

# Parallel Loops: Bubble Sort

**Question:** go run `make bench` sequentially first.

## 1 Bubble Sort

**Question:** Implement a parallel version of the BubbleSort algorithm. Write the code in directory `bubblesort/` in file `bubblesort.cpp`. Remember to set thread count and granularity using the `setNbThread()` and `setGranularity()` functions provided in the `omploop.hpp` file. Output the time it took on `stderr`. Test the code is running correctly with `make test`.

**Question:** Benchmark the code on `Centaurus` using `make bench`. And plot results using `make plot`. What speedup do you achieve with 16 threads?

Hint: Extracting the dependencies of the BubbleSort algorithm will help you identify where there is parallelism that can be leveraged.