Two-year multi-disciplinary

Master's programme

Cognitive Neuroscience

study in holland
open to international minds

change perspective

Radboud University

IN·DEI·NOMINE·FELICITER

Radboudumc
university medical center

Change perspective

Gaining new and exciting insights

Radboud University is one of the leading academic communities in the Netherlands. Our top-flight education and research takes place in modern buildings with state-of-the-art facilities, located on a beautiful, green campus.

We are a close-knit community where academics from different faculties – thanks to being walking-distance from each other – often work together in cross-disciplinary teams. Therefore, as a Master's student at Radboud University, you will not only be able to converse with your fellow students, but also with students from other programmes, teachers, professors, and top-notch scientists. These meetings will stimulate you to take a fresh look at things and change your perspective. In turn you, as an international student, can stimulate others to change their perspective.

The strength of our university lies in its personal approach. Our Master's students receive individual guidance from top researchers. Students' studies are also directly integrated with the work done at the university's 14 research institutes – a number of which are top in their field. This offers unique opportunities to undergraduates, postgraduates and doctoral candidates alike.

Gain a diploma from the Best Traditional University in the Netherlands

Radboud University is in the top one percent of universities in the world. An annual survey among all university students in the Netherlands has shown that between 2010 and 2017, students at Radboud University were the most satisfied with their university. The survey included aspects such as the quality of education, the guidance provided by teachers, and study facilities. In 2019, Radboud University was once again voted the number one traditional university in the Netherlands. As an example of excellence, the 2010 Nobel Prize in Physics was awarded to a professor and PhD student connected to Radboud University. These are some of the reasons why an increasing number of students and scientists from around the world choose to study and work in Nijmegen. The University is constantly strengthening the international character of its programmes. The diverse backgrounds of those who study and teach at the University help our common objective: to achieve the highest possible quality in education and research.

Live in a true student city

You will be based in a true university city: of its 170,000 inhabitants, some 30,000 are students. Students appreciate the city's attractive, green surroundings and its many venues for relaxation and entertainment. The cultural centre LUX is the largest art house cinema in the Netherlands and also offers theatre, music, debate, and multimedia. The oldest city in the Netherlands dates from Roman times when its name was Noviomagus (New Market). Situated close to the German border, Nijmegen lies on the banks of the river Waal, a branch of the Rhine. It is a friendly and safe place to live and study.

Ranking and awards 2017

- Best Traditional University in the Netherlands 2019, 2010 - 2017, according to students in information guide 'Keuzegids universiteiten'
- Nobel Prize for Physics awarded to two professors connected to Radboud University in 2010
- 123 in the Times Higher Education Rankings 2018
- 205 in the QS World University Rankings 2018
- 115 in the Shanghai Rankings 2018

For more information on rankings and awards, please have a look at **www.ru.nl/masters/rankings**

A warm welcome for international students

As a visiting student, the International Office of Radboud University will help you with practical matters such as finding housing, arranging a visa, and medical insurance. In addition, it organises many activities that will make you feel at home in the city and bring you into contact with its students and its other inhabitants. For more information: **www.ru.nl/internationaloffice**

Studying in Holland

There are many reasons for choosing to study in the Netherlands:

- Dutch higher education has a strong reputation worldwide thanks to a national system of strict regulation and quality assurance.
- Dutch scientific research is rated disproportionately high internationally.
- An international environment in which to study.
- The Dutch speak good English, so it is easy to communicate.
- The Netherlands is a multicultural society and a gateway to Europe.
- Education in the Netherlands is not free, but tuition fees are very reasonable. The annual fee for a degree programme at a Dutch higher education institution starts at €2083 (2019-2020) for students from the European Economic Area (EEA). The costs of programmes or courses for students coming from outside the EEA are generally higher (€12,645 2019-2020). Additional expenses will include housing and other everyday costs.

