



Fakultät für Ingenieurwesen
Facoltà di Ingegneria
Faculty of Engineering

PhD in
Computer Science
2023/24



At a glance

Duration of the programme: 3 years
Courses will be taught in English
Places available: 18 with scholarship +
4 without scholarship
Campus: Bozen-Bolzano
Tuition fees: € 180 per year



loghi pnrr

What makes our PhD graduates ideal candidates to work as researchers both in academia and in the IT sector is their ability to research and understand theoretical and applied research topics, the collaborative approach to work, and their dissemination and writing skills. Moreover, problem solving skills and the ability to work autonomously enable them to become key players in every field of IT, as independent consultants or in management roles.

At the end of our programme, graduates are equipped with a vast knowledge of IT, from the formal and theoretical aspects to the latest developments in methodology and technology.

PhD students can choose any of the three research themes offered by the faculty. They are different not only in the main topics explored, but also in the research methodology applied. In the **Knowledge and Data area**, students investigate the topics of **Intelligent Integration and Access to Data, Conceptual and Cognitive Modelling**, and **Process-aware Information Systems Management**. In the **Software and Systems Engineering area**, work follows an empirical approach based on the implementation of prototypes and techniques and the carrying out and analysis of experiments. Finally, the **Information and Database Systems Engineering area** adopts a hybrid approach, with a focus on efficient implementation and user interaction. This large spectrum of topics offers PhD candidates a wide range of options to develop their own research and great flexibility to match their interests.

Programme Structure

The aim of the PhD programme is to allow students to acquire the abilities and skills to carry out independent research in the area of computer science. This also involves the ability to communicate ideas clearly and efficiently orally and in writing and the ability to work in groups.

In order to conclude the programme successfully, the PhD student has to elaborate a research topic independently and this research must contribute significantly to current knowledge in the area of computer science. Due to the time limits of the programme, PhD students will focus on their research work. To achieve this, they are supported by a structured PhD programme.

The Stages of the PhD

The programme is divided into four stages, respectively ending at months 6, 12, 24, and 36 of the programme.

- **Phase 1** first six months. The student identifies with the support of their supervisors the area of research, a specific topic within the area, and one or more possible approaches to the topic. The student acquires the necessary foundations for carrying out the research, for instance, by attending courses or supervised literature study.
- **Phase 2** second half of the first year. The student spends time both on the acquisition of skills, for instance, by attending courses or supervised study of literature, and on the first research steps.
- **Phase 3** second year. and is to be spent on an in-depth exploration of the research topic.
- **Phase 4** comprises the third year. The aim is to complete the research and document it in a thesis.

Fieldwork abroad

During the three years of the PhD programme, candidates are required to commit full-time to the PhD, and the programme will include both working on the research project and learning activities. Students are also strongly encouraged to carry out part of their research in another university or research center, for a longer period, ranging **from 1 month and up to 18 months**. This is an extremely valuable opportunity for a PhD candidate to study specific aspects of their research in depth under direct supervision of world experts in their chosen research topic. It is also an opportunity to carry out research in highly stimulating and competitive contexts, while exchanging ideas with other scholars and establishing an early network of colleagues in the world of research.

Partner Universities and Research Centres

We have established partnerships with many universities and research institutions in Italy and abroad, such as the Technical University of Dresden, the Universidade Nova of Lisbon and the Technical University of Vienna. In addition, members of our Faculty cooperate on a regular basis with other universities and research institutes, such as Oxford University, Rice University Houston, Zürich University, Sapienza University of Rome, University of Trento, and FBK Trento.

Some of the PhD positions are collaborations supported by external research and industry partners (Fondazione Bruno Kessler FBK, Südtiroler Informatik SIAG, NOI Techpark, Barbieri Electronic snc, University of Umea).



PhD in Computer Science

2023/24

Application and Admission

You can find key information to apply and gain admission to this PhD Programme. **For detailed information browse the general and specific calls below.**

In order to gain admission to the PhD programme, you will need to have obtained 300 ECTS credit points (Master degree) and have some relevant academic experience in Computer Science, Computer Engineering or Electronics or in a related discipline.

Deadlines

1st Call

Application deadline: by 15 June 2023, 12:00 midday (GTM +2:00)

Admission interviews: 27/28 June 2023 (via MS Teams)

Publication of ranking lists: by 14 July 2023

Confirmation of the PhD position - 1st Call

Applicants with grant: starting from 14 July 2023 until 27 July 2023;

Applicants without grant: starting from 27 July 2023 until 04 August 2023.

