

# Assignment MPI: Numerical Integration : Advanced Manager-Worker

The purpose of this assignment is for you to learn more about

- implementing a dynamic workload partitioning scheme in MPI (here Manager-Worker).
- implementing operations using regular communication patterns.

As usual all time measurements are to be performed on the cluster.

## 1 Extra Credit: Advanced Manager-Worker (30 pts)

One of the issue with such a manager-worker implementation is that the worker process will be idle until the master provides the next chunk. To avoid this, it is common that the manager will give more than a single chunk of work (say, 3 chunks of work) to each worker. That way, when a worker sends a result to the master node, the worker still has some chunks of work (here, 2 chunks) to perform.

**Question:** Adapt the numerical integration code to use advanced scheduling.

**Question:** Run and time that program on Centaurus. And generate speedup tables.