The Graduate School of Management and Economics

Quiz HPC

SIMD

write code that gets 2 arrays and returns their sum. now use simd macro and compare these 2 implementations with benchmark tools.is there any difference? why?

Multithreading

write code in Julia that gets $n \times n$ matrix and computes its trace.
now use thread macro to implement this function then compare it with *tr* in *LinearAlgebra* library.

Distributed

use distributed macro to compute this sum(assume m is 1 million)

$$e = \sum_{n=1}^{m} \frac{1}{n!}$$

now use pmap macro to compute the above sum and compare their performance. why pmap is slower when the number of parts is much more than the size of the part?