Asli Ozyurek

Centre for Language Studies, Donders Centre for Cognition

Language lies at the heart of what makes us human and probably played a key role in the evolutionary survival of our species. Our amazing capacity to learn, produce and understand language so effortlessly is something that we often take for granted. But there are many complexities hiding just below the surface of our everyday conversations that we do not yet fully understand. Researchers in the Language and Communication theme at the Donders Institute have a leading role in the field, hosting the greatest concentration in the world of researchers working on language and combining interdisciplinary approaches with the newest methods to understand the complexity of our language faculty. To achieve this, we take a multidisciplinary and multimodal (including speech, gesture and sign) approach, bridging language research from the study of molecules all the way to language structure and to the study of language use in context, interaction and shaped by culture. For example, at the neurobiological level we question how the human language capacity is rooted and evolved, in the 'language-ready' human brain and its genetic makeup. At the psychological level, we explore the mental operations that underlie our ability to produce and comprehend language, in our native or non-native languages and the role of individual differences in this process. At the linguistic level, we try to understand what is common and different across languages and how children born to different languages learn them so early and so easily. There is still much to discover at each of these levels and the relations between them. Come to Nijmegen if you like to learn about the newest approaches and methods to language research. It is the place to be!

Alan Sanfey

Donders Centre for Cognitive Neuroimaging

How do we manage to negotiate our way through very complex physical and social environments, adapting to these environments in order to fulfil our goals? The research specialisation of Perception, Action, and Control is concerned with understanding the neural and cognitive structures of the brain that make those feats possible. More precisely, we study how the integration between perception and action is achieved, controlled, and exploited during sensorimotor integration, adaptive decision-making, and complex social interactions. We consider multiple levels of biological organisation, from genes to neuromodulators, from single neurons to brain circuits, from individual organisms to multiple interacting agents. At each of these levels, we are also concerned with how the perception-action cycle is altered in neurological and psychiatric populations. This interdisciplinary and multi-level approach offers students the opportunity to experience different analytical and theoretical perspectives, providing a unique research profile in the Dutch and European landscape of cognitive neuroscience.

Discover the human brain in action

Cognitive neuroscience studies the cognitive and neural basis of mental processes such as perception, action, language, attention and memory. This relatively young discipline seeks to unravel the workings of the human brain. What happens in our brains when we do what we do? How is this fascinating, unbelievably complex 'micro cosmos' inside our skulls organised? How do those billions of nerve cells collaborate in an organ no bigger than half a football?

Thanks to brain imaging – a technology for measuring and depicting brain activity – scientists are now able to observe the human brain in action. In their research, cognitive neuroscientists are therefore no longer dependent on patients with brain damage if they want to ascertain which parts of the brain are involved in certain tasks and functions. Nowadays, it is also possible to conduct carefully controlled experiments on healthy people using state-of-the-art imaging techniques. Because of this revolutionary development, cognitive neuroscience has gained tremendous momentum over the past twenty years. As many already know, cognitive neuroscience is the discipline of the future.

Donders Graduate School

Research in the field of cognitive neuroscience is one of the spearheads in the research policy of Radboud University. More than six hundred scientists from different faculties and top institutes have joined forces in the Donders Institute for Brain, Cognition and Behaviour to systematically unravel the workings of the human brain. They work closely together, exchanging expertise and sharing state-of-the-art research equipment. The Donders Graduate School , of which the MSc Cognitive Neuroscience (CNS) programme is a part, provides the teaching.

From molecules to minds to population

A unique multi-disciplinary Master's programme

Are you interested in the human brain? Would you like to conduct research into the workings of the brain and join an enthusiastic, international group of top researchers? Then the Donders Graduate School is the place to be, with its multi-faculty Master's programme in Cognitive Neuroscience (MSc CNS). This selective Master's programme takes two years and is, of course, of a scientific orientation. There is a strong emphasis on experimental research. After all, what counts is hands-on research experience. This Master's programme is unique in the Netherlands.

The Master's programme in Cognitive Neuroscience primarily focuses on training talented Bachelor's students to become excellent researchers. Research institutes and businesses around the world need highly qualified and motivated researchers. Moreover, since cognitive neuroscience is a rather young discipline, there is still a lot to be explored and many questions that need to be answered. Therefore, there is plenty of room for new discoveries!

