



**Course:  
From Human Neuroanatomy to Psychopathology**

April 3-6, 2017  
Maastricht University

# Introduction

This MHeNs course aims to introduce PhD students to basic concepts of neuroanatomy, functional neuroanatomy and neuropathology and will clarify the current knowledge on the neuroanatomical and neurobiological underpinnings of neuropsychiatric disorders.

The course of 4 consecutive days starts at the first day with lectures on the anatomy and cerebrovasculature of the brain followed by theoretical lessons on functional and structural MRI methodologies. On the second day we will continue the imaging part with visits of the MRI and TMS scanners. Thereafter students will get hands-on training on the neuroanatomy by real dissection of the human skull and brain. The course will focus on microscopical analysis of the human and rodent brain under normal and pathological conditions with practicals on day 1, 3 and 4. The last day will link the functional and anatomical concepts to clinical neuropsychiatric disorders such as schizophrenia, epilepsy, Parkinson's and Alzheimer's disease, affective disorders and developmental disorders.

The multidisciplinary teaching staff consists of experts in the fields of neuroanatomy, neuroscience, imaging, and clinical neuropsychiatry and will provide an excellent learning experience for PhD students working in neuroscience, psychiatry, neurology and psychology.

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## PROGRAMME

### DAY 1 | CHAIRMAN: HEIDI JACOBS

Monday April 3<sup>th</sup>, 2017

Location: Bontezaal, UNS 50, room 1.331

**8.45 - 9.00** Registration (coffee)

**9.00 - 9.15** Welcome and Introduction into the course

**9.15 - 10.30** Introduction of the students: Elevator Pitches

**10.30 - 10.45** Coffee break (UNS 50, room 1.142A)

**10.45 - 12.15** Lecture Neuroanatomy I: man & mice  
*Jörg Mey*

**12.15 - 13.00** Lunch break (UNS 50, room 1.142A)

**13.00 - 14.00** Lecture Cerebrovasculature in Health and Disease  
*Robert van Oostenbrugge*

Location: UNS 40, Room C 4.577

**14.15 - 16.00** Practical Microscopy I (rodent brain)  
*Ali Jahanshahi, Jörg Mey and Anand Goswami*

Location: Bontezaal, UNS 50, room 1.331

**16.00 - 16.40** Lecture From ex-vivo to in-vivo histology of human cortex with ultra-high field MRI  
*Alard Roebroek*

**16.40 - 17.20** Lecture Neuroimaging: new (f) MRI imaging techniques  
*Walter Backes*

# Programme

17.20 – 18.00 Lecture In vivo molecular neuroreceptor imaging  
*To be confirmed*

19.00 Dinner

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**DAY 2** | CHAIRMAN: HEIDI JACOBS / JÖRG MEY  
Tuesday April 4<sup>th</sup>, 2017

Location: Meetingpoint: UNS 50, room 1.142A

**Chairman: Heidi Jacobs**

8.45 – 9.45 The group will be split in two groups for site visits:  
Group 1: visit to MRI scanner (Prof. Walter Backes)  
Group 2: visit to NIBS-Labs (non-invasive brain stimulation)

10.00 - 10.45 Group 1: visit to NIBS-Labs  
Group 2: site visit MRI scanner

10.45 – 11.00 Coffee break (UNS 50, room 2.142)

**Macroanatomy - Chairman: Jörg Mey**

Location: UNS 50, Room 2.142 (for discussions) and the dissection room 2.138A

11.00 - 12.00 Lecture Neuroanatomy II: Functional System  
*Jos Prickaerts*

12.00 - 12.45 Lunch break (UNS 50, room 2.142)

12.45 - 15.00 Macroanatomy of the human brain: dissection human brain  
*Jörg Mey, Jos Prickaerts, Andreas Herrler, Sonja Johann, Harry Steinbusch*

15.00 - 15.15 Coffee break (UNS 50, room 2.142)

15.15 - 17.00 Macroanatomy of the human brain: continued

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**DAY 3** | CHAIRMAN: ALI JAHANSHAHI  
Wednesday April 5<sup>th</sup>, 2017

Location: Bontezaal, UNS 50, room 1.331

9.00 - 10.00 Developmental Neurology  
*Jeroen Vermeulen*

10.00 - 11.00 Protein aggregation and Neurodegeneration  
*Anand Goswami*

11.00 - 11.20 Coffee break (UNS 50, room 1.142A)

11.30 - 13.00 Practical Microscopy II: neurotransmitter systems  
*Ali Jahanshahi, Jörg Mey and Anand Goswami*

13.00 - 14.00 Lunch break (UNS 40, Drielandenpunt)

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# Programme

- 14.00 - 15.00** Drug development for neurological diseases  
*Alexander Flohr*
- 15.15 - 16.30** Nanoscopy M4I unit: 2 parallel groups; 2 sites: (1) Sample preparation (2) Microscopy  
*Raimond Ravelli, Carmen López Iglesias (UNS 50, level 0)*
- 16.30 - 17.30** Invited key lecture: to be invited| open for other scientists |
- 17.30 - 18.00** Get together
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## DAY 4 | CHAIRMAN: BORIS KRAMER

Thursday April 6<sup>th</sup>, 2017

Location: Paarsezaal, UNS 50, room 1.319

- 9.00 - 09.40** Lecture Cognition and Neurodegenerative diseases  
*Heidi Jacobs*
- 9.40 - 10.20** Functional and structural MRI correlates of cognitive comorbidity in epilepsy  
*Govert Hoogland*
- 10.20 - 11.00** Neuronal changes during prenatal, postnatal development and 'adulthood' in human brain  
*Boris Kramer*
- 11.00 - 11.30** Coffee break (UNS 50, room 1.142A)
- 11.30 - 12.30** Glia  
*Bert Brône*
- 12.30 - 13.15** Lunch Break (UNS 50, room 1.142A)

