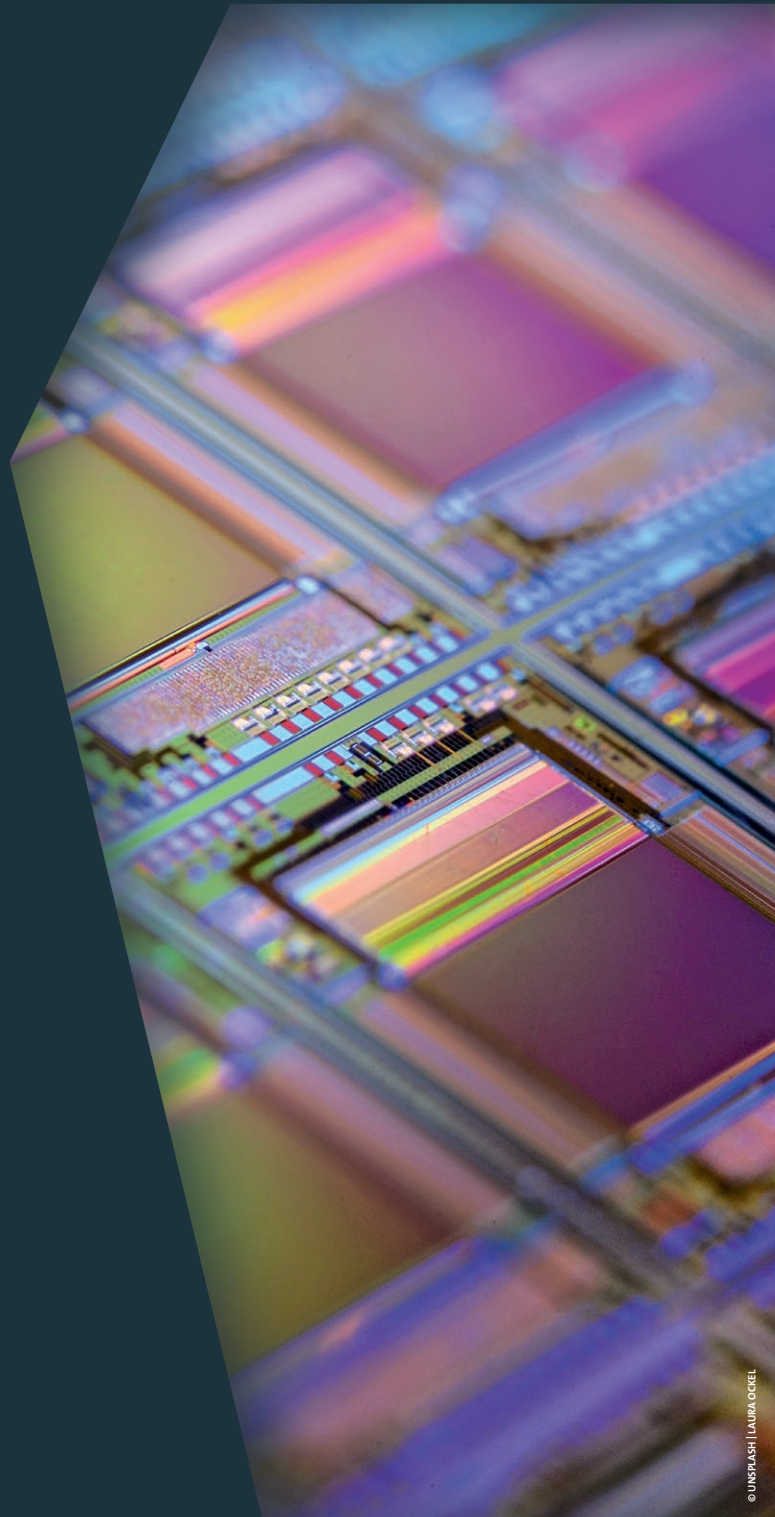




# NEURAL SYSTEMS AND COMPUTATION

JOINT  
DEGREE

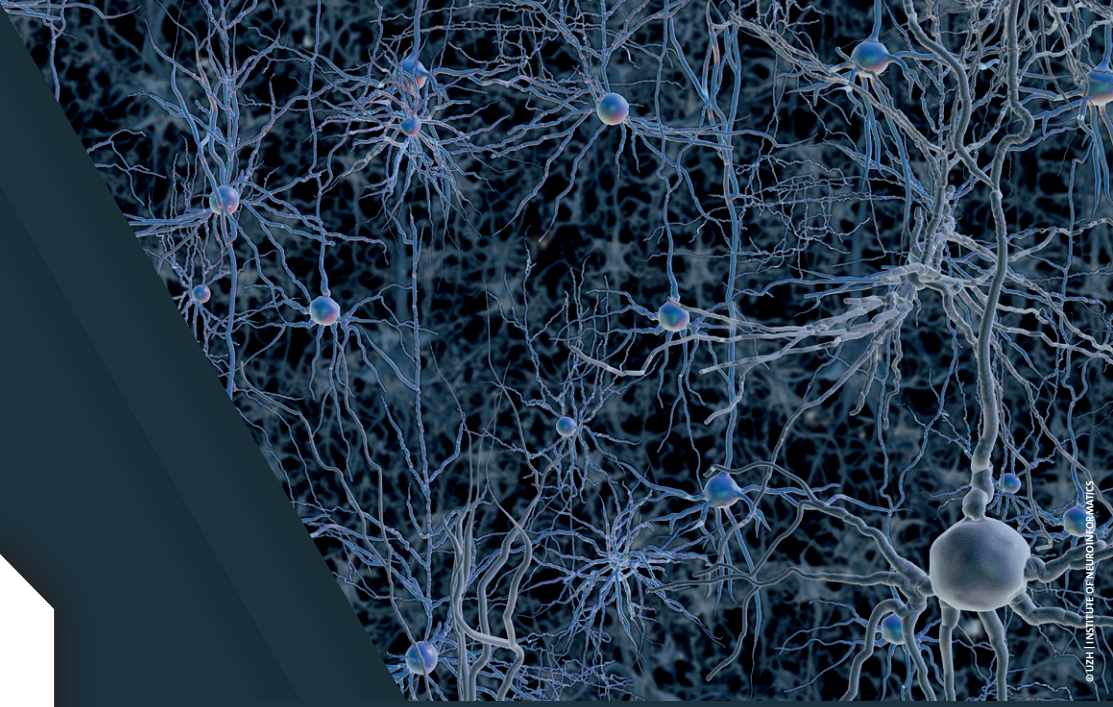
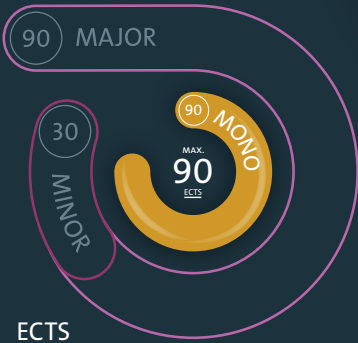
**U**nderstanding the principles underlying brain function and discovering how to develop artificial systems that use the same principles are key issues for the future success of medical sciences and for the development of artificial intelligent systems. Answering these questions requires expertise that extends across multiple academic disciplines.



## GOALS OF PROGRAM

The NSC is a joint program of the University of Zurich and the Swiss Federal Institute of Technology of Zurich. Students have the opportunity to be trained and mentored in the following areas:

- Systems neuroscience and the current understanding of how neural architectures give rise to sensory, motor and cognitive functions
- Neural computation and how theories of neural computation relate to the classical theory of computation
- Theories, methods, and algorithms employed in the computational analysis of neurobiological data
- Theory and design principles for the construction of neuromorphic hardware and of systems that interact intelligently with the world



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## PROFESSIONAL PERSPECTIVES

Students in the NSC program are expected to enter with a good background in neuro- and computational sciences. Upon completion of the program, students can perform research in a variety of fields ranging from neurophysiology and artificial neural networks to machine learning and neuromorphic engineering. It prepares students for research careers in academia as well as in the industry.

# JOINT DEGREE: NEURAL SYSTEMS AND COMPUTATION

MONO  
90  
ECTS

### MASTER STUDY PROGRAM

Students draw up their own individual curricula. The program consists of core modules, elective core modules, elective modules, and a Master's thesis and short projects. The core modules provide fundamental theoretical and practical knowledge in neuroscience and information processing. The elective core modules cover basics of neuroscience: systems neuro-

science, neural computation and theoretical neurosciences, and neurotechnologies and neuromorphic engineering. Elective modules allow students to expand and deepen their specific skills and knowledge. The Master's thesis and semester projects give students the opportunity for doing independent research. A fast track program is not possible.

## ADMISSION

Electronic application which requires the following documents:

- Curriculum vitae (resume)
- A max. one-page motivation letter
- Full details about your Bachelor's degree
- For non Swiss citizens: a short financial statement

You are required to provide the following information:

- Names of a preferred and second-preferred mentor
- Two reference contacts

## POSSIBLE MINOR COMBINATIONS

30 MINOR  
ECTS

The NSC program is a full-time, specialized Masters program, it cannot be combined with a minor.

## CONTACT

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8057 Zurich



TO ADMISSION PAGE



TO STUDY PROGRAM PAGE



CONTACT