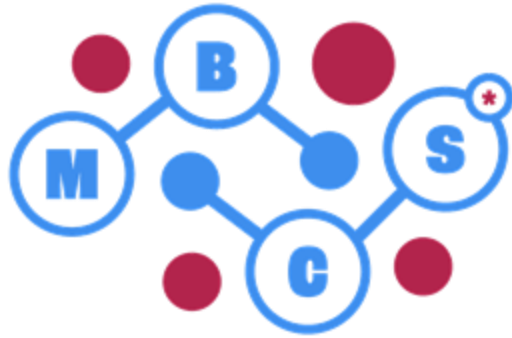




***Master Brain and Cognitive Sciences**

MSc Brain and Cognitive Sciences

Crossing the border
between the brain and the mind

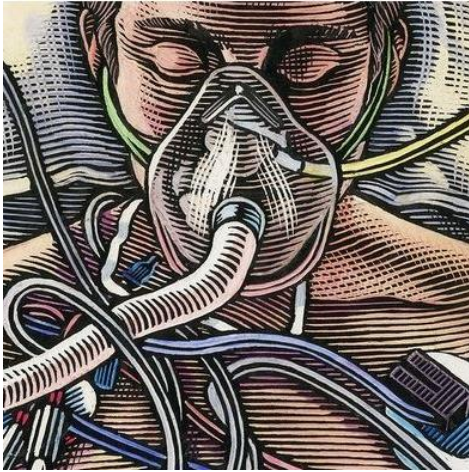
Dr. Umberto Olcese

February 12th, 2026





Brain and Cognitive Sciences



Are they conscious?

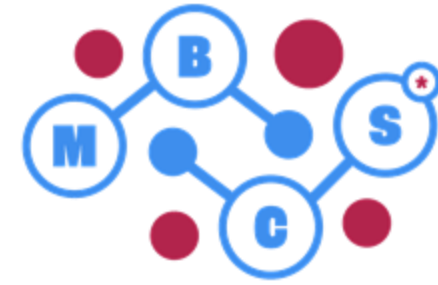


How does language emerge?

