

# Portfolio 9 - RcppParallel

Sam Bowyer

2023-05-29

In this portofolio we will discuss how the R-to-C++ gains obtained in regular Rcpp can be improved upon further by parallelisation with RcppParallel. In particular, we'll look into `parallelFor` and `parallelReduce`, using examples based on [2] and [1] respectively.

## **parallelFor**

With RcppParallel, the `parallelFor` loop works by \*\*\*\*\*

## **Jensen-Shannon Distance**

## **parallelReduce**

As discussed in Portfolio 7 on Intel TBB, another very useful function that can easily be parallelised is `reduce`, which is implemented in RcppParallel as `parallelReduce`. This works by \*\*\*\*\*

## **Inner Product**

## **References**

- [1] JJ Allaire. Computing an Inner Product with RcppParallel, July 2014.
- [2] JJ Allaire and Jim Bullard. Parallel Distance Matrix Calculation with RcppParallel, July 2014.