Close cooperation on campus

The Master's programme in Cognitive Neuroscience is a multidisciplinary programme closely involving internationally renowned scientists from several faculties and research institutes on campus. The Nijmegen research in Cognitive Neuroscience has therefore gained national and international recognition for its high quality. In the Master's programme you will attend lectures by these top scientists. They will also supervise your practical training and the writing of your Master's thesis in your second year.

The following faculties participate in the MSc programme:

- Faculty of Social Sciences
- Faculty of Arts
- Faculty of Science, Mathematics & Computing Science
- Faculty of Philosophy
- Faculty of Medical Sciences Radboudumc

The following institutes are responsible for the practical implementation of the MSc programme:

- Donders Institute for Brain, Cognition and Behaviour (DI, i.c. Donders Graduate School):
  - Donders Centre for Cognition (DCC)
  - Donders Centre for Medical Neuroscience (DCMN)
  - Donders Centre for Neuroscience (DCN)
  - Donders Centre for Cognitive Neuroimaging (DCCN)
- Centre for Language Study (CLS)
- Max Planck Institute for Psycholinguistics (MPI)

Indira Tendolkar

Donders Centre for Medical Neuroscience

The brain is our most complex organ and directs the 'orchestra' of other organs in our body. Even with so many functions, there is still an incredible flexibility to the brain's functioning and organisation. This fascinating 'plasticity' is what we study, from neuro-development to old age, and all the way from molecules to minds to population. Among the questions that keep us busy are how the brain acquires its abilities of learning and memory, how genetic factors contribute to our cognitive abilities, where the neural substrates of those abilities are localised and how they are used. And what goes wrong under stress or when mental disorders occur - in the young (like in intellectual disability, autism and ADHD) or during aging (like in Alzheimer's disease)? Due to the breadth and depth of our work, integrating results from molecular, cellular, animal and neuroimaging studies with work on neurocognitive and behavioural measures, you will be able to learn the state-of-theart from leading scientists in the field of Plasticity and Memory.

Tansu Celikel

Donders Centre for Neuroscience

Most of us can cycle through a busy street quite effortlessly. When doing so, our brain receives massive amounts of information, little of which is relevant for the task at hand. At the same time we need to balance our bikes and find our way to our destination. Even such a seemingly routine everyday task engages most of (if not) the entire brain. In recent years, we have learned a lot about how individual brain regions operate to partly accomplish real-world computations, but we still need a much better understanding of how the brain operates at the network level. Also, it has been suggested that many disorders such as ADHD and schizophrenia must be understood as malfunctioning of the brain network. As such, understanding the brain as a network is one of the greatest challenges in neuroscience. Making progress in this field requires an interdisciplinary approach, combining the knowledge gained using different techniques with sound theories. We need to understand how groups of neurons communicate with each other whether the neurons are merely a hair away from each other or located in distinct portions of the brain; this is the main focus of research in the Neural Computation and Neurotechnology specialisation. Given the multidisciplinary groups and the collaborative spirit at the Donders Institute, we are in a unique position to better understand how the brain operates as a network and apply this knowledge to understanding cognition and disorders.

Bilingualism
During my bachelor's I wanted to know why things work the way they do, I was very interested in finding out about the workings behind brain processes. I chose Cognitive Neuroscience so I can do fundamental research into brain processes, and language processing in particular. Being bilingual myself, I have been fascinated by language processing and want to know, among other things, how bilingual people process things differently from non-bilingual people.

A challenging programme
I am now in my first year of the Master's programme and have already been taking part in the latest, state-of-the-art research in the field of language and communication. Researchers here are very motivated and good in what they do. I'm getting acquainted with current research, as well as learning about different research techniques and paradigms. Not only do I learn what is already out there, but I also learn a lot about how to challenge myself to find out more.

During lectures students are challenged and motivated to think critically for themselves and to take part in discussions. Teachers welcome the input from students, and are willing to help and answer questions.

Also, as a student of this programme, I have the opportunity to pursue the subjects I find most interesting. For example, I chose my three lab-rotations -short internships in the first year- by sending an email to the teacher after lectures I found particularly interesting, asking them if I could do a lab-rotation in their lab.

