

MYCHP203 — TOP : Lab 2

Gabriel Dos Santos
gabriel.dossantos@cea.fr
gabriel.dos-santos@uvsq.fr

Hugo Taboada
hugo.taboada@cea.fr

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Spatial and temporal locality, data structure packing, Structure of Arrays vs Arrays of Structures & false sharing.

I Cache blocking

1. Profile the `cross-stencil` code using Linux Perf. Specifically, look at cache misses in the L1 and L3 (LLC) caches.
2. Implement a cache-blocked version of the `cross_stencil::run()` function to improve the spatial and temporal locality of the loop.
3. Assert that your implementation computes the correct result. Update the `CMakeLists.txt` file accordingly.
4. Tune the block size to maximize the performance of your cache-blocked version. Use Perf to assert the improvements in spatial and temporal locality.