INSTITUT PARIS DESCARTES NEUROSCIENCES COGNITION

FÉDÉRATION DE RECHERCHE EN NEUROSCIENCES

Neuroscience Seminar Series

Friday, September 22th, 2017 at 11:30

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PhD

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Emerging medical technologies for interfacing the brain: CLINATEC brain computer interface project

Evolving medical technologies, including stimulators, infusion pumps, and neuroprosthesis, are addressing progressively a wide range of neurological conditions, bringing fresh hope to patients where other solutions have proven to be ineffective. In this context, brain-computer interfaces (BCIs), that allow interaction between neural tissue and an external device, have been developed for a many diverse conditions: in particular, they have allowed severely motor disabled patients to communicate and integrate better within their environment. Motor controlled-BCIs aim at providing users with control over upper or lower limb orthoses or prostheses. The major challenge for BCI systems with home use for motor disabled subjects is the ability of recording long term stable neuronal signals and decoding in real-time complex multi-limb effectors with robustness and precision. For 7 years we have been developing an ambitious program aiming at building an ECoG based BCI platform dedicated for a chronic clinical use. Our institution has been developing new devices integrating medical teams and engineering expert from the device conception, addressing clear clinical problems from the early steps. New technologies are being made simpler and ever more close to reality and clinical trial than before; the design of innovative solutions to improve implantable devices opens a new era in clinical research.

Those interested in meeting with the speaker please contact

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