

# TRANSCRANIAL ULTRASOUND STIMULATION (TUS)

## WORKSHOP

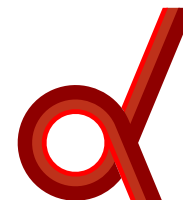
**Date:** 3 – 5 June 2026  
**Location:** Donders Centre for Cognition  
room MM 01.620  
Thomas van Aquinostraat 4  
6525 GD Nijmegen  
The Netherlands  
**Contact:** neuromod@donders.ru.nl  
**Registration:** [Brainbox Initiative](#)

This 3-day course will provide you with in-depth training in Transcranial Ultrasound Stimulation (TUS), a non-invasive deep brain stimulation technique with unprecedented precision.

We move from physics to the clinic, covering devices, protocols, biomechanisms, confounds, study design, treatment planning, target engagement, and effects on behaviour, plasticity, and circuits. The course centres on hands-on training and welcomes all levels of experience.

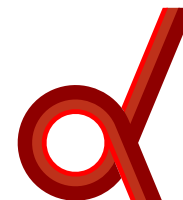
The in-person training is complemented by online educational videos. We recommend that all attendees engage with the [online course material](#) before the Workshop, specifically courses 1 to 4.

Days open with lectures introducing the fundamental concepts, followed by hands-on training and demonstrations. The third day extends this with practicals on state-of-the-art systems and a symposium of invited talks from leading TUS researchers.



## Wednesday, June 3: Foundations

<b>09:00 – 09:10</b>	Welcome and introduction
<b>09:10 – 09:30</b>	TUS past, present, future
<b>09:30 – 10:00</b>	Biomechanisms
<b>10:00 – 11:00</b>	TUS effects, protocols, and confounds
	<i>Coffee break</i>
<b>11:15 – 11:45</b>	Roundtable: elevator pitch of TUS research
<b>11:45 – 12:30</b>	Safety and screening
	<i>Lunch</i>
<b>13:30 – 17:15</b>	TUS foundation – Water tank, protocols, and hardware
<i>Lab Rotations</i>	
	TUS planning – TUS Calculator & PRESTUS
	TUS preparation – Coupling and positioning
	TUS practical – Neuronavigation
<b>17:15</b>	<i>General closing of the day</i>



## Thursday, June 4: Advanced

<b>09:00 – 09:30</b>	Plasticity & state-dependency
<b>09:30 – 10:15</b>	Physics, measurement, and reporting
<b>10:15 – 11:00</b>	Target planning – simulation
	<i>Coffee break</i>
<b>11:15 – 11:45</b>	Target verification – MR-ARFI
<b>11:45 – 12:30</b>	Target engagement – multimodal TUS
	<i>Lunch</i>
<b>13:30 – 17:15</b>	TUS foundation – Design your own experiment
<i>Lab Rotations</i>	
	TUS foundation – Study design, confounds, & control
	TUS practical – K-Plan & integrated application
	TUS practical – Cognitive neuroscience experiment
<b>17:15</b>	<i>General closing of the day</i>
<b>19:30</b>	<i>Dinner</i>



## Friday, June 5: State-of-the-art

<b>09:00 – 11:30</b> <i>Lab Rotations</i>	Integrated TUS-MRI – the CITRUS system
<i>Kapittelweg 29</i>	US metrology – characterization & monitoring
	Q&A – Ask us anything!
<b>11:30 – 11:45</b>	<i>Walk to Maria Montessori</i>
<i>Thomas van Aquinostr 4</i>	<i>Lunch</i>
<b>12:45 – 13:30</b>	MRI guidance and target engagement in ultrasonic neuromodulation: the CITRUS pipeline – <i>Suhas Vijayakumar, Mainz</i>
<b>13:30 – 13:45</b>	Biasing decision flexibility with thalamic ultrasound stimulation – <i>Julian Kosciessa</i>
<b>13:45 – 14:00</b>	Ultrasound stimulation of a deep thalamic nucleus modulates large-scale neural synchrony in humans – <i>Vivek Sharma</i>
<b>14:00 – 14:15</b>	Ultrasonic neuromodulation of the human amygdala modulates threat learning and extinction – <i>Sjoerd Meijer</i>
	<i>Coffee break</i>
<b>14:30 – 15:30</b>	Bringing transcranial ultrasound stimulation from physics to the clinic – <i>Jean-Francois Aubry, Paris</i>
	<i>Discussions and Drinks</i>
<b>16:30</b>	<i>General closing of the workshop</i>