Enrolment: Starting from 27 July 2023 until 31 October 2023, 12:00 midday (CEST)

2nd Call

Application deadline: by 18 July 2023, 12:00 midday (GTM +2:00)

Admission interviews: 31 July 2023 (via MS Teams)

Publication of ranking lists: by 7 August 2023

Confirmation of the PhD position - 2nd Call

Applicants with grant: starting from 7 August 2023 until 23 August 2023;

Applicants without grant: starting from 24 August 2023 until 31 August 2023.

Enrolment: Starting from 24 August 2023 until 31 October 2023, 12:00 midday (CEST)

Total positions: 22

1st Call

Positions with university grants: 4

Positions with other types of grants: 2

Positions MD 118/2023 under PNRR: 3

Positions without grant: 3

2nd Call

Positions MD 117/2023 under PNRR: 9

Position without grant: 1

1st Call

In the academic year 2023/2024, the Computer Science doctoral school offers 20 research topics.

You can find here the detailed descriptions (project description + required skills) of all Research Projects. Please read carefully the document, consider that you have to **select up to five project proposals** from the list!

2nd Call

At this link you can find a list of potential research projects and their corresponding proposed supervisors.

All citizen, regardless of sex, age and nationality may apply to be admitted to a PhD programme:

- Applicants holding a postgraduate degree as per Italian Ministerial Decree no. 509/1999, a postgraduate degree as per Italian Ministerial Decree no. 270/2004, a degree of the former Italian university system, or an equivalent degree obtained abroad;
- Applicants achieving one of the above mentioned titles within the enrolment deadline. In this case applicants will be admitted conditionally to the selection procedure, and **they must produce the degree certificate within the enrolment's deadline. If not, their application is considered null and void.**

All applicants are eligible for selection, subject to verification of self-certified statements pursuant to Presidential Decree no. 445/2000 and subsequent amendments and additions. In the event of a false declaration, the university may order at any time, by order of the Rector, the exclusion of applicants from the selection process or from the PhD programme, without prejudice to the criminal liability arising therefrom.

Candidates with degrees obtained abroad that have not already been declared equivalent to an Italian degree.

On the basis of the documentation produced, the selection committee will declare the foreign qualification equivalent to a Master's degree, solely for the purposes of participation in this competition. Candidates with a foreign qualification will be admitted to the selection process with reservations and will be excluded from the PhD programme if it turns out, after verification, that the qualification does not comply with the requirements of this call for applications and therefore does not permit enrolment in the PhD programme.

The official language of the PhD programme is **English**. Therefore applicants must have very

good knowledge of English.

The proficiency in English will also be assessed during the interviews.

Online Application

Applications to the selection procedure can be submitted from the date of the announcement of the public competition.

Each application is subject to a payment for administrative expenses (30 €). This registration fee cannot be reimbursed under any circumstances.

In order to apply, you need to follow these steps:

1. Create an account at Application Portal and upload in electronic format a passport-size colour photo and a valid ID (passport or identity card, front/back);
2. In the application portal, select the PhD programme and pay the registration fee of 30 € (see instructions in the portal);
3. Fill in the online form in the same portal and upload the additional required documents (see the specific attachments to the call for each PhD programme).

Completing the application online is the only way to submit the application. Applications will not be considered if:

- incomplete or without compulsory entry qualifications/requirements;
- sent by e-mail.

It is necessary to upload the required documentation for each PhD programme chosen in the portal. A traffic light system indicates complete/incomplete documentation (missing documents will be marked in red).

Only documents uploaded by the deadline will be evaluated. It is advisable to apply online well in advance and to check the portal regularly to take note of any notes concerning missing and/or incorrect documents.

The application must be completed no later than 18 July 2023 at 12:00 midday (GTM +2:00). After this deadline, it will no longer be possible to complete/correct incomplete applications. The University is not liable if the portal is overcharged, due to the net or to the software itself.

To apply to the PhD programme, applicants must include the documentation listed below. Incomplete applications will be excluded from the competition.

Attention: text exceeding the maximum allowed length (if clearly indicated for a document) will not be taken into account! Please respect the format/length indicated.

Diploma supplement or the Master degree diploma together with the transcript of records of all passed exams (=certificate with exams list of Master degree):

- if graduated in Italy: diploma supplement or self-declaration (following the Italian D.P.R. no. 445/2000) of the degree awarded with the exams passed (if graduated) or just with the exams passed (if not graduated yet);
- if graduated abroad: certification that at the university in the country in which the degree

was obtained they have access to a course of study similar to that chosen at unibz. They must therefore upload one of the following documents to the pre-enrolment portal:

