University of Trento

Center for Mind/Brain Sciences - CIMeC

English-taught Masters

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UNIVERSITY
OF TRENTO - Italy

Center for Mind/Brain Sciences

The Center for Mind/Brain Sciences - CIMeC

The **Center for Mind/Brain Sciences (CIMeC)** is an international research institute specialized in mind and brain studies. Its strengths are research, training, instrumentation and dissemination of knowledge within the local community. CIMeC is one of the leading Cognitive Neuroscience research units in Italy (**ranked 1st in Italy for Quality of Research 2013**) whose faculty has won several highly competitive national and international grants. CIMeC researchers study brain organization via the analysis of its functional, structural and physiological characteristics, in both normal and pathological conditions. **Top-of the line instrumentation** includes fMRI, MEG, EEG, NIRS, TMS, tDCS and eye tracking solutions, as well as systems for studying kinematics.

The Center is responsible for **graduate training programs** at both Master's and Doctorate levels placing a heavy emphasis on professional development and successful placement of graduates. The activities organized by CIMeC are diverse and numerous, including colloquia, research seminars, international workshops with leading researchers in the mind/brain sciences as invited speakers. The close integration of the Center's core scientific, educational, and clinical programs fosters a dynamic **multidisciplinary environment** for research in cognitive neuroscience.

Research at CIMeC is conducted in various areas that range from experimental psychology, to neuroimaging acquisition methods, cognitive neurosciences and animal cognition, as well as computational linguistics. In addition, the Center for Neurorehabilitation (CeRiN) is dedicated to the diagnosis and treatment of pathologies deriving from cerebral damage. CIMeC maintains strong ties with other groups at the University of Trento, including researchers in the Departments of Psychology and Cognitive Science, Physics, and Information and Communication Technology. Research is conducted in five interdisciplinary labs:

- Functional Neuroimaging (LNiF)
- Experimental Psychology (EPL)
- Neuropsychology (NP)
- Center of Neurocognitive Rehabilitation (CeRiN)
- Language, Interaction and Computation (CLIC)
- Animal Cognition and Comparative Neuroscience (ACN).

The Laboratory of Neurophysics (NPhys) is a joint activity of CIMeC and the Department of Physics. Five external labs have become part of CIMeC:

- Computational Cognition (CCL) and NeuroInformatics (NILab) in collaboration with the Bruno Kessler Foundation
- Insect Neurobiology and Neuroecology laboratory (INN Lab) in collaboration with the Research and Innovation Centre of the Edmund Mach Foundation
- Ethology, Ecology and Evolution (EEE Lab) in collaboration with the Public Museum of Rovereto.

Living in Rovereto

CIMeC is located in Trentino at the foot of the **Dolomites**, a UNESCO world heritage site. The teaching and experimental labs are in Rovereto (30 km south of Trento), and the Neuroimaging facilities are near Trento.

Trento is set at the intersection of important routes leading to Lake Garda, the Dolomites, Venice, Verona, Bolzano and Innsbruck. It is dominated by the nearby Bondone and Paganella mountains, where residents and tourists go skiing and hiking. Trento is able to surprise as it is a very versatile city, constantly changing features, yet always maintaining close links with tradition. Despite being small (115,000 inhabitants), nowadays Trento is still an important crossroad between the Mediterranean and the Alpine areas and a culturally active city. Trento's rich **artistic and historical heritage** can be found in its monuments, which embody centuries of history written under the dual influences of northern and Italian cultures, still evident today in the variety of architectural styles. Trento and its region offer a wide range of **cultural events** at any time of the year: exhibitions, cultural meetings at several prestigious museums, festivals, musical and theatre seasons, as well as the chance to taste local wines and cuisine. Students can enjoy its several facets throughout the year: taste local gastronomic products in autumn, experience history and local tradition during the San Vigilio Festival, at the end of June, or visit the Christmas market in December. All of this makes Trento one of Italy's most pleasant cities to live in.

With nearly 33,000 residents, **Rovereto** is a dynamic and culturally rich town offering internationally renowned events, art and sports exhibitions. Adding to the already **world-wide known Peace Bell**, the austere Veneto Castle which hosts the Historical War Museum, and the traces of its Venetian past in its historical center, is the **Mart museum**, the Museum of Modern and Contemporary Art in Trento and Rovereto, designed by architect Mario Botta, which has placed the city among the art capitals of Europe once again. The Mart and the oldest theater in the region, the **Zandonai theater**, built in 1782, decorate Corso Bettini amongst other buildings from the 1700s. This is where the academic and research centers of the University of Trento are located, which contribute to highlight the cultural aspects that marked the life of Rovereto in the Eighteenth century. Depending on the season, many cultural and artistic events take place here, as well as in the surrounding areas, like the Lagarina Jazz Festival, historical reenactments in the city of Ala (a few kilometers south of Rovereto), the *Comun Comunale* (organized by the villages on the right side of the Adige River) and the autumn *Ganzega*. If you are keen on **sports**, you have a very wide range of possibilities to choose among mountain climbing, trekking, canoeing, rafting, mountain biking, horse-riding, skiing, ice skating, speleology, fishing, windsurfing, sailing, tennis, etc.