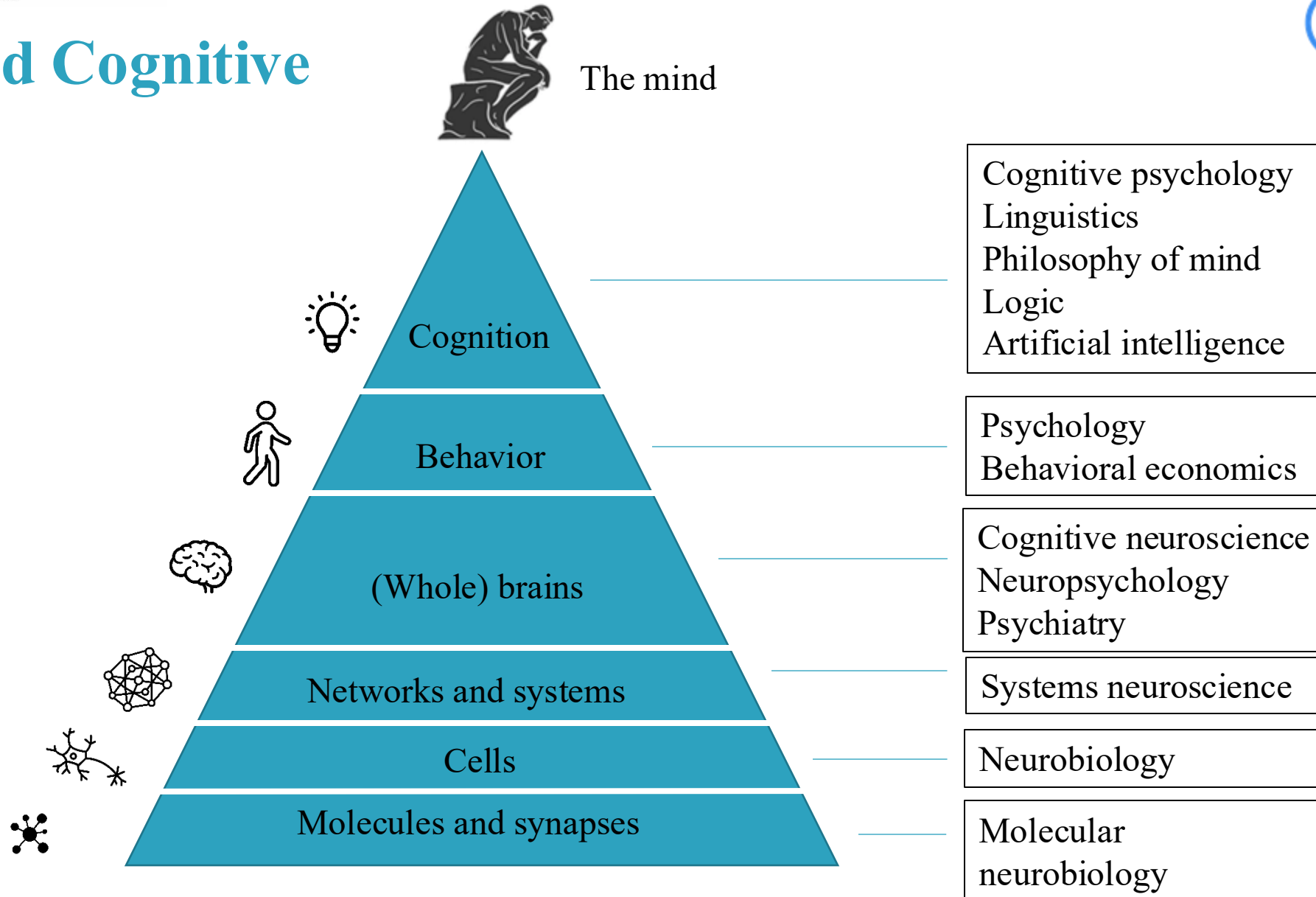


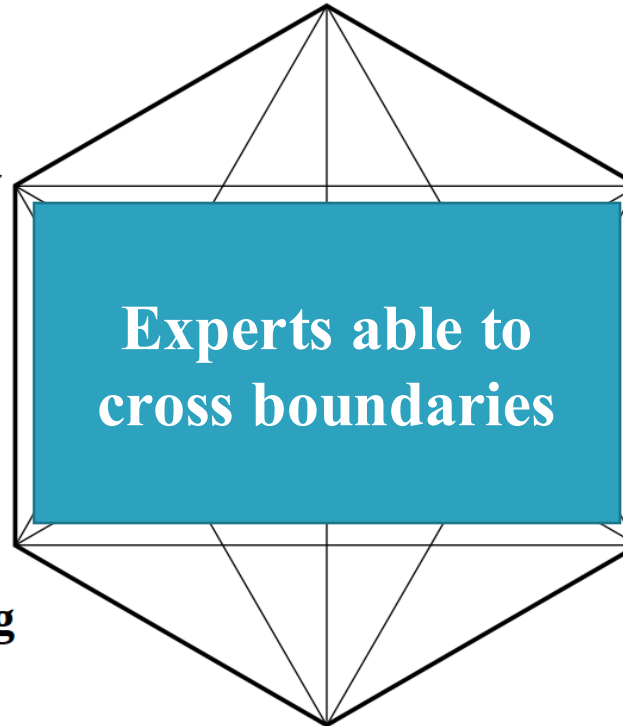
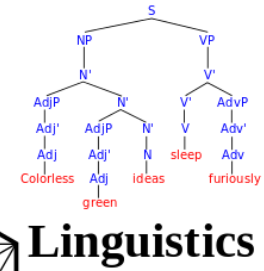
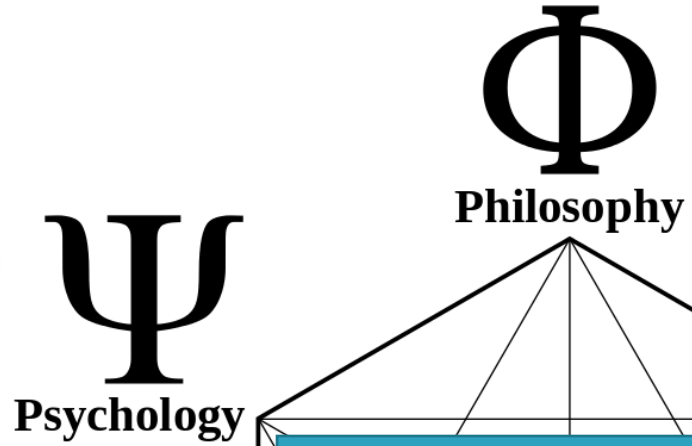
What are the neuronal bases of emotions?

And much much more...



