



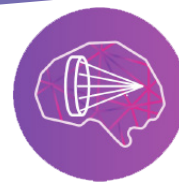
iTRUSST Presents

FUN 2022

**A conference on
Focused Ultrasound Neuromodulation**

**September 26-28, 2022
Mainz, Germany**

FUN 2022



A conference on
Focused Ultrasound Neuromodulation

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 Mainz, Germany

Monday 26.09.2022	
08:30	Registration
08:45	Welcome
09:00	TECHNICAL
	Invited Speaker - Jean-François Aubry . <i>The path to safe and effective transcranial ultrasound stimulation</i>
09:30	Seyedsina Hosseini . <i>A Validated Template for Computational Dose Modelling for Transcranial Focused Ultrasound Stimulation</i>
09:45	Samuel Pichardo . <i>Integration of stereotactic neuronavigation with GPU-accelerated transcranial ultrasound modelling in Apple Silicon computer systems for focused ultrasound-based neuromodulation procedures</i>
10:00	Maria Miscouridou . <i>Classical and learned MR to pseudo-CT mappings for accurate transcranial ultrasound simulation</i>
10:15	Discussion
10:30	Coffee
10:45	BIOMECHANISMS
	Invited Speaker - Sangjin Yoo . <i>Biomolecular mechanisms of ultrasonic neuromodulation</i>
11:15	Jiejun Zhu . <i>Piezo1 contributes to ultrasonic neuromodulation in vivo</i>
11:30	Ivan Suarez-Castellanos . <i>Mixed Focused UltraSound/MicroElectrode Array (FUS/MEA) platform for spatiotemporal description of FUS-elicited Local Field Potentials (LFPs) in ex vivo murine hippocampal structures</i>
11:45	Théo Lemaire . <i>Direct two-photon imaging of focal and cell-type-selective ultrasound neuromodulatory effects in the mouse cortex</i>
12:00	Discussion
12:15	Lunch
13:15	NEUROSCIENCE
	Invited Speaker - Elsa Fouragnan . <i>Studying cognition with ultrasound neuromodulation: Inducing short to medium neuroplastic effects in human and non-human primates</i>
13:45	Benjamin Kop . <i>An auditory confound can drive online effects of transcranial ultrasonic stimulation</i>
14:00	Tulika Nandi . <i>Disentangling transcranial and auditory sources of transcranial ultrasonic stimulation induced suppression of corticospinal excitability</i>
14:15	Hongsun Guo . <i>Ultrasonic Neuromodulation Produces Amplitude-Dependent Off-target Cortical Activation in Awake Transgenically Deafened Mice</i>
14:30	Discussion
14:45	Coffee
15:00	NEUROSCIENCE
	Invited Speaker - Li Min Chen . <i>Transcranial Focused Ultrasound Suppresses Thalamic Heat Pain Response and Reorganizes Effective and Resting State Functional Connectivity Networks</i>
15:30	Industry Pitches
16:15	Industry Exhibition & Demonstrations, Posters, Drinks
19:30	Dinner

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Tuesday 27.09.2022	
08:45	Registration
09:00	NEUROSCIENCE/TECHNICAL
	Invited Speaker - Kim Butts Pauly . <i>Considerations for pulse shaping</i>
09:30	Alessandro Bongioanni . <i>Transcranial ultrasound modulation of distinct neurocognitive mechanisms for task engagement and speed accuracy trade-off strategy in non-human primates</i>
09:45	Benjamin Slater . <i>Transcranial ultrasound stimulation of primate hippocampus and prefrontal cortex modulates context-guided sequence learning</i>
10:00	Hector Estrada . <i>Fluorescence-guided transcranial focused ultrasound in the mouse brain</i>
10:15	Discussion
10:30	Coffee
10:45	BIOMECHANISMS
	Invited Speaker - Meritt Maduke . <i>Ion Channels in Ultrasound Neuromodulation</i>
11:15	Siti Nurbaya Yaakub . <i>Neurochemical and functional connectivity changes mediated by transcranial ultrasound stimulation in deep cortical regions</i>
11:30	Harriet Lea-Banks . <i>Transcranial focused ultrasound of the periaqueductal grey reduces blood pressure in a rodent model of hypertension</i>
11:45	Seung-Schik Yoo . <i>Transcranial Focused Ultrasound Enhances CSF/Interstitial Solute Transport in the Brain</i>
12:00	Discussion
12:15	Lunch
13:15	TECHNICAL
	Invited Speaker - Hairong Zheng . <i>Ultrasound neuromodulation and neuroimaging for future noninvasive brain machine interface</i>
13:45	Daniel Schmitt . <i>Hybrid transcranial focusing – Combining acoustic holograms and electronic beamsteering</i>
14:00	Jiro Kusunose . <i>Patient-specific stereotact frame for repeated transcranial ultrasound therapy</i>
14:15	Kasra Naftchi-Ardebili . <i>TUS Deep Target Sonication of Sub-Cubic Millimeter Volumes Using Crossbeam</i>
14:30	Discussion
14:45	Coffee
15:00	TECHNICAL
	Invited Speaker - Elly Martin . <i>Towards quantification of acoustic pressure in the brain.</i>
15:30	Poster Pitches
16:15	Poster Session with Authors Present, Drinks
19:30	Dinner

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 **Fraunhofer**
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Wednesday 28.09.2022	
08:45	Registration
09:00	CLINICAL
	Invited Speaker - Noah Philip . <i>Low Intensity Focused Ultrasound for Depression: Experiences from an Ongoing First-in-Human Study</i>
09:30	Talyta Cortez Grippe . <i>Neurophysiological and Clinical Effects of Low-intensity Transcranial Ultrasound of the Motor Cortex in Parkinson's Disease</i>
09:45	Martin M Monti . <i>Biomarkers of thalamic Transcranial Focused Ultrasound in Chronic Disorders of Consciousness</i>
10:00	Andrew Strohman . <i>Single-element focused ultrasound to the human left dorsal anterior insula alters EEG contact heat-evoked potentials and network functional connectivity</i>
10:15	Discussion
10:30	Coffee
10:45	NEUROSCIENCE
	Invited Speaker - Charlie Stagg . <i>Learning lessons from previous mistakes: developing a new neuromodulation approach in a new era</i>
11:15	Brian Lord . <i>Modulating Default Mode Network Functional Connectivity with Transcranial Focused Ultrasound</i>
11:30	Takahiro Osada . <i>Offline effects of transcranial ultrasound stimulation on cortical/subcortical areas in humans</i>
11:45	Ke Zeng . <i>Effects of Different Sonication Parameters of Theta Burst Transcranial Ultrasound Stimulation of Human Motor Cortex</i>
12:00	Discussion
12:15	Lunch
13:15	CLINICAL
	Invited Speaker - Nir Lipsman . <i>MR-guided Focused Ultrasound in Clinical Practice: From Current to Emerging Indications</i>
13:45	Awards
14:15	Closing Remarks & Farewell



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