

FULL PROGRAM

THURSDAY 19/06

09:30-10:00 Check-in / Presentation & poster setup

10:00-10:45 **Introduction by T. Deffieux**

10:45-11:30 **Lecture by A. Gozzi** From BOLD to fUSI: mapping large scale networks in rodents beyond fMRI

Brain connectivity & drug discovery I
Chair: S. Pezet

11:30-11:50 **C. Pepe** Large-scale fUS connectivity networks in the mouse brain
11:50-12:10 **I.E. Mosneag** fUS imaging in Alzheimer's disease
12:10-12:30 **Z. Fu** Meta-analysis of SCHEMA functional connectome using fUS imaging

12:30-14:00 Lunch break

Brain mapping & decoding
Chair: Y. Boubenec

14:00-14:20 **I. Alcalá** Retinotopic characterization of primate visual cortex using fUS imaging for sonogenetic stimulation
14:20-14:40 **D. Liao** Exploring neural dynamics in the auditory telencephalon of crows using fUS
14:40-15:00 **B. Berthon** Local activities in the medial frontal cortex predict self-initiated action
15:00-15:20 **F. Cybis-Pereira** Speed vascular patterns in the spatial navigation system
15:20-15:40 **R. Wykes** Concurrent fUS imaging with graphene-based DC-coupled electrophysiology as a platform to study slow brain signals and CBF under control and pathophysiological brain states

15:40-16:10 Coffee/tea break

Neurovascular coupling
Chair: M. Tanter

16:10-16:30 **A. Landemard** Neurovascular coupling throughout the brain: an insight from whisking events?
16:30-16:50 **N. Zucker** 3D functional ultrasound localization microscopy reveals global regulation of cerebrovascular function during local neurovascular coupling
16:50-17:10 **Z. Zhou** Neural Dynamics in Shank3 Mutant Mice: Insights from fUS Imaging
17:10-17:30 **K. Chhabria** Catecholaminergic cells in RVLM control cortical hemodynamics through polysynaptic circuits

17:30-18:30 **Poster session**

19:30-01:00 **Cruise & dinner on the Seine river**
Boarding at Port de Solferino at 19:30 precisely

FRIDAY 20/06

09:30-10:00 Check-in / Presentation setup

10:00-10:45 **Lecture by S. Soloukey** Ultrafast ultrasound imaging of the human brain: clinical opportunities in- and outside of the neurosurgical operating room

Clinical applications
Chair: C. Demené

10:45-11:05 **F. Faure** fUSION: neuroimaging combining fUS and NIRS for whole brain connectivity imaging in the neonate
11:05-11:25 **E. Gommers** Towards multimodal intraoperative functional mapping using simultaneous fUSi and ECoG recordings during tumor resection in humans
11:25-11:45 **K. Agyeman** Interictal activity mapping and effects of epileptogenic seizure tissue resection and responsive neurostimulation in the human brain

11:45-12:30 **Presentation by J. Ferrier** Breaking barriers in fUS neuroimaging: what's new with IconeusOne?

12:30-14:00 Lunch break

14:00-14:45 **Lecture by S. Picaud** Ultrasound neuromodulation for visual restoration

Behavioral studies
Chair: P. Pouget

14:45-15:05 **A. Bergel** Hippocampus-cortex communication and global brain hemodynamics during hippocampal ripples observed with fUS imaging
15:05-15:25 **C. Zhang** Brain-wide fUS imaging in head-fixed marmosets
15:25-15:45 **F. Cheataini** Studying the influence of cerebrovascular dynamics on CSF-ISF exchanges in rats

15:45-16:10 Coffee/tea break

Brain connectivity & drug discovery II
Chair: A. Gozzi

16:10-16:30 **J. Thalgott** Non-invasive detection and functional characterization of pericyte dysfunction in HHT using super-resolution ultrasound-identification of TGF-β as a potential drug target
16:30-16:50 **M. Abioui-Mourgues** Improving stroke prognosis through early ultrasound imaging in awake mice
16:50-17:10 **J.C. Mariani** Intrinsic fluctuations in arousal shape the dynamic organization of functional ultrasound large-scale networks
17:10-17:30 **L. Barthe** Long-term effects of gestational ketogenic diet on neural circuit development in mice

17:30-17:45 **Wrap up**

POSTER SESSION

- P-01 **L. Bourgeais-Rambur** Functional brain networks of chronic corneal pain revealed by c-Fos mapping and functional ultrasound imaging
- P-02 **F. Chauveau** Toxic-fUS unveils sub-clinical symptoms of chronic chlordecone intoxication in mice
- P-03 **K.D. Shailaja** Microbiota-gut-brain axis: fUS Detection of Inflammatory Connectome Changes
- P-04 **P. Ju** Effect of electroacupuncture at Zusanli reduced Olanzapine-induced lipid disturbances in mice via potential liver-brain interaction
- P-05 **K. Sydorkska** Functional connectivity of the default mode network after chronic sleep fragmentation in mice
- P-06 **B. Vidal** Investigating hippocampal functional networks in the 3xTgAD mice model of Alzheimer's disease during TSPO inhibition
- P-07 **S. Pezet** Functional ultrasound imaging reveals vascular dysfunction in a mouse model of CNS demyelination
- P-08 **F. Arcizet** Developing a new therapeutical approach for vision restoration: sonogenetic stimulation of primary visual cortex
- P-09 **C. Linnenbank** Altered cerebral hemodynamic responses in aging mice with retinal vasculopathy with cerebral leukoencephalopathy: using functional Ultrasound Localization Microscopy
- P-10 **F. Timmermans** Non-invasive assessment of vascular function in inducible endothelial SMAD1/5 knockout mice using functional ultrasound
- P-11 **N. Zucker** Physio-fUS: all-in-one tool for simultaneously monitoring physiological parameters during neurofunctional imaging
- P-12 **E. Boulebnane** Assessing brain hemodynamics in mouse models of small vessel diseases using functional ultrasound
- P-13 **A. Jimenez** Whole-Brain ultrasensitive Doppler monitoring reveals vascular autoregulation and hematocrit sensitivity in brain edema
- P-14 **P. Kruizinga** Developing an open-source pipeline for functional ultrasound imaging
- P-15 **M. Urosevic** A processing pipeline for non-contiguous functional ultrasound imaging (fUSI) data
- P-16 **S. Le Meur-Diebolt** fUSI-BIDS: extending the Brain Imaging Data Structure to fUS imaging
- P-17 **S. Le Meur-Diebolt** Strategies for detection and removal of motion artifacts in awake transcranial fUSI
- P-18 **J. Uchitel** CONEXUS: Pilot study of three-dimensional functional ultrasound imaging of the preterm neonatal brain
- P-19 **G. Zhang** Transcranial brain-wide functional Ultrasound and Ultrasound Localization Microscopy in mice using multi-array probes
- P-20 **N. Perez Jimenez** Super-resolution ultrasound imaging using erythrocytes on a rat brain
- P-21 **C. Negreira Casares** An ultrasound brain imaging platform in Uruguay for understanding Charcot-Marie-Tooth disease
- P-22 **A. Bertolo** 3D Ultrasound Localization Microscopy with Row-Column Array probes in mice and primate models
- P-23 **L. Fernandes** Optimisation of a model of focal cortical ischemia compatible with functional ultrasound imaging
- P-24 **V. Skultety** Fast 3D fULM correlation mapping using sparse and time-selective approaches