International surprise
Although I knew that this programme would be taught in English, the fact that it is so international was a surprise to me and is very refreshing. I had no idea that people with so many different nationalities come to Nijmegen for this programme. It's good to interact with people with different nationalities. In language research this is particularly interesting, because an example during a lecture can often immediately be related to a student from a particular country in the group. This makes it enriching.

Four Master's specialisations

The MSc CNS programme offers four specialisations which correspond one-to-one with the four research themes of the Donders Institute: (1) Language and Communication; (2) Perception, Action and Control; (3) Plasticity and Memory, and (4) Neural Computation and Neurotechnology. Each specialisation has its own set of seven core courses and a student has to complete 30EC of these courses to complete her/his specialisation training. The entire programme is in English and the specialisations share a common ground in the set of general core courses mandatory for all students.

Five general core courses
In the first year, next to the personalised set of specialisation courses, students will become acquainted with the most important theories, models, experimental techniques and analysis methods in cognitive neuroscience in general, through the set of five general core courses. This specialised and common ground is complemented with two skill-training courses and two elective courses. For a detailed overview of the courses, please visit **www.ru.nl/masters/cns**

Internship & thesis
The second year is mainly devoted to the research internship and the writing of the thesis. With its abundance of state-of-the-art facilities available, students embark in their second year on a big research project that they can call their own. Under supervision of a researcher at the Donders Institute, or one of its affiliated institutes, a research project starts of course with a research question and ends in the Master's thesis, written in the form of a research paper that is in principle submittable to a scientific journal.

1 Language and Communication

Understanding and producing language: more complicated than you think
How do people understand a simple sentence? How do they recognise separate words in running speech? How do they distinguish separate words when the acoustic signal does not contain any spaces? And what about language production? How do people produce a simple sentence? A mature language user has a vocabulary of about thirty to forty thousand words. Speech is produced at a speed of three to five words per second. So, how is it possible that, in such an amazingly short space of time, people can select the correct words, put them in the correct order and grammatical form, and pronounce them intelligibly? Listening and speaking seem to be natural accomplishments. They are skills you normally hardly ever think about, which is strange because they involve a unique human ability that is acquired in the first few years of life. The acquisition and comprehension of language is based on extremely complex cognitive processes, which are not yet entirely understood. It is these processes that form the psycholinguistics' field of study.

Top international institutes
Linguistics, cognitive psychology and neuroscience all play a significant role in psycholinguistics. These sciences are prominently featured in Nijmegen. On campus you will find, next to the Donders Institute, the Centre for Language Study (CLS), associated with the Faculty of Arts, and the Max Planck Institute for Psycholinguistics (MPI). These are all international research institutes with very modern facilities. As a student in the Language & Communication specialisation, you will gain ample experience in using experimental techniques.

Career Prospects
After completing the Master's specialisation in Language and Communication, you will have knowledge on how language is acquired, understood and produced. You will also know a lot about language development, the neural basis of language skills, language and speech disorders, and linguistics using contemporary research techniques and methodology such as speech analysis, eye-movement analysis, brain imaging and computational modelling. With this background you may find a position as a PhD candidate within a psycholinguistic research institute, as a researcher in a government institution i.e., in the care sector (rehabilitation centres) or, e.g., in education (language disorders or in a specialised company).

2 Perception, Action, and Control

Targeted action: more than meets the eye
How do people pick out their own glass of beer from all the other glasses at the bar? And how do they find their way around a building? How do people walk from one room to the other – and to what extent can you do this with your eyes closed? Catching a ball, picking up a cup, writing a sentence, choosing a meal: these are all targeted actions that people often perform without thinking. For patients who suffered a stroke, these automatic actions do not come naturally any more, and are extremely difficult to perform. Why is that? What cognitive and brain processes play a role in these actions? That is what researchers who study Perception, Action and Control want to discover.

Close cooperation between disciplines
Perception, Action and Control is a central research area within different faculties of Radboud University. It is aimed at the three basic components of current cognitive neuroscience: modelling (e.g. in artificial intelligence and physics), designing and conducting behavioural studies (e.g. in psychology) and measuring the biological foundation of behaviour. The various research groups of the Donders Institute within the research theme Perception, Action and Control use a wide range of modern research facilities, which enables them to provide natural stimuli and measure complex everyday behaviour. The close cooperation between the different disciplines also characterises the content of the courses in this specialisation.