Brain and Cognitive Sciences





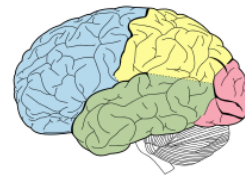
**Computation
and modelling**



Medicine



Neuroscience



Research Master Brain and Cognitive Sciences



- ✓ Institute for Interdisciplinary Studies
- ✓ UvA's expert institute for interdisciplinary training



- ✓ Amsterdam Brain and Cognition Center
- ✓ Fosters interdisciplinary research
- ✓ Scientific excellence



What makes MBCS unique?

- Interdisciplinary focus and skills
- Freedom of choice – create your own profile
- Excellence and community
- Preparation for PhD and research career





Year 1 Research Master Brain and Cognitive Sciences



Study trip



MBCS Summer School 2026

Bias in the brain, mind and society

From perceptual biases and memory distortions to
societal prejudices and stereotypes



Speakers:

Anne Urai

Leiden University

Vanessa van Ast

University of Amsterdam

Jan Willem de Gee

University of Amsterdam

Jan Engelmann

University of Amsterdam

David Amodio

University of Amsterdam

Gijs Schumacher

University of Amsterdam

Bert Bakker

University of Amsterdam

Anne Kroon

University of Amsterdam

Organized by: Dr. Jan Willem van der Gee, Prof. Dr. David Amodio and Dr. Umberto Olcese

15-25 June 2026

Registration via





Year 2

Sem 1

Literature Thesis (12 EC) (free choice)	Specialisation course (6 EC) (restricted choice)	Research project 2 (36 EC) (free choice)
	Elective (6 EC) (free choice)	

Sem 2

Research project 2 (36 EC)



The curriculum

- Interdisciplinary courses: 12 EC
- Entry courses (domain-specific): 10 EC
- Specialization courses: 12 EC
- Electives: 12 EC
- Literature thesis: 12 EC
- Research Projects: 26 + 36 EC

