

Please note that a valid sanitary pass is required to access the Neurocampus-Michel Jovet building (Centre Hospitalier Le Vinatier - Bâtiment 462 - Neurocampus Michel Jovet, 95 boulevard Pinel, Bron).

As of September 3rd, there is no limitation of the number of people allowed to attend. However, this may evolve depending on the evolution of the sanitary situation. Information will be updated on the M2 website (<https://masterneuro.univ-lyon1.fr/paths/m2nfc-main/m2nfc-conferences/>).

UE Neural Basis of Cognition - with the support of Labex Cortex

Coordination Irene Cristofori (irene.cristofori@univ-lyon1.fr) & Céline Amiez (celine.amiez@inserm.fr)

Tuesday November 2, 2021

Amphitheater "Neurocampus" (CH Le Vinatier, Bron)

- 09.00-11.00 **General Introduction.** I Cristofori (ISCMJ) & C Amiez (SBRI)
How to prepare for the exam
Instruction for the organization of the UE
- 11.00- 12.30 **Frontal cortex, executive functions, and neuroanatomy** C Amiez (SBRI)

Afternoon: reading of important papers to optimize the understanding of UE conferences.

Wednesday November 3, 2021 - CEREBRAL PLASTICITY

Amphitheater "Neurocampus" (CH Le Vinatier, Bron)

- 09.00-10.20 **Introduction, concepts and paradigms.** P Giraux (LIBM, St Etienne)
- 10.30-11.50 **Plasticity of body and space representations.** C Brozzoli (CRNL)
- 13.30-15.00 **Functional plasticity after traumatic brain injury.** I Cristofori (ISCMJ)
- 15.00-16.30 **Plasticity after tumor resection.** P-A Beuriat (ISCMJ, HFME)
- 16.30-17.00 **Round table** (chaired by students)

Thursday November 4, 2021 - DECISION-MAKING PROCESSES

Amphitheater "Neurocampus" (CH Le Vinatier, Bron)

- 09.00-10.00 **Sensory perception and emotions: visual pathways and face perception network in primates.**
F Hadj-Bouziane (CRNL)
- 10.00-11.00 **Thinking others in primates.** J Sallet (SBRI)
- 11:00-12.00 **Behavioral and electrophysiological approaches to decision-making.** D Thura (CRNL)
- 13:30-14.30 **Voluntary action and automatism: cortico-stripped circuits.** L Tremblay (ISCMJ)
- 14.30-15.30 **Social perception: from faces to interaction.** L Papeo (ISCMJ)
- 15.30-16.30 **Explicit vs implicit theory of mind.** L Bardi (ISCMJ)
- 16.30-17.00 **Round table** (chaired by students)

Friday November 5, 2021 - ARTIFICIAL AND BIOLOGICAL NEURONAL NETWORKS

Amphitheater "Neurocampus" (CH Le Vinatier, Bron)

- 10.00-12.00 **Models of biological neural networks, from structure to function.** B Delord (ISIR, Paris)
- 13.30- 14.30 **Introduction to Artificial Intelligence.** E Reynaud (EMC, Lyon2)
- 14.45-15.45 **Artificial Intelligence & Neurosciences: convergences and applications.** J-R King (ENS-PSL, Paris)
- 16.00-17.00 **Societal and Ethical impacts of Artificial Intelligence** F. Muhlenbach (Université de Saint-Etienne)
- 17.00-17.30 **Round table** (chaired by students)

Monday November 8, 2021 – COMPUTATIONAL MODELS OF COGNITION

Amphitheater “Neurocampus” (CH Le Vinatier, Bron)

- 09.30–10.30 **Introduction to Reinforcement Learning & applications.** M Khamassi (ISIR, Paris)
- 10.45–11.45 **Introduction to Bayesian approaches.** F Lecaigard (CRNL)
- 13.30–14.30 **Probabilistic modeling in Psychiatry I.** P Series (University of Edinburgh) → VISIOCONFERENCE
- 14.45–15.45 **Probabilistic modeling in Psychiatry I II.** J Scholl (University of Oxford)
- 15.45–16.15 **Round table** (chaired by students)