The complex human brain
Because I have an interest in the human body as a biological system I chose to study medicine. During my Bachelor's I realised that I am interested in the theory, rather than the clinical site of medicine, and therefore chose a minor in neuroscience. This fascinated me. I learned about the workings of human brain and decided to do my Master's in Cognitive Neuroscience.

In this Master's programme, I can focus even more on studying the human brain as a complex mechanism. I chose the specialisation Perception, Action and Control, which is most related to my interest: seeing the brain as a biological system that integrates information to enable perception and cognition. In this programme, I also explore other research fields. Not just the biological side of things, but also subjects like the physical side of MRI-machines, or the mathematics behind Artificial Intelligence (cognitive computing); cognitive psychology behind decision making and philosophy. All these research fields come together in this specialisation. Students have the freedom to specialise in what they are interested in. As long as you are motivated, you have many options to discover new areas. I find it unique to work on something as unique as the human brain in a truly interdisciplinary team; students really get different perspectives.

Internship – no longer stuck to the ground
I am currently a second year student and my internship is at the biophysics department of the Donders Institute where I take part in a research project to investigate the use of wearable and smart technology that can aid people with Parkinson's disease. More specifically, I study the use of smart glasses as an aid for walking. Parkinson's patients sometimes suffer from a symptom called freezing of gait, where they remain frozen in place while they do have the intention of walking. By means of smart technology, we can relieve these symptoms. It can help people if they have cues in their environment that they can aim for. We try to display this by using augmented reality glasses. The use of smart technology in this domain is new and can be used anywhere.

Even though my internship is in the Netherlands, it feels like a truly international environment. You find different nationalities from around the world here. The students have a lot of time to focus on their studies and their internship, so we have become one friendly community.

Broad development
CNS is a relatively small programme where teachers have time for intimate teaching and coaching of their students. Asking them questions is always possible. During lab rotations, the contact between staff and students is easy; teachers are open to share their research with students. This programme really gives me the opportunity to develop myself broadly and to get acquainted with a lot of research, which will be very useful in the future as I would like to do a PhD after my graduation.

Ilgin Kolabas (23)

Specialisation: Plasticity and Memory
Bachelor: Molecular Biology, Genetics and Bio engineering (Istanbul University)
Nationality: Turkish

I've always been fascinated by life and living, about finding out how we function. I associated this with DNA, so I did my Bachelor's in molecular biology. But as life is so much more than just biology, I did a minor in psychology. For my Master's I looked for a programme that covered the overlap between biology and psychology and that also contained research in this area. It all came together in the Master"s programme in Cognitive Neuroscience. The psychological field, together with the genetics and their interaction is what I'm most interested in. I want to find out how these specific networks interact and influence us. How some abnormalities or maladaptations influence our everyday life and our genes, and how our DNA influences our daily life.

Change perspective
What I love about this programme, is that everyone, students as well as instructors, is so enthusiastic. The instructors are open to students and ready to help. Students are also very open and share their interests and expertise. The programme has a very international atmosphere, a real cultural mix that has broadened my perspective. Different people from different cultures have different visions and different suggestions. Our brains are shaped by the way we are raised. Students share their perceptions with others. That really adds to the programme. Not only in course work, but also during going out, or during extracurricular activities. The different cultures enhance the creativity in a group.

In the programme, the selection of course options is quite vast. You can more or less create your own path by choosing different courses and by the lab rotations that you choose to do. When you do a course, we are not taught by one instructor for the whole course, but taught by different specialists in the field.

Living in the Netherlands
Coming from Istanbul, Nijmegen and the Netherlands feels really organised. At first a little challenging, I now find it an easy country to live in. The city is filled with students, so it feels young and open. There are many events going on, I have never been bored here. I was surprised how easy it has been to meet Dutch students, I thought they would be really clustered, but actually, most of my friends are now Dutch.