Location: will follow

- 13.15 - 15.00** Practical Microscopy III: pathology  
*Anand Goswami / Ali Jahanshahi*
- 15.00 - 15.20** Coffee break (UNS 50, room 1.142A)
- Location: Paarsezaal, UNS 50, room 1.319
- 15.20 - 16.00** Affective disorders: from neuroanatomy to psychopathology  
*Not yet confirmed*
- 16.00 - 16.40** ALS: from neuroanatomy to psychopathology  
*Anand Goswami*
- 16.40 - 17.00** Neuropsychiatric disorders and deep brain stimulation  
*Yasin Temel*
- 17.00** Conclusion of the course, plenary discussion and evaluation

# Faculty list

- *Prof. Walter Backes*, Faculty of Health, Medicine and Life Sciences, School for Mental Health and Neuroscience, Dept. of Radiology, Maastricht University Medical Centre / w.backes@mumc.nl
- *Prof. Bert Brône*, Faculty Med. & Life Sci., BIOMED, Neurophysiology lab, University of Hasselt / bert.brone@uhasselt.be
- *Dr Alexander Flohr*, Hoffmann-La Roche, Inc. Basel, Switzerland
- *Dr Anand Goswami*, Institute for Neuropathology, Uniklinik RWTH Aachen / agoswami@ukaachen.de
- *Andreas Herrler*, Dept. Anatomy / Embryology, Maastricht University / a.herrler@maastrichtuniversity.nl
- *Dr Govert Hoogland*, Faculty of Health, Medicine and Life Sciences, School for Mental Health and Neuroscience, Dept. of Neurosurgery, Maastricht University Medical Centre / g.hoogland@maastrichtuniversity.nl
- *Dr Heidi Jacobs*, Faculty of Health, Medicine and Life Sciences, School for Mental Health and Neuroscience, Division Cognitive Neuropsychiatry and Clinical Neuroscience, Maastricht University / h.jacobs@maastrichtuniversity.nl
- *Dr Ali Jahanshahi*, Faculty of Health, Medicine and Life Sciences, School for Mental Health and Neuroscience, Division Neuroscience, Maastricht University / a.jahanshahianvar@maastrichtuniversity.nl
- *Dr. rer. nat. Sonja Johann*, Institute for Neuroanatomy, Uniklinik RWTH Aachen/ sjohann@ukaachen.de
- *Prof. Boris Kramer*, Faculty of Health, Medicine and Life Sciences, School for Mental Health and Neuroscience, Dept. Neonatology, Maastricht University Medical Centre / b.kramer@mumc.nl
- *Dr Carmen López Iglesias*, M4I Division of Nanoscopy, Maastricht University / c.lopeziglesias@maastrichtuniversity.nl
- *Dr Jörg Mey*, Faculty of Health, Medicine and Life Sciences, School for Mental Health and Neuroscience, Division Neuroscience, Maastricht University / joerg.mey@maastrichtuniversity.nl
- *Prof. Robert van Oostenbrugge*, Faculty of Health, Medicine and Life Sciences, School for Mental Health and Neuroscience, Dept. of Neurology, Maastricht University Medical Centre / rvan.oostenbrugge@mumc.nl
- *Dr Jos Prickaerts*, Faculty of Health, Medicine and Life Sciences School for Mental Health and Neuroscience, Division Neuroscience, Maastricht University / jos.prickaerts@maastrichtuniversity.nl
- *Dr Ulrike von Rango*, Dept. of Anatomy & Embryology, Maastricht University / ulrike.vonrango@maastrichtuniversity.nl
- *Dr Raimond Ravelli*, M4I Division of Nanoscopy, Maastricht University/ rbg.ravelli@maastrichtuniversity.nl
- *Dr Alard Roebroek*, Faculty of Psychology and Neuroscience, Dept. Cognitive Neuroscience, Maastricht University / a.roebroek@maastrichtuniversity.nl
- *Prof. Harry Steinbusch*, Faculty of Health, Medicine and Life Sciences, School for Mental Health and Neuroscience, Maastricht University / h.steinbusch@maastrichtuniversity.nl
- *Prof. Yasin Temel*, Faculty of Health, Medicine and Life Sciences, School for Mental Health and Neuroscience, Dept. of Neurosurgery, Maastricht University Medical Centre/ y.temel@maastrichtuniversity.nl
- *Dr Jeroen Vermeulen*, Faculty of Health, Medicine and Life Sciences, Dept. Neurology, Maastricht University Medical Centre / jeroen.vermeulen@mumc.nl

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**Organization:**

Dr Heidi Jacobs  
Dr Ali Jahanshahi  
Prof. Boris Kramer  
Dr Jörg Mey  
Dr Nicole Senden

**Information and registration:**

Secr.euron@maastrichtuniversity.nl  
[http://www.euronschool.eu/page/145/Online\\_registration/](http://www.euronschool.eu/page/145/Online_registration/)

Deadline registration and motivation letter: **March 1<sup>st</sup>, 2017**

**Registration fee:**

€150 MHeNs PhD students  
€225 other-EURON students

€275 other Maastricht PhD students  
€375 external PhD students and other academic participants  
€600 non-academic interested participants

Maastricht participants students will have to pay via internal accounting.  
Please provide us your internal budget number.

External students will get a link to the online payment platform. Registration is definitive after the approved motivation letter and payment.

[www.maastrichtuniversity.nl](http://www.maastrichtuniversity.nl)

**Contact information**

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