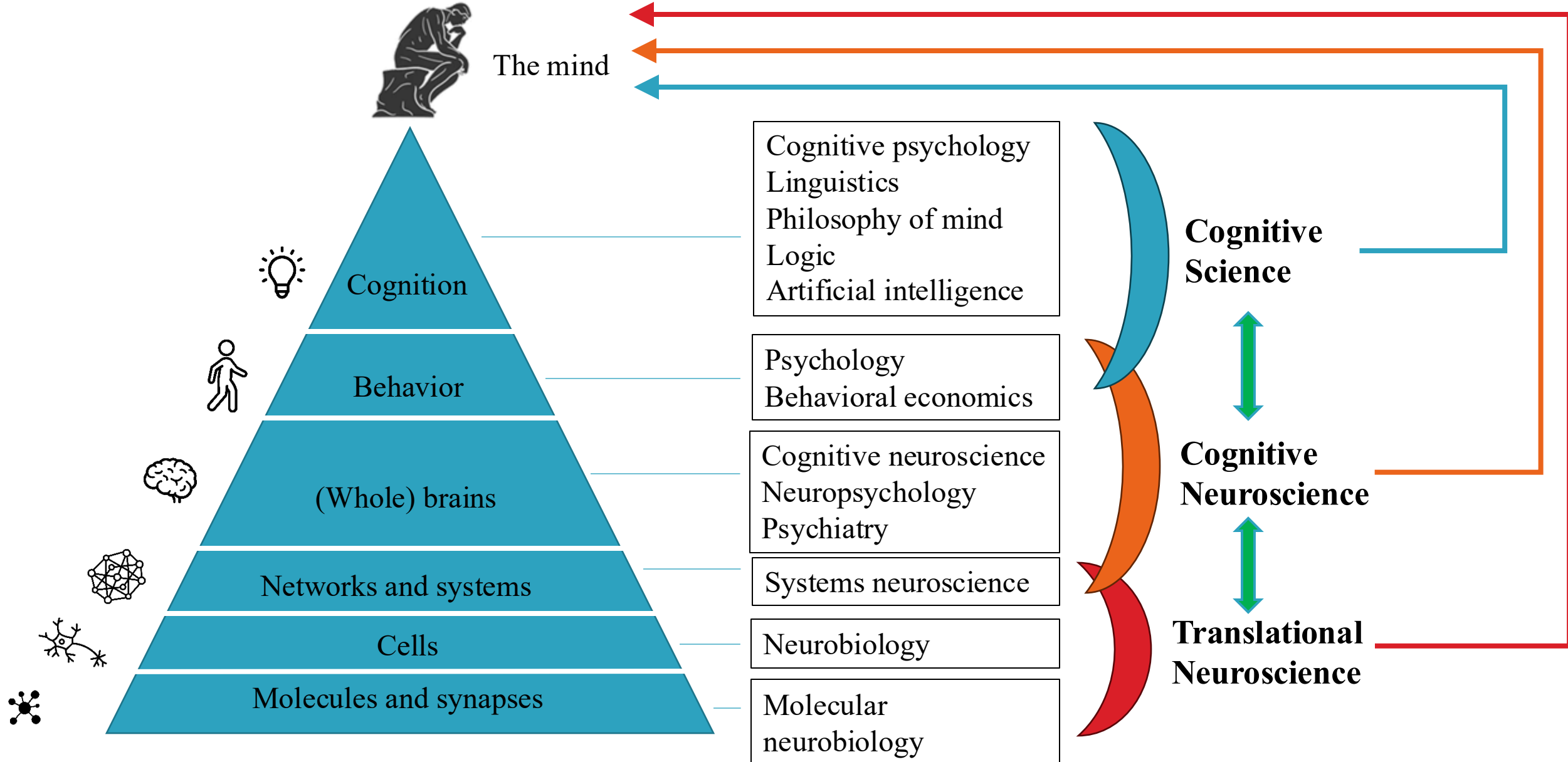




Three domains (Max 20 students/domain)

- Translational Neuroscience
- Cognitive Neuroscience
- Cognitive Science







Translational Neuroscience (TNS)

From molecules to behaviour



Discover the mechanisms and processes that determine the development of neural systems and the control of behaviour, from molecules to neuronal networks.

Entry courses:

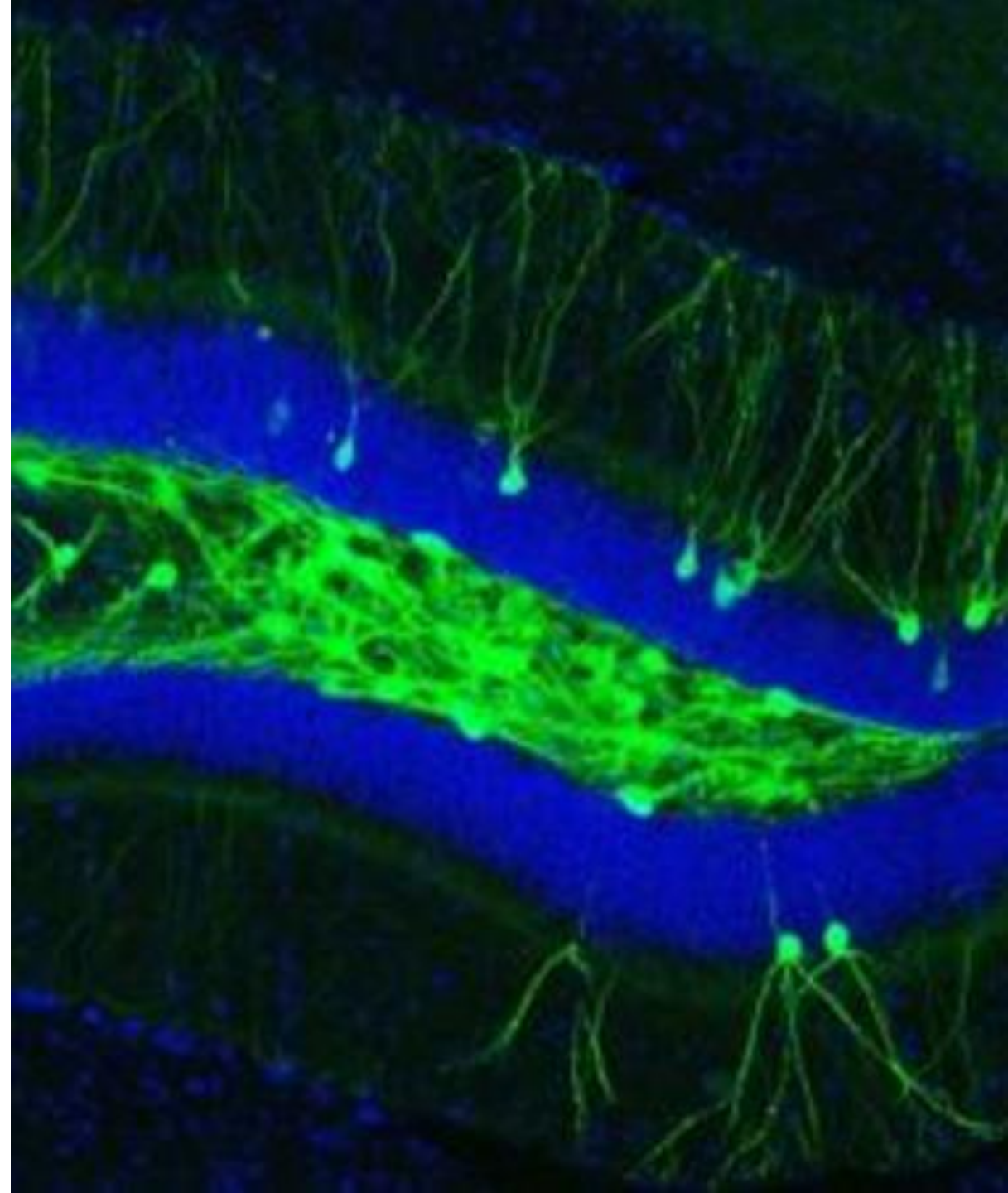
- *Theory course:* Neuroscience: From cell to behaviour
- *Methods course:* Experimental Neurobiology





