

# Report for Assignment [boost]MPI: Back to Basis with $\pi$

Student: Quoc Hong Nhat HOANG

StudentID: 0170942349

Email: quoc.hoang.001@student.uni.lu

## Exercise 1:

$n = 100000000$

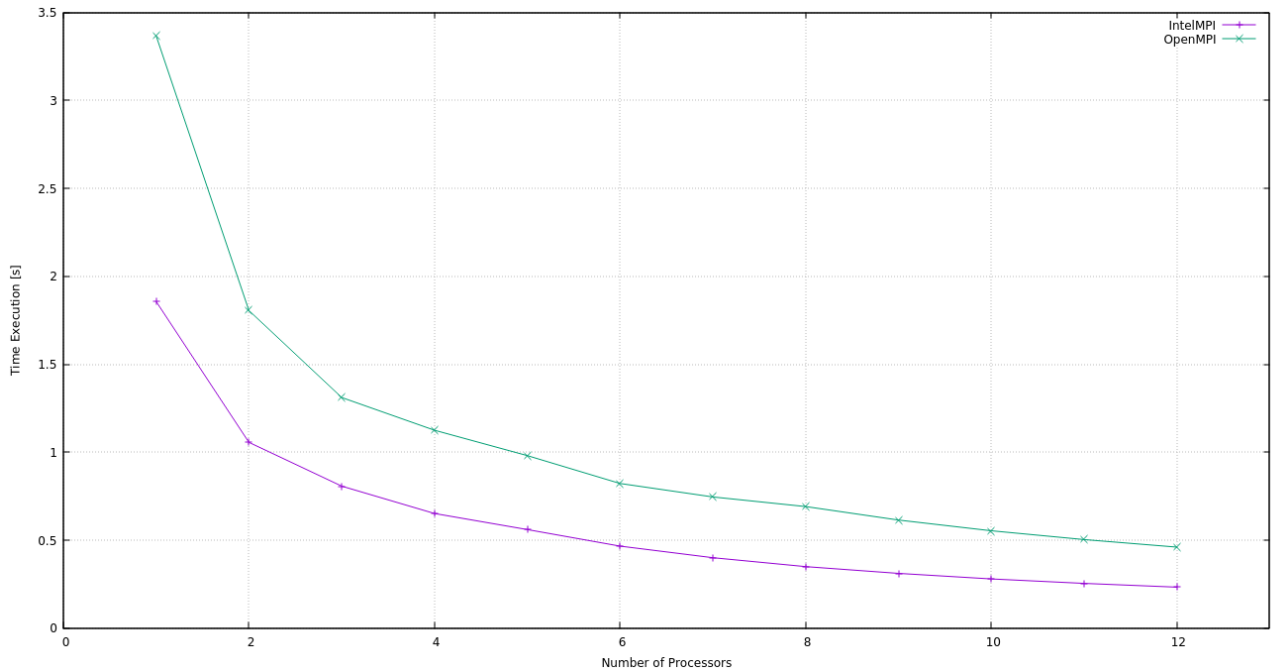


Figure 1: IntelMPI vs OpenMPI by Trapezium rule

## Exercise 2:

$n = 100000000$

