

## **UE Computational Neurosciences - with the support of Labex Cortex**

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# **Bridging empirical findings and computational models: from neurons to circuits, networks and cognition**

## **Tuesday November 28, 2023 – Neuronal dynamics, from physiology to cognition**

Amphitheater "Neurocampus" (CRNL, CH Le Vinatier, Bron)

- 09.30 – 11.00 Françoise Lecaiguard (CRNL, Lyon)  
***Neurophysiology of auditory sequence perception: experiments and models***
- 11.00 – 12.45 Matteo di Volo (SBRI, Lyon)  
***Hippocampal gamma oscillations form complex ensembles modulated by behaviour and learning***
- 14.15 – 15.45 James Bonaiuto (ISC-MJ, Lyon)  
***Selective alteration of human value decisions with medial frontal tDCS is predicted by changes in attractor dynamics***
- 16.00 – 17.30 Romain Quentin (CRNL, Lyon)  
***Multivariate methods to decode memory contents from neural recordings***

## **Wednesday November 29, 2022 – Neural dynamics, from cells to whole brain**

Building 416, Vinatier (room 5, 2nd floor, Bron)

- 09.30 – 12.45 Duo (Experiment & Model) - Laurent Venance (CIRB, Collège de France, Paris) & Hugues Berry (INRIA, Lyon)  
***Spike timing dependent potentiation: from experiments to computational models***
- 14.15 – 15.45 PierPaolo Sorrentino (Institut de Neurosciences des Systèmes, Marseille)  
***Brain models: linking theory and data towards a mechanistic account of pathophysiological processes***
- 16.00 – 17.30 Spase Petkoski (Institut de Neurosciences des Systèmes, Marseille)  
***Spatio-temporal brain structure shapes its dynamics: Normalized connectome and Virtual Aging Brain***

## **Thursday November 30, 2023 – Neural dynamics for flexible decision making**

Amphitheater "Neurocampus" (CRNL, CH Le Vinatier, Bron)

- 09.30 – 12.45 Duo (Experiment & Model) - Emmanuel Procyk (SBRI, Lyon) & Bruno Delord (Institut des Systèmes Intelligents et de Robotique, Paris)  
***Inhibitory control of frontal metastability sets the temporal signature of primate cognition***
- 14.15 – 15.45 David Thura (CRNL, Lyon)  
***Models of decision-making in changing conditions***
- 16.00 – 17.30 Pauline Mouches (CRNL, Lyon)  
***Adaptive artificial neural networks for neuroscience applications***

## Friday December 1, 2023 – Artificial and altered brains


Amphitheater “Neurocampus” (CRNL, CH Le Vinatier, Bron)


- 09.30 – 12.45 Duo Laurie-Anne Sapey-Triomphe (CRNL, Lyon) & Kristen Barc (Institut du Cerveau, Paris & CRNL, Lyon)  
***Perceptual biases in autism and neurotypics***
- 14.15 – 15.45 Jean Daunizeau (Institut du Cerveau, Paris)  
***Synaptic plasticity in the orbitofrontal cortex explains how risk attitude adapts to the range of risk prospects***



## Vinatier Hospital - Access map to the Neurocampus and the 416 Building



 Neurocampus building

 Building 416 (for conferences on Wednesday 29/11)