Internship
Although there are very good opportunities in Nijmegen, I chose to do my internship at the Max Planck Institute (MPI) in Munich. The Radboud University offers the MPI/Radboud Scholarship which I applied for and received. The lab where I work, works on improving imaging quality by making tissues transparent. They use a tissue clearing protocol that is quite widely used all over the world, so I thought it would be a great qualification to learn for my later studies. The techniques we are using specifically work in strokes and dementia. With this we try to understand different stroke models and how we can see stroke progresses.

Career Prospects
After completing the Master's specialisation in Perception, Action and Control, you will have experience in current research and analysis techniques in perception, motor research, and decision-making, using research techniques from psychophysics and brain imaging. This will enable you to apply models of perception, sensorimotor control, and complex choice in your future research. With this background you may find a position as a PhD student or in industry research in the Netherlands or abroad.

3 Plasticity and Memory

The connection between the brain and cognition
How does your brain enable you to remember certain events? How does your brain adapt to certain changes, such as a haemorrhage or other forms of damage? How do you distinguish between important and relatively unimportant information in the world around you? And how does the consolidation of newly acquired memories work during sleep? These are just a few of the questions that scientists in the domain of Plasticity and Memory would like to see answered. In this research theme researchers tackle the mechanistic underpinnings and behavioural consequences of long-term changes in neural structure and function. More specifically, the aim is to unravel how neuroplasticity supports development during childhood, adaptation to environmental challenges, and learning and memory throughout life span. In addition to fundamental research, this group also focuses on topics related to Alzheimer's disease, neurodevelopmental and stress-related disorders.

Neurocognition in Nijmegen: the cutting edge
Radboud University and the Radboud University Medical Centre (Radboudumc) both have an outstanding reputation in the domain of Plasticity and Memory. The Plasticity and Memory theme truly realized a bench to bedside approach and is therefore integrated with clinical subthemes of the Radboud University Medical Center.

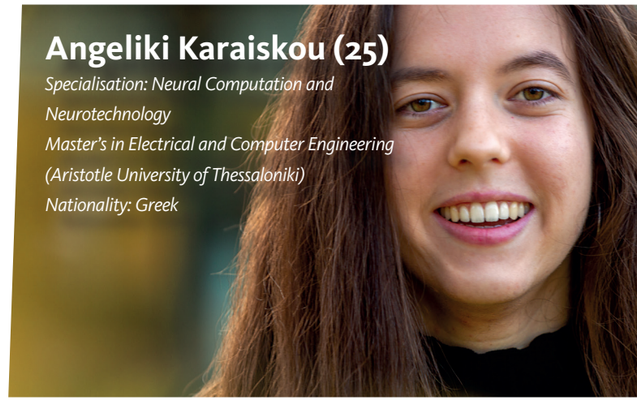
Career Prospects
After completing the Master's specialisation in Plasticity and Memory, you will be able to conduct neuroimaging and neurobiological research. You will know a lot about anatomical and neurophysiological aspects of the human brain and theoretical cognition/neurocognition models. This will enable you to conduct research into the neurofunctional architecture of cognitive key functions, for example in the context of a PhD project at a research institute or academic university.

4 Neural Computation and Neurotechnology

Communicating networks: connecting the dots
Our perception of the outside world, as well as our deepest, most private thoughts are just patterns of electro-chemical activity generated by a massive network of interconnected neurons. Within this network, information travels and is processed from node to node. Mental health requires these brain networks to be effective. If they are not, or breakdown all together, brain diseases such as schizophrenia, attention-deficit disorder, or dementia may ensue. Recent technological breakthroughs in experiment and theory make it possible to measure, characterise, and ultimately understand these brain networks. As such, research in this area is poised to make major contributions to the treatment of brain diseases as well as lead to fundamental insights into how information is represented and processed in the intact brain and how the brain learns.

Breakthrough research
The specialisation Neural Computation and Neurotechnology focuses on brain networks ranging from the smallest scale (communication between individual neurons) up to the largest scale (communication between different brain areas). Researchers at the Donders Institute have proposed a powerful principle called 'Communication through coherence,' which holds that fast brain oscillations are modulated so as to line-up neurons for fast and accurate information processing. Experiments have confirmed this hypothesis in a number of neural systems on scales ranging from neuron pairs to whole brain areas.