Research projects TNS

- Retinotopic Disorganization at the Single-Cell Level in the Albino Mouse Visual Cortex, *Netherlands Institute for Neuroscience*
- Frequency-Specific Functional Connectivity Between the Piriform Cortex and Higher- Order Olfactory Regions in Human Odor Intensity Perception, *Karolinska Institutet, SWE*
- The role of NaV1.6 channel in fast action potential generation in human and mouse L2-L3 cortical neurons, *AUMC*





Cognitive Neuroscience (CNS)

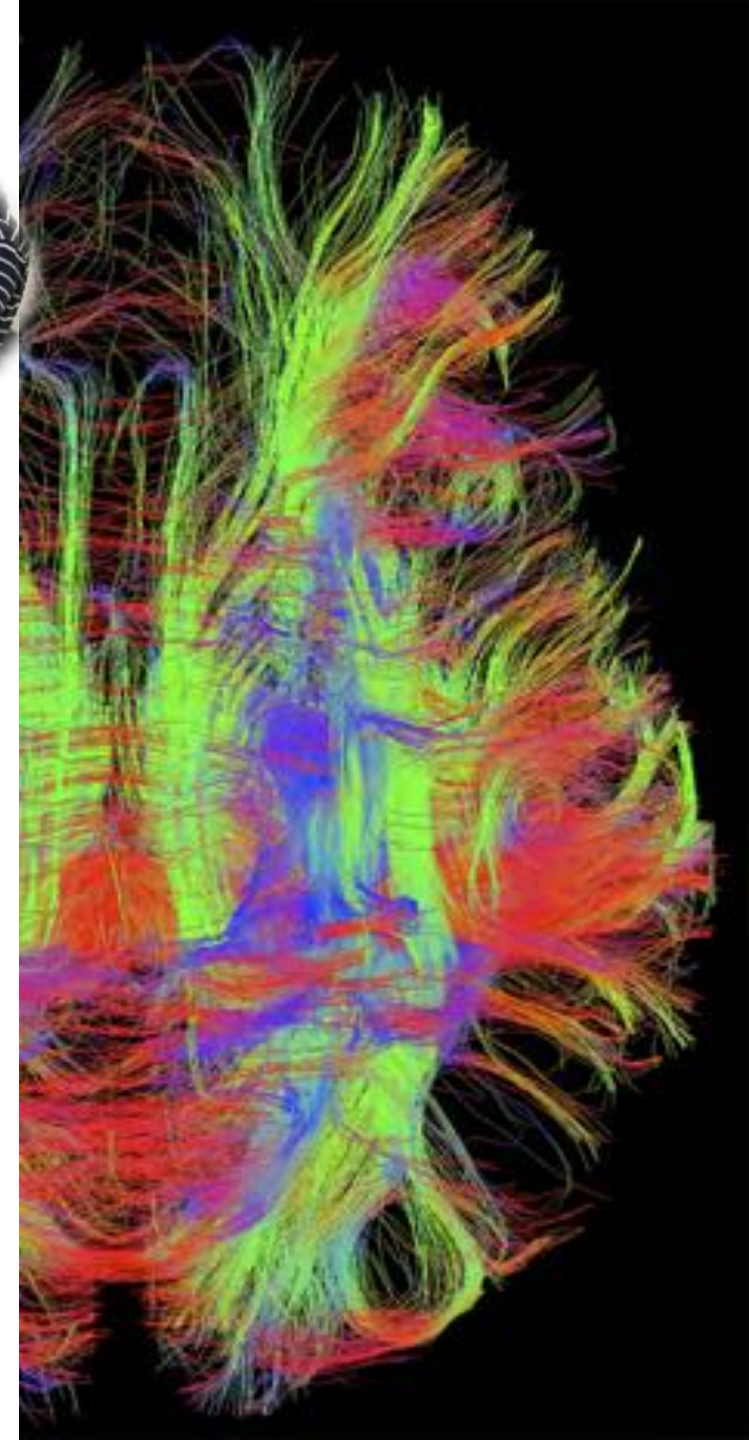
The neural bases of cognition



Bring together neuroscience and psychology to understand the development and execution of cognitive functions underlying behaviour.

