Join Radboud Summer School 2019!

Animal Navigation

change perspective

Radboud University

Our ability to navigate effectively and efficiently through our spatial environment is central to everyday life. Although machines, of varying kinds, are able to perform some basic spatial navigation functions, the brain far exceeds machines in terms of its deductive reasoning power. The brain is able to deduce the state of the world based on (often) minimal sensory information. To enable navigation the brain encodes the sensory, motor and cognitive representations of the world as maps. Neural pathways responsible for decoding sensory information and encoding action are organized to process information in the form of topographical representations.

In this course, we will follow the footsteps of Sherrington and learn how the brain performs egocentric and allocentric computations to drive navigation. Lectures will be complemented with hands-on demonstrations, including a guided navigation of downtown Nijmegen with your eyes closed.

If you are interested in this course, you might like the complementary course 'Biomimetic Robot Navigation', in the 2nd week of July, too. For more information, check our website.

After this course you are able to

- Analyse sensation, perception and action in terms of basic operational principles of the brain
- Relate principles of neural representations from small-scale networks to larger-scale functional maps in the brain
- Identify the neural structures and circuits that encode navigation
- Discuss the minimal circuit requirements to drive animal navigation

**Number of EC**
2 ECTS credits

**Course leaders**
Prof. Tansu Celikel & Prof. Freya Ólafsdóttir,
Department of Neurophysiology
Donders Institute, Radboud University
Admission documents
- Motivation letter
- CV (including list of relevant prior coursework and grades)
- 1-2 reference letters (strongly recommended)

Entry level
Advanced Bachelor, Master, PhD, Postdoc and Professional

This course is designed for
Biologists, psychologists, cognitive scientists and neuroscientists who are interested in acquiring in-depth information on how the brain navigates

More course details on our website

Course date
Monday 1 July - Friday 5 July 2019

Course fee
€ 650

Deadline application
1 May 2019

Discounts
- 10% discount for early bird applicants. The early bird deadline is 1 March 2019.
- 15% discount for students and PhD candidates from partner universities. Please note that these discounts can be combined if you apply before 1 March 2019.

Apply now!
What is the RSS experience?

RSS is more than just a course!

Radboud Summer School offers you a unique opportunity to meet other students and researchers from all over the world with different cultural and academic backgrounds. You will also get to know Radboud University and the city of Nijmegen. Our social programme includes a welcome reception, guest lecture and farewell drinks. And for a small fee you can join our BBQ, River Cruise on a pancake boat, a Pub Quiz, Sports Activities or a City Game.

Want to know more?
Have a look at what participants have said about their experience on our website!

Contact
T. +31-248187706
E: Radboudsummerschool@ru.nl
F: RadboudSummerSchool
I: Radboudsummerschool

www.ru.nl/radboudsummerschool