- **The Diploma supplement**, where it must be indicated, that the person has achieved at least 300 credit points (ECTS) and that the study title gives access to a PhD programme. In case of doubt, unibz reserves the right to request the Statement of comparability;
- **Statement of comparability of the qualification**, issued by the Italian Information Centre on Academic Mobility and Equivalence (CIMEA), in the case the Diploma supplement is missing;
- **Declaration of equivalent value** of the qualification, issued by the Italian consulate or embassy abroad.
- **Curriculum vitae (CV)** in English (possibly following the EU format that can be downloaded here). The CV must be updated with all data and information of the current year 2023.
- **Presentation letter** - Attachment A (In English, PDF format: it is mandatory to use the relative template in section "Attachments"): Highlight your reasons for applying to the doctoral programme in Computer Science, your motivations for choosing unibz (in particular the Faculty of Engineering) and your career perspective after completing your PhD. Include a brief discussion of your general research interests, of questions and objectives you are interested in, and add a summary of the skill set you already acquired (for instance in your master level research) as well as techniques and methodologies you are interested in to learn and apply in your PhD research;
- **Research proposal** – Attachment B (In English, PDF format: it is mandatory to use the relative template in section "Attachments"). In this document, the applicant should indicate up to five research topics in order of preference selected from the list of Research Projects presented in the call (see section "Research projects- details"). Briefly motivate your choices, and develop only the first choice into a more detailed proposal.

Other documents (facultative) to be included in the application if available:

- The PDF of up to three of your best publications (excluding theses);
- up to a maximum of 2 academic reference letters written in English provided by an university professor or by a researcher of research institutions, describing the work carried out and the quality of the same (the letters must be signed).

For the scholarships funded by external partners (FBK and Ministry), separate ranking lists will be established containing candidates who are also eligible according to the general ranking and who in addition indicated a preference for such scholarships and have a scientific profile that is particularly suited to the specific topics associated to these scholarship.

Please download the two Word files. Fill them in and upload them in the portal as PDF files. Please do not exceed the maximum number of characters indicated in each document!

- Attachment A – Presentation Letter
- Attachment B – Research Proposal

The project preferences indicated by the candidate are not binding for the purposes of the

assignment of the position. It will be the competence of the Selection Committee to assign to the successful candidate the candidate the project considered most suitable.

The selection is based on:

- **the evaluation of each applicant's profile** based on their curriculum vitae, qualifications, presentation letter and research proposal;
- **the coherence with the research themes** identified in the faculty's specific part of the call;
- **the evaluation of the reference letters** and the **publications**,
- **an interview**

The following points will be awarded:

- **up to a maximum of 50 points** for the curriculum, qualifications and publications:
 - Educational and working curriculum (**up to 35 points**)
 - Experience abroad, participation at summer schools and conferences, contribution to research projects, scholarships (**up to 10 points**)
 - Publications (**up to 5 points**)
- **up to a maximum of 5 points** for the reference letters;
- **up to a maximum of 10 points** for the presentation letter and the research proposal on the basis of congruence with the research topics proposed in the call.

The Evaluation Committee will select the best applicants on the basis of a comparative assessment.

Candidates that have obtained at least **45 points** in the evaluation of their application documents will be admitted to the next stage of the selection process. This will consist of an **interview** in which also the knowledge of English of the applicant will be assessed. The interviews will take place in video-call (Skype, MS Teams, etc.). **Up to a maximum of 35 points** will be awarded for the interview.

The final score is the sum of the score for the evaluation of the application documents, and of the score for the interview. **The maximum score obtainable is 100.**

Applicants that have obtained a final score of **at least 70/100** are considered eligible.

Eligible applicants will be ranked according to their final score. The top eligible applicants will be admitted according to the number of available places with and without grant, according to their order in the ranking list. The remaining eligible applicants will be put on a waiting list. Applicants in the waiting list will be admitted to the program in case an already admitted applicant is not available or withdraws their application.

Tuition fees

Fees amount to **€ 180**

In order to confirm your study place, you need to log on to the application portal and pay the tuition fees (€ 180) which includes the provincial tax for the right to study of € 164 and a revenue stamp of € 16. by one of the methods indicated on the portal by the deadline indicated above.

If you do not respect this deadline, you will automatically lose your study place. If, by paying the instalment you have confirmed the study place, there will be no refund of the tuition fees unless you are a non-EU applicant resident abroad and you do not receive the necessary documents from the Italian authorities in your country.

Application deadline: by 15 June 2023, 12:00 midday (CEST)

CALL GENERAL PART (PDF): EN – IT – DE

CALL SPECIFIC PART (PDF): EN – IT – DE

Application deadline: by 18 July 2023, 12:00 midday (CEST)

CALL GENERAL PART (PDF): EN – IT – DE

CALL SPECIFIC PART (PDF): EN – IT – DE

Contact us by phone at +39 0471 012800 or send us an e-mail: phd@unibz.it.

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Opening Hours

Mo, Wed: 10:00-12:00

Thu: 14:00-16:00

Tue, Fri: online only, 10:00 - 12:00

Alternatively, you may call us
throughout the week or book an
online appointment