Entry courses:

- *Theory course:* Brain Organization and Cognition
- *Methods course:* Neurophysiology: Introduction to Electrophysiology and Imaging





Research projects CNS

- Mind the Map: Exploring the Relationship Between Visual Mental Imagery and Landmark Knowledge Using Questionnaires and a Task Battery, *Leiden University*
- PsiloCouples: A Naturalistic Observational Study of Psilocybin-mediated Changes in Neural Synchrony during Music Listening Tasks, *University of Buenos Aires*
- A concurrent MEG-tACS study: investigating episodic memory and brain activity changes by non- invasive brain stimulation in patients with Alzheimer's disease, *AUMC*





Cognitive Science (CS)

Computational methods to study cognition



Discover the mechanisms of the mind and study cognitive and computational models to explore processes underlying language, music and other higher cognitive functions, whether in humans or artificial intelligence.

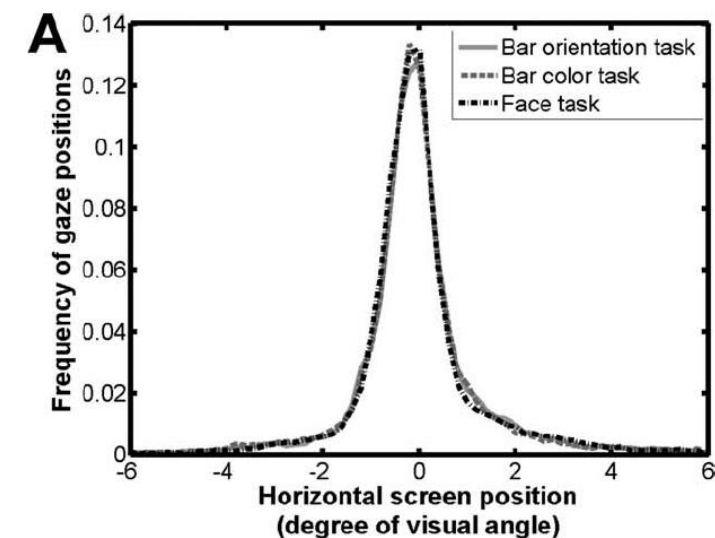
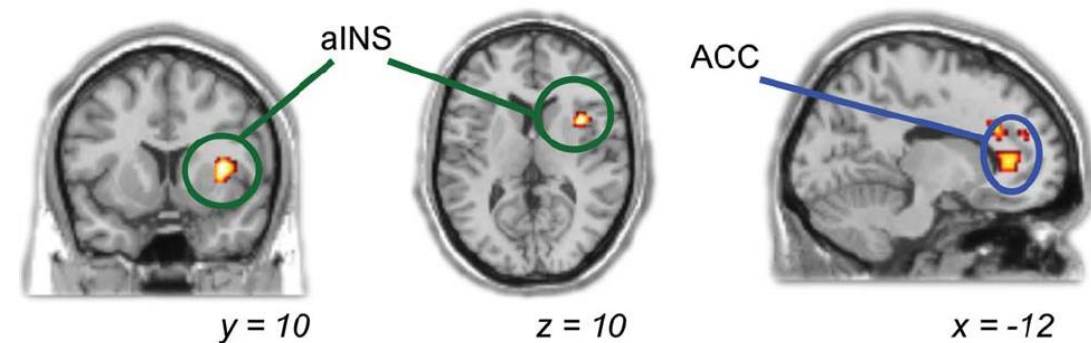
Entry courses:

- *Theory course:* Higher Cognitive Functions
- *Methods course:* Introduction to Computational Cognitive Neuroscience



Research projects CS

- Compositional Meaning in Vision-Language Models and the Brain, *University of Amsterdam*
- Bilingualism on the Grid: Effects of Bilingual Experiences on Global and Local Structural Brain Networks, *AUMC*
- Mentalizing Skills in Children: Adapting and Piloting a Nonverbal False Belief Paradigm, *University of Amsterdam*



$$\Phi = \frac{1}{L} \sum_j \frac{P(D_j | old)}{P(D_j | new)} = \frac{1}{L} \sum_j \lambda_j$$

