ / transcript of records or Declaration of Value⁹ or Rector's Decree of Equivalence,¹⁰

to be obtained:

- a certificate of enrolment with a list of the examinations successfully passed and marks and credits obtained in each examination; if this document is not in English, the applicant must provide, in the same file, a translation of the same duly undersigned;
- a statement in English declaring that the student will complete his/her degree by October 31, 2016, with the Institution and the official length of the programme.

⁶ The list of candidates, identified by the application ID, excluded because of incomplete applications will be published on the selection website.

⁷ It is in the interest of the applicant to provide all information relevant for the assessment, especially if the country where the qualification was obtained has an education system not comparable with the Italian one. EU candidates who have obtained or will obtain the qualification abroad can submit a self-declaration (see facsimile in Annex A)

⁸ The Diploma Supplement accompanies a higher education diploma, providing an improvement in international "transparency" and a promotion of the academic and professional qualifications obtained (diploma, degrees, certificates, etc.). The Diploma Supplement must be issued by the same institution that issued the qualification. Further information at: http://ec.europa.eu/education/lifelong-learning-policy/ds_en.htm

⁹ <http://www.cimea.it/default.aspx?IDC=176>

¹⁰ Delivery of the Diploma Supplement, Declaration of Value or Decree of Equivalence, optional in the application stage, will be mandatory for the winners at the time of actual enrolment.



- 3) a short **thesis summary** in English (maximum 2000 characters, spaces included) structured as follows: motivations of the thesis, methods of investigation, final results;
- 4) **curriculum vitae** in English, preferably according to the Europass model: <http://europass.cedefop.europa.eu/en/documents/curriculum-vitae>; with a list of publications if any. Please do not send the actual publications; only the list will be considered by the commission;
- 5) **statement of purpose**: a short statement (maximum 5000 characters, spaces included) in English highlighting the reasons for the applicant's interest in attending the Doctoral School and outlining his/her specific research interests. The template is downloadable from the online application. This text may optionally include a link (and the access credentials, if necessary) forwarding to a video (1-2 minutes) in which the applicant describes his/her goals and research interests (please upload the video, not to the Application website but to an on-line service, and provide only the link and credentials);
- 6) Only for applicants who intend to compete for the scholarships relative to the topics specified in article 1 of the present call: a single file in English with a short research project for each specific topic which the applicant wishes to undertake (based on the template downloadable from the online application). Applicants who intend to compete for the scholarships relative to the topics specified in article 1 of the present call must state this intention and furnish a description of the project(s) in the application for admission.

OPTIONAL ATTACHMENTS:

- any certificates attesting language skills in English (TOEFL, Proficiency Certificate or other).
- the certification of GRE test (Graduate Record Examination) if any.
- any additional information useful for assessing the applicant's research skills (e.g. documents concerning awards, post-graduate study and research, scholarships etc. which will also be taken into consideration with regard to art. 7 of this Call)
- Up to three (3) names of referees with details of their e-mail addresses.

The University will accept any additional documents to the submitted application if sent by email to ateneo@unitn.it (**Subject**: "Application ID - Applicant's Surname and Name – PhD Programme in "Information and Communication Technologies" – 32nd Cycle - Supplement to application") **by May 26, 2016, HRS 04.00 PM (GMT +2) Italian time**. Additional documents submitted by other means will be disregarded.

Only documents (originals or copies) in English and Italian will be taken into consideration; for all other languages it is compulsory to attach a translation into English signed by the candidate. The attachments required at points 3-5 must be submitted in English by all applicants.

All applicants are admitted to the selection procedure conditionally upon ascertainment that they fulfill the admission requirements. The University of Trento has the right to verify the documents delivered pursuant to articles 71 et seq. of the Presidential Decree no. 445 of 28.12.2000. The University can at any time, even after enrolment and upon justified reasons, decide the exclusion of candidates lacking the requirements specified in the present call.

Art. 4 – EVALUATION OF APPLICATIONS

1. The evaluation is made by an Admissions Committee for access to the PhD Programme appointed by the Rector upon advice of the Doctoral School Committee, in accordance with the University doctoral regulations. The Committee sets the evaluation criteria during the preliminary meeting.
2. The selection procedure is designed to ensure, comparatively, the knowledge and aptitude of the candidates in regard to research in areas related to the PhD programme and the chosen Research Area. The selection is made on the basis of assessment of the applicant's qualifications according to art.3. The Admissions Committee may contact the applicant for an in-depth interview or a video-interview concerning the material submitted. This interview will not entail additional points.



3. Applicants interested in applying also for topics of reserved scholarships as listed in art. 1 (max 2 for each Research Area chosen) must specify them in the online application. Applicants who have submitted the application by the deadline may also opt for any scholarships on reserved topics (max 3 for any Research Area) that will be made available after the opening of the present call and published on the Selection website together with the instructions on how to access the online system, which will be available only from June 6 to June 13, 2016, 4.00 PM (GMT +2) Italian time.
Competences on the specific subjects of the reserved scholarships or fellowships will be assessed during the evaluation process by the Admissions Committee based on the research projects submitted.
N.B.! The choice made by the candidate to compete also for the reserved scholarships implies a preference on his/her part for the allocation of that specific scholarship with respect to the others.
4. The Admissions Committee will award a maximum of 100 points. Applicants obtaining a minimum score of 60/100 will be short-listed.
5. The date of the assessment of qualifications will be published at least 20 days before it takes place on the Selection website.

