

JOINT WORKSHOP

NEURAL HORIZONS: FUTURE PANORAMA WITHIN BRAIN-MACHINE INTERFACES

19.02.2025

Gardanne, France

BRA NCODER
CONFERENCE

8:00-8:30

Welcome coffee & registrations

8:30-8:50

Welcome & introduction

Session 1: Innovation within Brain Implants: pioneering BMIs

8:50-9:15

- Brice Bathellier – Institut Pasteur | HearLight
Encoding algorithms for sensory rehabilitation implants

9:15-9:40

- Hans Scherberger – DPZ | B-CRATOS
Cortical hand movement prosthetics

9:40-10:05

- Fabien Sauter-Starace – CEA DTIS | NEMO-BMI
Design and clinical validation of WIMAGINE®, a BMI wireless ECoG implant

10:05-10:30

- Paul Le Floch – CEO of Axoft
Novel materials and electronics for soft neural interfaces

10:30-10:55

- Paul Wanda – Blackrock Microsystems Europe | B-CRATOS
Modern Brain Computer Interface Platforms: The Need for Next-Generation Wireless Technologies

10:55-11:25

Coffee break

11:25-12:00

1st Panel Session with 4 speakers – Moderator: Tania Rinaldi Barkat

Session 2: Mind Meets Machine: evolutions within communication

12:00-12:25

- Robin Augustine – Uppsala University | B-CRATOS
Fat – Intra Body Communication: A new paradigm for intra-body communication technology enabling reinstatement of lost functionalities in human

12:25-12:50

- Charles Rezaei-Mazinani – Ecole des Mines, Department of Bioelectronics | HearLight
Multi-conductive layer flexible bioelectronic implants for neural recording and stimulation

12:50-13:15

- Ali Khaleghi – NTNU | B-CRATOS
A Battery-Free, High Data-Rate Brain-Machine Interface with RF Backscatter Communication, Wireless Power, and NFC Telemetry

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13:15-14:45

Lunch break

14:45-15:05

2nd Panel Session with 3 speakers – Moderator: Fabien Sauter-Starace

Session 3: Prospects about the Machine-Humans Interactions

15:05-15:30

- Marco Controzzi – Scuola Superiore Sant’Anna | B-CRATOS
Next-Generation Hand Protheses: What is next?

15:30-15:50

- Guillaume Charvet – CEA DTIS | NEMO-BMI & Reverse-Paralysis
Implantable chronic Brain Machine Interface for movement compensation: from clinical proof of concept to use in daily life

15:50-16:10

- Henri Lorach – EPFL | NEMO-BMI & Reverse-Paralysis
Brain-controlled spinal cord stimulation to restore voluntary motor control after paralysis

16:10-16:40

Coffee break

16:40-17:00

3rd Panel Session with 2 speakers – Moderator: Robin Augustine

17:00-17:20

Closing remarks