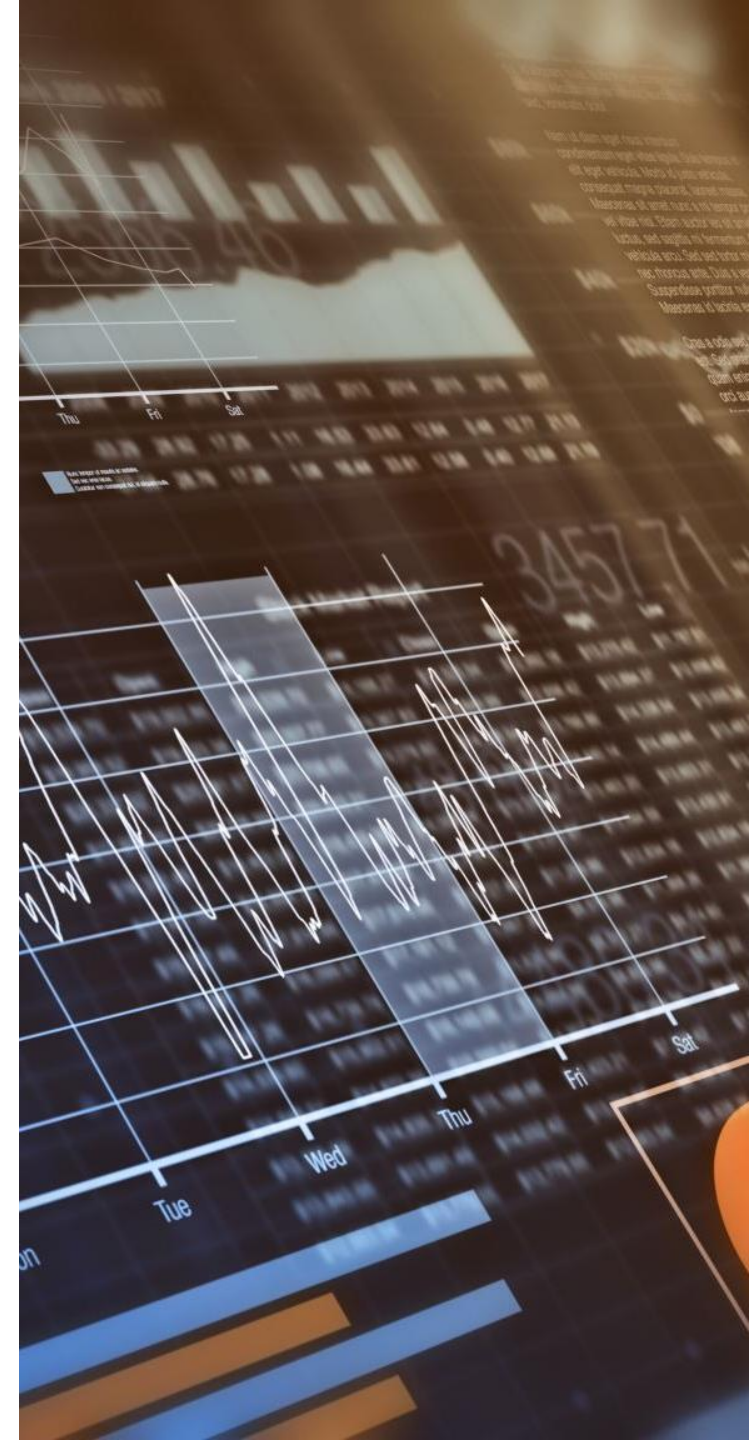


Specialisation courses

- Statistical Methods for Brain and Cognitive Sciences
- Neuroimaging: BOLD MRI
- Foundations of Neural and Cognitive Modelling
- Advanced Neural and Cognitive Modelling
- Cognitive Data Science: Genes, Brain and Behaviour
- Introduction to Neuroscientific Methods and Brain Anatomy
- Machine Learning & Language Models

Electives (organised in-house)

- Cognition & Language Development
- Philosophy of Cognition and the Brain: From Neurons to Embodied Cognition
- How Music Works: Music Cognition





Inspiring community

- Selective, full-time programme
- 1st year study trip
- Community events:
 - Brain Slicing Event
 - Meet the Company
 - Cognitalks
 - ABC Symposium