Master's course in Cognitive Science

The **Master's course in Cognitive Science** leads to the Master's degree in Cognitive Science ***(Laurea Magistrale)***, whose aim is to provide students with advanced theoretical and methodological knowledge in cognitive neuroscience through an **interdisciplinary approach** to the study of the mind-brain system. Two characteristic features of this program are: a close relationship between teaching and research practices, and a constant interplay between biology-based and technology-based explorations of the human mind and brain.

The program combines courses in cognitive neuroscience, statistics, advanced signal and data analysis with hands-on training in cutting-edge research techniques. The program provides **research-focused training** with a varied, international group of faculty and researchers. All students are actively involved in developing research projects and have access to the laboratories during the Master's course, thus gaining invaluable **hands-on experience** with the latest research technologies. These include functional magnetic resonance imaging (fMRI), transcranial magnetic stimulation (TMS), magnetic encephalography (MEG), transcranial direct current stimulation (tDCS), electroencephalography (EEG), eye tracking, cinematic motion tracking, psychophysics, computational modeling, & comparative cognition (animal models). The knowledge and skills gained during the Master's course will most of all provide a foundation for advanced scientific research, but also prepare for professional applications in more applied settings.

Program overview

Main application deadline	Non-EU: January/February each year
Extended application deadline	June each year, only for EU citizens or non-EU citizens living in Italy (check www.mcs.unitn.it for updates)
Intake	September each year
Duration	2 years, full time
Minimum requirements	Bachelor's degree, fluency in English, basic knowledge of programming, mathematics and statistics
Selection criteria	Curriculum Vitae et Studiorum, English knowledge, professional experience in university or research, references

Career opportunities

The Master's course in Cognitive Science offers a unique opportunity for students aiming to train as scientists. Its main objective is to prepare **talented doctoral candidates** who can be competitive and confident in performing research in international settings. Graduates will be able to apply advanced skills in cognitive neuroscience using **experimental methodologies** in the study of the mind-brain system. They will conduct research activities as part of the analysis and development of systems related to human cognitive performance as well as empirical research and development of neural and computational models of cognition.

The Master's course in Cognitive Science is international: our students come from all continents and, after graduation, find positions in their home countries and elsewhere. Though the program is relatively young, its strength is already evident in the satisfaction reported by students and in their **high and successful placement** after graduation. A recent survey conducted on 84 graduates of the program showed that 77% of them are currently employed. The Master's degree in Cognitive Science provides access to doctoral courses in the disciplines of cognitive neuroscience, both in Italy and in Europe as well as in the United States. CIMeC itself offers a **PhD program in Cognitive and Brain Sciences**. We are also very proud of the success of those students who choose careers in industry. They have found interesting positions in academic research management (both clinical and non-clinical), software development, communication and consulting.

Requirements

Ideal applicants are highly motivated individuals holding a **Bachelor's degree** from an accredited university, and **fluent in English**. Students whose first language is not English, or whose language of instruction in the previous degree was not English, are asked to provide evidence of a good command of English. Candidates will be selected on the basis of their academic achievements, strength of their intellectual and working abilities as described in their CV, their experience in the field, and reference letters. We are open to candidates from any academic background.

Fees and Funding

The yearly tuition fee is approximately **3,000 euro for European students** and **6,000 euro for non-European students**: the fee may be reduced depending on the student's financial situation. Qualified candidates are encouraged to apply for scholarships. The **Opera Universitaria scholarship** is awarded on the basis of income and merit, and covers partial or total living expenses. Each year scholarships and tuition waivers will be made available depending on the financial sources available.

Joint Study Programs

The course is also part of a joint educational program, restricted to a small number of highly selected students, with the **Scuola Internazionale Superiore di Studi Avanzati di Trieste (SISSA).**

Another opportunity is offered by the **European Master's Program in Language and Communication Technologies (EM LCT)**, a joint international study course recognized by the European Commission under the Erasmus Mundus program. We also offer students the opportunity to attend courses abroad as part of international exchange programs and numerous collaborations with foreign universities.




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