Career Prospects
After completing the Master's specialisation in Neural Computation and Neurotechnology you will be able to study brain networks and will understand the processes involved in coherent brain activity that subserve neuronal communication. You will be able to apply for a wide range of research projects, ranging from computational neuroscience, neuroinformatics, machine learning to psychology, neuroimaging and systems neuroscience. These skills, in combination with an understanding of communication processes in the brain are invaluable for a PhD position in this domain and (non-)industrial jobs, e.g. related to artificial intelligence, brain-computer interface etc.



Angeliki Karaiskou (25)

Specialisation: Neural Computation and Neurotechnology
Master's in Electrical and Computer Engineering (Aristotle University of Thessaloniki)
Nationality: Greek

From engineering to neuroscience
I am fascinated by the brain, but with a background that focused mainly on mathematics, physics and programming, my past experience did not seem optimal. Still, I wanted to get involved with neuroscience, so I looked for a programme in computational neuroscience. I had heard about the Donders institute and its research in this domain, so that is how I chose this university and its Master's programme in cognitive neuroscience (CNS). I like the fact that the CNS programme has four different specialisations and that there are people here from all sorts of different backgrounds who cooperate, work and study together.

A different life
I also came here because Radboud University is in the Netherlands, a country that is friendly to internationals and where almost everyone speaks English. But although everybody speaks English and the people are open, it did take me some time to get used to living here. People try to help, but the way of living is different from Greece. Still, the people here are easy to talk to, which helps. In my spare time, I also meet with some of the people from my specialisation because we work on assignments together. One girl is Dutch, one girl is Chinese and another student is from Iran. All very different, and I really like that.

I am in my first year and still working on finding out what direction I want to go into. So far, I like everything! I chose the specialisation of Neural Computation and Neurotechnology because of my background. I like doing computational things and mathematics; I prefer maths and programming to biology, although I would like to learn more about the biological side of the brain. I am also interested in courses from other specialisations even though some of them are quite challenging for me.

Approachable staff
This programme is really about the brain. What is very unique, is that it has four specialisations and that people from all sorts of different backgrounds can work together. The contact with the teaching staff is quite different from what I was used to in Greece. The teachers in the Master's programme are very approachable and their doors are always open to ask questions.

General information

What prior qualifications do you need?
You may apply for the Master's programme in Cognitive Neuroscience if you have a Bachelor's degree in Linguistics, Physics, Mathematics, Biomedical Sciences, Behavioural Sciences (e.g. Psychology), or a related Bachelor's programme. For this selective Master's programme, every applicant is assessed individually to ascertain whether he/she is eligible to participate in the programme. Further information can be found on our website: **www.ru.nl/masters/cns**

If you are interested, please call the secretariat's office (+31(0)243611669), or send an email to: cns@cns.ru.nl

The Master's programme is open to Dutch as well as international students.

How to enrol for the Master's programme
The Admission Board of the Master's programme in Cognitive Neurosciences determines whether or not you will be admitted to the Master's programme. An interview (real life or Skype) may be part of the selection process. After you have been accepted to the programme by the Admission Board, you will need to complete the formal registration to Radboud University online. On the basis of your documents the Radboud Student Affairs Office will determine whether you meet the general requirements to be admitted to an academic study programme at the Master's level. For more information on the application procedure, the general and specialisation specific requirements, including English proficiency, please visit: **www.ru.nl/masters/cns**

Tuition fees
Students from the European Economic Area (EEA) which includes all EU countries, Iceland, Lichtenstein and Norway, pay the same tuition fee as Dutch students, for the academic year 2019/2020: €2,083 per year. For students from outside the EEA, the fee is €12,645 per year in 2019/2020. For the most up to date tuition fees, please visit: **www.ru.nl/masters/tuition**

