**PROJECT PROPOSITION - Lab1** (M1, second semester)

Supervisor(s): …Nollmann Marcelo…..

Contact email: …nollmann@cbs.cnrs.fr..

Hosting lab: ……CBS..

Period of proposed project (put **x** instead of ロ) :

ロ Only 1st slot Only 2nd slot

ロ One slot, but I have no preference on which x Both slots (with different groups)

1st slot: thursdays and fridays, from 3/2/2021 to 18/3/2021

2nd slot: thursdays and fridays (except for the last 2 weeks), from 31/3/2021 to 6/5/2021

PROJECT’S TITLE

Subject (5 lines max for the description)

Hi-M is a novel imaging technology developed in the lab that permits imaging of tens to hundres of genomic loci and RNA species at once. This method generates large amounts of data (>2 Tb) per experiment that need to be processed by custom-made image analysis pipelines based on Artificial Intelligence methods. Use of super-computer centers and cloud computing resources has become critical for these analyses.

Technical tools to be used:

Linux, console scripting, parallel computing, artificial intelligence, high-performace computing

Objectives:

Become acquainted with Linux, bash scripting, AI-based image analysis, develop and benchmark image analysis pipelines using high-performace clusters and cloud computing.