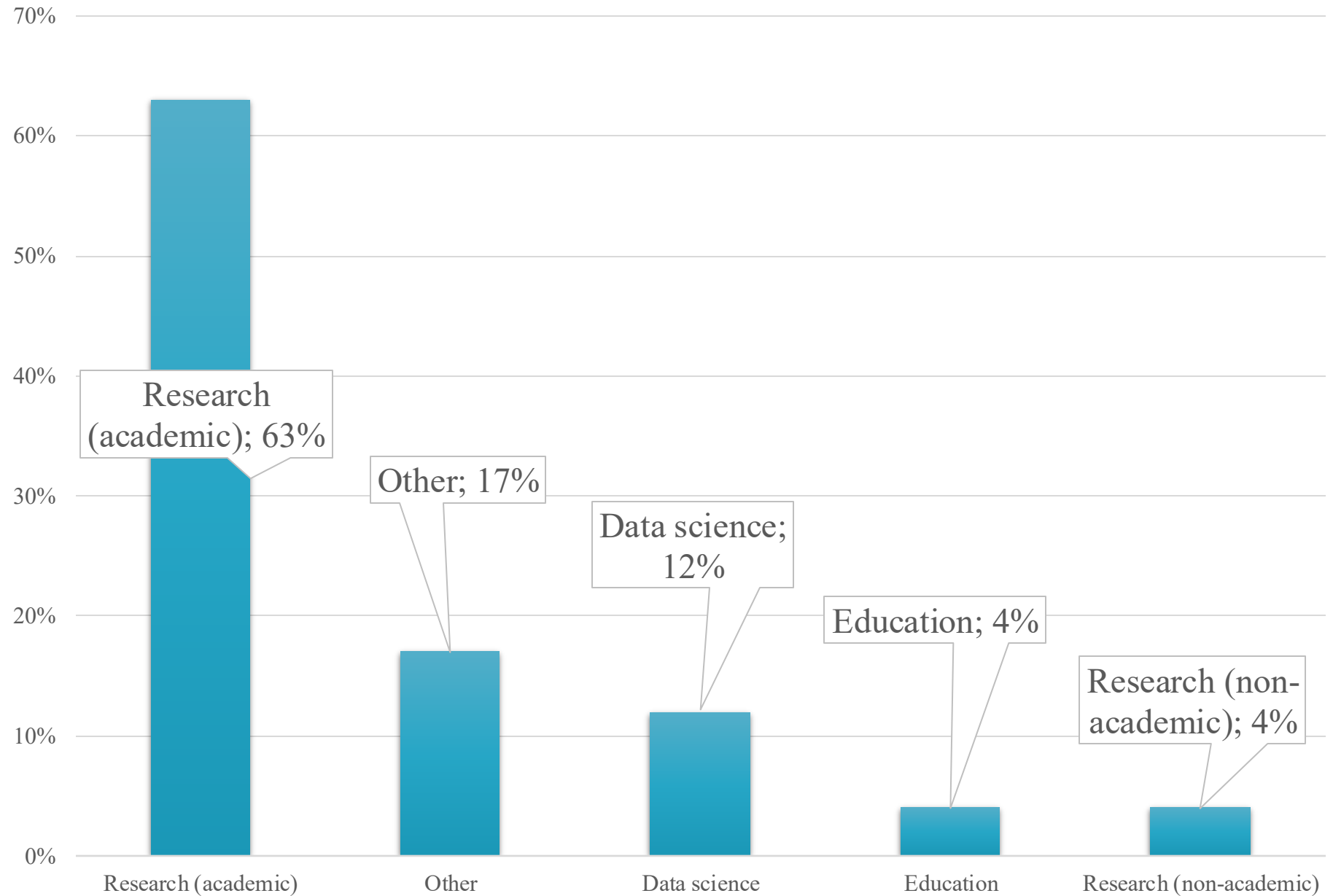




Graduates

(Cohorts 2018-2020)

First job after graduation



Selection criteria

- Clear motivation for research in brain and cognitive sciences
- Coursework on neuroscience or cognition
- Research-preparedness: statistics, programming, experimental design
- Interdisciplinary attitude
- GPA of 7.5 or higher
- Positive references



Selection process

- Application deadline EU: 30 April, non-EU: 31 January.
- Admissions Board will review:
 - Motivation letter
 - Resume
 - Written work (e.g. BSc thesis)
 - Course transcript
 - GPA
- Immediate decision for top and bottom percentiles
- Rest ranked by score, decision in May



How to compare with other programmes?

- Compared to disciplinary research masters, MBCS adds *interdisciplinarity*
- Students have a large freedom in choosing most courses (no tracks, majors or minors)
- Moving across disciplines (e.g. for research projects) is encouraged
- Focus on preparation for an (academic) research career





Contact and information



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