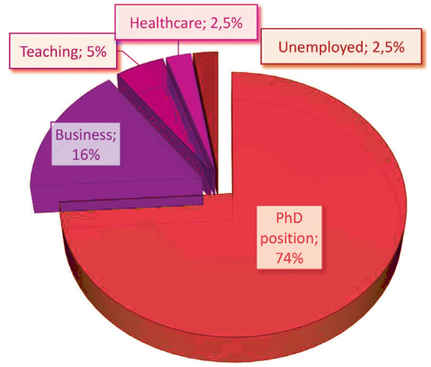
Scholarships
The Master's programme in Cognitive Neuroscience has been accredited by the Dutch authorities. This means that Dutch students enrolled in this programme may apply for a government scholarship. For more details, please go to: **www.duo.nl**

Foreign students are encouraged to find a scholarship through: **www.studyinholland.nl/scholarships**
If you are a student from outside the EEA, you may be eligible to apply for the Radboud Scholarship Programme. For more information on this scholarship programme please visit: **www.ru.nl/rsp**

Rob van Lier

Director of the Master's programme

The Master's programme is part of the Donders Institute for Brain Cognition and Behaviour, an internationally leading institute in the research field of cognitive neuroscience. The lecturers in the Master's programme are also researchers in the Donders institute, having up-to-date knowledge about the latest scientific developments. Prospective students are invited to apply to one of our four Master's specialisations in which they are trained to conduct cutting edge research using state-of-the-art techniques. All applications are reviewed and in most cases applicants will be invited for an interview to examine the match between the student's wishes and capacities and the programme's high demands and ambition. Students who meet these standards of excellence are invited to enter our two-year educational programme. In the first year of our programme, the students follow theoretical and skill training courses, while in the second year the students level-up their scientific expertise by means of an internship in an established research group. In selecting an internship students are encouraged to make their own choice regarding research topics and methods. At the end, a Master's thesis is written and our students are ready to compete for challenging PhD jobs, or jobs at (inter-) national institutes and companies who need highly qualified researchers with the latest knowledge and hands-on experience regarding cognitive neuroscience and brain-related research methods. In short: Nijmegen is *the* place to be to study Cognitive Neuroscience.



Position of CNS alumni one year after graduation (data 2017)

Programme outline

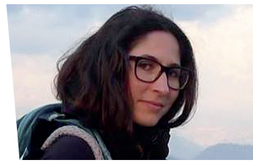
Overview of the Cognitive Neuroscience programme. In two years, 120EC needs to be obtained. The first year is largely dedicated to coursework, while the second year mainly comprises the research internship, culminating in the writing of the Master's thesis.

FIRST YEAR		SECOND YEAR	
Theoretical training		**Practical training**	
General (compulsory)		General (compulsory)	
Trends in cognitive neuroscience	6EC	Practical training & Thesis	45EC
Neuroimaging I	6EC		
Neurophilosophy	6EC		
Lab rotations	3EC		
Neuroimaging II (choose one)	6EC		
Electrophysiological methods			
Haemodynamic methods			
Specialisation			
Core courses	30EC	Free choice (elective courses)	12EC
Skill training (choose 2 out of 6)			
Neuroanatomy	3EC	Practical ERP training	3EC
Advanced math	3EC	Academic writing	3EC
Basic mathematics	3EC	Matlab mathematical programming	3EC
Total	60EC	**Total**	60EC

Alumni quotes

Patricia Romero Verdugo
PhD candidate at
Donders Institute

"I enjoyed that the programme was so interdisciplinary: we had lecturers and classmates from different backgrounds (such as physics, biology, and psychology). It was inspiring and fun to collaborate and learn from each other's expertise."



Rowan Sommers
PhD candidate at
Max Planck Institute

"The best thing about the CNS Master is that it allowed me to acquire both skills and knowledge from an incredible variety of disciplines. My brain has never been stimulated as much as it was during the CNS Master."

Danielle Tump
Developer and tester at
MindAffect in Nijmegen

"The freedom and opportunities to broaden your knowledge and experience in the direction you find most interesting."

Nic Bechet
PhD candidate at
Lund University, Sweden

"The combination of specialised neuroscience training coupled with the opportunity to apply this knowledge whilst working in an exciting research group really stood out for me."

Giulia Lorenzon
Italian Civilian Service
volunteer for psychological
support in Ecuador

"Not a simple Master, rather a school of life. It made me discover and cross limits that I couldn't even imagine. It pushed me to the edge of my potential, and made my family international."

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