Art. 5 – RANKINGS

1. At the end of the selection procedure, the Admissions Committee draws up one ranking list for each Research Area.
2. Scholarships are assigned to short-listed applicants according to:
 - a. the position in the ranking list;
 - b. for reserved scholarships, the applicant's eligibility for that specific scholarship.
3. The non-allocation of scholarships on reserved topics concerning point 2.b) will result in the reduction of the available positions. Should any positions without scholarships or scholarships, also reserved for a specific topic, not be assigned to any candidates, they will not be allocated to candidates shortlisted in others Research Areas.

Art. 6 – ADMISSION TO THE DOCTORAL PROGRAMME AND ACCEPTANCE OF THE POSITION

1. Short-listed applicants are admitted to the Doctoral School according to their place in the final ranking lists until all available places in each Research Area have been filled. If an applicant is short-listed in more than one Research Area, he/she will be enrolled in the one that he/she selected as first choice in the online application and deleted from the other ranking list. An applicant who has been awarded a scholarship on a specific reserved topic must accept it. Renunciation of the reserved scholarship implies the applicant's exclusion from the right to enrol.
2. Should two candidates obtain the same score as regards the award of the scholarship, the candidates' economic situations shall be the deciding factor, in accordance with the criteria established by the Italian Prime Minister's Decree of 9 April 2001 and subsequent amendments and integrations. As regards positions without scholarships, the younger of the two candidates will be selected.
3. Admitted applicants must send their acceptance of the position following the instructions at <http://www.unitn.it/en/ateneo/1928/enrollment-1-2-3-year>:
 - **within 8 days** starting from the day following publication of the final ranking lists on the Selection website for **positions with scholarships**;
 - **within 14 days** starting from the day following publication of the final ranking lists on the Selection website for **positions without scholarships**.

N.B.! Admitted applicants with a foreign qualification must deliver the Diploma Supplement (qualifications obtained in countries of the European Research Area) or the Declaration of Value together with the copy of the final Diploma with a complete transcript of records, translated and authenticated by the Italian diplomatic representatives in the country of issue; if these documents are not available at the time of the



acceptance of the position, they must be delivered **by November 9, 2016**. Their non-delivery may result in exclusion from the Doctorate.

4. Note that the enrolment must include the payment of stamp duty and, where applicable, the payment of the "provincial tax for the right to higher education" - TDS¹¹. At present, no fees are charged to doctoral students to access courses and attend them, with the exception of the aforementioned annual provincial tax for the right to study (TDS).
5. Admitted applicants who do not enrol by the above-mentioned deadlines will lose their right to enrol, and their places will be offered to the next applicants on the relevant ranking list.
6. If a successful applicant withdraws before the beginning of the PhD Programme (November 1, 2016), the next applicant on the reference ranking list will be offered the place. The latter must submit his/her enrolment within 4 days starting from the day after the day on which the communication from the Doctorate Office S&T is sent.
7. If a successful applicant withdraws or is excluded after the beginning of the PhD Programme and during the first quarter of the first year (three months), the Doctoral School Committee may decide to fill the vacancy with the next applicant on the reference ranking list.

Art. 7 – SUPERNUMERARY POSITIONS

1. According to art. 20, par. 3 of the University Regulations for Doctoral Programmes, no more than **4** supernumerary applicants may be admitted without scholarships paid by the University, after passing the selection procedure, if they fall within one of the following categories:
 - a) shortlisted non-EU candidates who are granted scholarships by other entities;
 - b) shortlisted candidates from countries which have specific inter-governmental agreements with Italy, and with which an ad-hoc agreement with the University is then made, without the University of Trento being required to assume any financial obligations;
 - c) research fellows (*Assegnista di ricerca*) at the date of the beginning of the PhD programme according to Italian Law 240/2010 and researching a subject relevant to the PhD Programme; such relevance to be determined by the Doctoral School Committee;
 - d) Italian civil servants or under Italian public law regime. Admission is subject to passing the selection procedure and placement on leave under Art. 2 of the Law of 13.08.1984 no. 476 and subsequent amendments.
2. Short-listed applicants who wish to assert their requirements for supernumerary positions shall request for such admission by submission of appropriate documentation proving their status via e-mail to phd.office-st@unitn.it, such admission **within 8 days** from the next day of the publication of ranking lists. Supernumerary admission is disposed within the limit of the number of supernumerary positions listed in the specific Research Area in art. 1.
3. After verification of the documents referred to in par. 2, applicants admitted to supernumerary positions will receive an email notification from the Doctorate Office S&T and must deliver their acceptance within the deadline specified in the email text itself.
4. Any candidates selected by special committees for admission related to specific international mobility programmes in which the University of Trento participates, may also be admitted to positions additional with respect to the quota specified in art. 1.

