BRAINCODER

20-21 February 2025
Gardanne, France

Brain-machine interfaces and advances in neural stimulation technologies

Time	Day 1 (Thursday February 20th 2025)
8:00 - 8:50	Coach pickup from Hotel Rotonde (15 avenue des Belges), Aix-en-Provence
9:00 - 9:10	Welcome message
9:10 - 9:50	*Reading from and writing to the human brain: A Bidirectional Cortical Interface for Vision Restoration* **Prof. Eduardo Fernandez** – Institute of Bioingeneering, Universidad Miguel Hernandez De Elche – invited talk (30 minutes + Q+A)
9:50 - 10:10	*The Utah Optrode Array, a neural interface for optogenetics in large animal models.* **Dr. Niall McAlinden** - University of Strathclyde - (15 minutes + Q+A)
10:10 - 10:30	*Neural mechanisms of operating an intracranial brain-computer interface for imagined speech decoding* **Dr. Silvia Marchesotti** – Institut de l'audition/University of Geneva - (15 minutes + Q+A)
10:30 - 11:00	Coffee break
11:00 - 11:40	*Implantable chronic Brain Machine Interface for movement compensation of patients with motor disabilities* **Dr. Guillaume Charvet** – CEA/Neurotehcnology Biomedical Research Unit - invited talk (30 minutes + Q+A)
11:40 - 12:00	*Towards auditory cortical implants for hearing impaired* **Dr. Charly Lamothe** – Institut de l'Audition - (15 minutes + Q+A)
12:00 - 13:00	Lunch buffet
13:00 - 14:30	Posters & workshop for companies
14:30 - 15:10	*Micro-LED-based optical cochlear implants for hearing restoration* **Dr. Patrick Ruther** - Institut für Mikrosystemtechnik – IMTEK - invited talk (30 minutes + Q+A)
15:10 - 15:50	*Probing Perception with Optogenetics* **Prof. Dmitry Rinberg -** Department of Neuroscience and Physiology/NYU- invited talk (30 minutes + Q+A)
15:50 - 16:00	Florence Granger - EMSE international development
16:00 - 16:20	Coffee break
16:20 - 17:00	*Strategies Towards Chronic and Multimodal Neural Interface Technologies* **Prof. Tracy Cui** – University of Pittsburgh- invited talk (30 minutes + Q+A)
17:00 - 17:20	*Providing artificial tactile feedback at different latencies in a brain-machine interface* **Alexandre Tolboom** - Institut des Neurosciences Paris-Saclay - (15 minutes + Q+A)
17:20 - 17:40	*Multi-layer organic cortical implants for chronic stimulation and recording* **Dr. Amélie Albon** – Ecole des Mines de Saint-Etienne - (15 minutes + Q+A)
17:40 - 18:00	*Spike inference from calcium imaging data with GCaMP8* **Dr. Peter Rupprecht** – University of Zurich - (15 minutes + Q+A)
18:00 - 21:00	Gala Dinner
21:00 - 21:30	Coach return to Gare SNCF, Aix-en-Provence

HEARLIGHT

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Time	Day 2 (Friday February 21st 2025)
8:00 - 8:50	Coach pickup from Hotel Rotonde (15 avenue des Belges), Aix-en-Provence
9:00 - 9:10	Welcome message
9:10 - 9:50	*Upper limb bidirectional neuroprosthetics in the mouse model.* **Dr. Luc Estebanez** - Institut des Neurosciences Paris-Saclay - invited talk (30 minutes + Q+A)
9:50 - 10:10	*Kirigami-based soft electrode arrays for long-term recording of motor intention in Non-Human Primates* **Dr. Laurine Kolly** - Laboratory for Soft Bioelectronic Interfaces /EPFL - (15 minutes + Q+A)
10:10 - 10:30	*Development of an olfactory neural interface for non-recovering anosmia – DOLFINA* **Dr. Victor Druet** – Laboratory of Soft Bioelectronic Interfaces/EPFL - (15 minutes + Q+A)
10:30 - 11:00	Coffee break
11:00 - 11:40	*Cortical implants for hearing restoration* **Prof. Tania Barkat** – University of Basel - invited talk (30 minutes + Q+A)
11:40 - 12:00	*Neuronal response patterns in the auditory cortex: a comparison of cortical and cochlear stimulation to sounds*. **Dr. James Taylor** – University of Basel - (15 minutes + Q+A)
12:00 - 13:00	Lunch buffet
13:00 - 14:30	Posters & workshop for companies
14:30 - 15:10	*TBC* **Mickael Tanter** – *ESPCI Paris*/INSERMinvited talk (30 minutes + Q+A)
15:10 - 15:30	*Chronically implantable μLED arrays for optogenetic stimulation of the mouse cortex* **Ryan Greer** - Institute of Photonics, University of Strathclyde - (15 minutes + Q+A)
15:30 - 15:50	*Functional ultrasound imaging of primate visual cortex: a prelude for sonogenetics as a possible therapeutical strategy for visual restoration* **Erwan Dessailly** – Institut de la Vision - (15 minutes + Q+A)
15:50 - 16:30	Coffee break
16:30 - 17:10	*TBC* **Prof. Keith Mathieson** - Institute of Photonics, University of Strathclyde - invited talk (30 minutes + Q+A)
17:10 - 17:30	*Inkjet-printed transparent electrodes: design, characterization, and initial in vivo evaluation for brain stimulation* **Dr. Davide Reato** - Institut de Neurosciences de la Timone,/Aix Marseille Universit´e, (15 minutes + Q+A)
17:30 - 18:00	Concluding remarks
18:00 - 18:30	Coach return to Gare SNCF, Aix-en-Provence

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