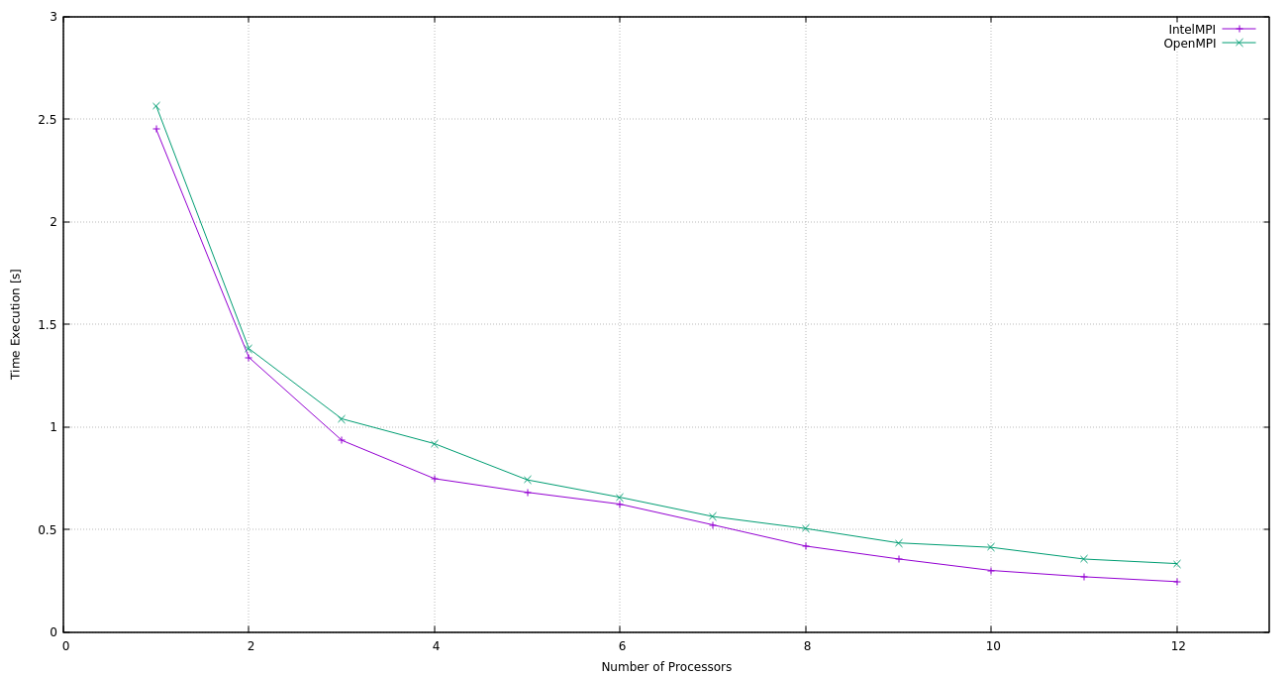
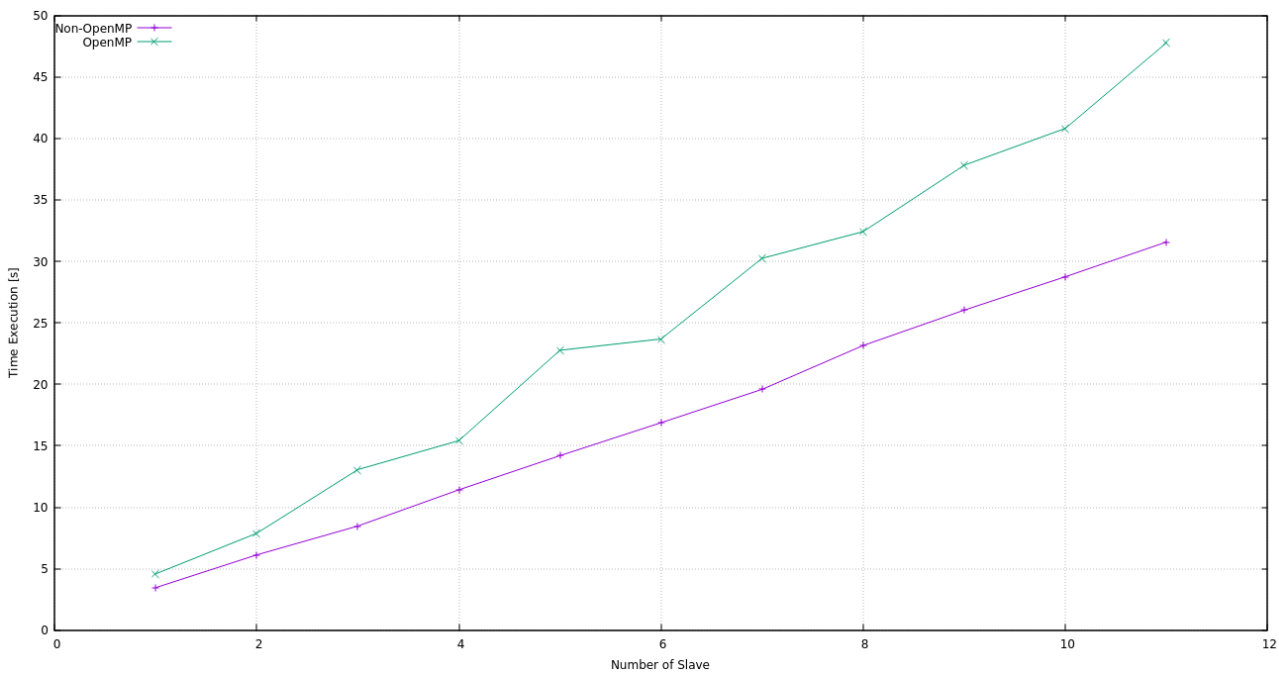


Figure 2: IntelMPI vs OpenMPI by Simpson's Rules with Boost::MPI libs

**Exercise 3:**  
chunk\_size = 100000000  
error = 0.001



*Figure 3: Non-using-OpenMP vs Using-OpenMP by a Monte-Carlo method*