Art. 8 – ENROLMENT ON THE PHD PROGRAMME

1. According to Ministerial Decree no. 45 of 08.02.2013, the PhD programme can only be activated upon accreditation or its confirmation by the Ministry of Education. Therefore enrolment on the PhD Programme, only for admitted candidates who have accepted the position as mentioned above, will be automatically formalized as soon as the aforementioned accreditation has been received or its

¹¹ Note that the total amount of the TDS + stamp duty must be paid only by credit card following the instructions. Page <http://www.unitn.it/en/ateneo/1931/education-tax-tds-and-revenue-stamp> provides information on exemption from the TDS.



confirmation has been approved. If accreditation is not confirmed, candidates who have accepted a place will receive timely notification via email, and the fee for the Right to Education (TDS) will be refunded.

2. At the end of the enrolment period, doctoral students must communicate via e-mail (ict.school@unitn.it) to the Doctoral School Secretariat the exact date of their arrival in Trento. Doctoral students who cannot be, for justified reasons, in Trento at the beginning of the academic year must submit adequate motivations and justifications by no later than November 7, 2016. The latest date of arrival in Trento cannot be subsequent to January 10, 2017, on penalty of exclusion from the School. In the case of a lack of communication and failure to arrive in Trento by the above-mentioned dates, the doctoral student will be considered excluded from the School.

Art. 9 – INTELLECTUAL PROPERTY RIGHTS ON RESEARCH RESULTS AND PUBLICATIONS

Without prejudice to the Italian law on copyright (Legislative decree no. 633/1941 and subsequent amendments), use of results derived from doctorate research conducted with scholarships of other financial support financed by external bodies may be subject to restrictions imposed by specific funding agreements of which doctoral support-holders will be informed at the moment of acceptance of the position or enrolment.

Art. 10 – PERSONAL DATA

1. The University of Trento, in compliance with Legislative Decree 196/2003 and subsequent amendments, shall use the personal data of the applicants only for the purpose of the selection procedures and for institutional reasons.
2. Participation in the present selection entails, in observance of the above-mentioned law, that the applicant allows the University of Trento to publish his/her personal data concerning the results of the selection procedure on the University website.
3. Data are treated by the University of Trento, via Calepina, 14 – 38122 Trento (Italy).

Art. 11 – REFERRAL RULES

1. For matters not explicitly mentioned in the present call, refer to Law no. 398 of 30.11.1989, art. 4 of Law no. 210 of 3.07.1998 as amended by art.19, par. 1, of the Law no. 240 of 30.12.2010, to Ministerial Decree no. 45 of 08.02.2013 and to the University Regulations for Doctoral Programmes issued with the Rector's Decree no. 383 of 04.07.2013 and subsequent amendments, to the Code of Ethics of the University of Trento, to the Internal Regulations in force of the Doctoral School in Information and Communication Technology, and to the other relevant provisions contained in the current legislation.
2. This call, accompanied by its translation into English, is published on the University website, on the website of the Italian Ministry of Education and on Euraxess. Any changes or additions to the call will be made available only on the selection website specified in art. 1.

On behalf of
The Rector

The Head of Education and Student Services
Dott. Paolo Zanei

ANNEX A

Declaration substituting **DEGREE CERTIFICATE**¹²

(Article 46 - letters l, m, n - D.P.R. 28 December 2000, No. 445)

The undersigned _____

Place of birth (*city+country*) _____ date of birth _____

Official postal address (*street, number, zip code, city, country*) _____

Mob. _____ E – mail _____

aware of the penal sanctions pursuant to Article 76 of the Italian Presidential Decree No. 445 of 28.12.2000 for falsifying documents and making mendacious declarations

DECLARES

A) TO HAVE GRADUATED (click the corresponding box):

Type of degree Master's degree
 Laurea specialistica/magistrale
 Italian University degree of the previous regulations in force
 Other (specify) _____

Degree title: _____

on ____/____/____ University of¹³ _____

City _____ Country _____

with mark _____ out of _____

AND TO HAVE PASSED THE FOLLOWING EXAMINATIONS (fill out the following section C, **obligatory in either case A) or B)**

Alternately:

B) TO HAVE NOT YET GRADUATED and to be aware that admission to the Doctorate is conditional upon submission of the degree certificate by the date cited in the announcement.

Type of degree Master's degree
 Laurea specialistica/magistrale
 Italian University degree of the previous regulations in force
 Other (specify) _____

¹² (*) **To be noted:**

- Extra-EU students can provide self-declarations only concerning facts and information which can be verified by an Italian public administration and only if they are in possession of a valid residence permit, to be attached to the declaration;

- The self-declaration shall provide all the information required, in particular the admission requirements and those related to the mark, date and place of award of the degree and/or English certificate;

- The self-declaration shall be duly signed and dated.

¹³ Graduates of the University of Trento **may** only declare the date of award of the title; other information will be collected automatically.

